

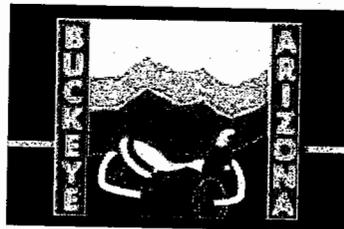
**Clean Water Act
208 Plan Amendment**

for the

**Central Buckeye
Wastewater Treatment Plant**

Prepared for the

Town of Buckeye, Arizona



May 2005



TOWN OF BUCKEYE

May 2, 2005

Ms. Brenda Day, Environmental Planning Program Manager
Maricopa Association of Governments
302 North 1st Avenue, Suite 300
Phoenix, Arizona 85003

Re: Town of Buckeye MAG 208 Amendment

Dear Ms. Day:

The Town of Buckeye is submitting a Clean Water Act Section 208 Amendment for the Buckeye Planning Area. In accordance with the MAG 208 Water Quality Management Plan, we are officially requesting that you initiate the approval process to consider amendments to the Central Buckeye Planning Area and Central Buckeye Wastewater Treatment Plant.

Please contact me, or Marty Craig at Camp Dresser & McKee (602-956-4500), the consultants who prepared the Amendment, with any questions or comments. We look forward to working with you and appreciate your assistance to facilitate the MAG approval process for this 208 Plan Amendment.

Sincerely,

Chris Young, P.E.
Public Works Director
Town of Buckeye

**CENTRAL BUCKEYE WASTEWATER TREATMENT PLANT
208 WATER QUALITY MANAGEMENT PLAN AMENDMENT**

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**208 WATER QUALITY MANAGEMENT PLAN AMENDMENT CHECKLIST
CENTRAL BUCKEYE WASTEWATER TREATMENT PLANT**

Requirement	Summary of How Requirements are Addressed	Page
AUTHORITY		
<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 Town of Buckeye is the Designated Management Agency for the Buckeye Municipal Planning Area.</p>	<p>Please refer to Appendix C of the MAG 208 Water Quality Management Plan, October 2002.</p>
20-YEAR NEEDS		
<p>Clearly describe the existing wastewater treatment (WWT) facilities:</p>		
<p>Describe existing WWT facilities</p>	<p>The existing Buckeye WWT facility has a capacity of 0.6 MGD. The facility consists of an oxidation ditch with boat clarifier, and chlorination basin. Sludge is processed using a belt filter press and disposed of at a licensed landfill. The facility is currently being expanded to 0.975 MGD. In the current MAG 208 Water Quality Management Plan, the 'Town of Buckeye Wastewater Treatment Plant,' located south of Beloit Road, between Miller and Apache Roads, is identified for a 2.0 mgd build-out capacity with an AZPDES permit discharge. With this amendment, the MAG 208 Plan will be modified to identify a facility expansion to a 16.6 mgd ultimate capacity, and a change of the facility name to the 'Central Buckeye Wastewater Treatment Facility.' The expanded facility will continue to have an AZPDES discharge,</p>	<p align="center">7</p>

Requirement	Summary of How Requirements are Addressed	Page
Show WWT certified and service areas for private utilities and sanitary district boundaries if appropriate	The Central Buckeye WWTP, Sundance WWTP, and Verrado WRF service areas are shown in Figure 3. Areas to be serviced by the Central Buckeye WWTP and Sundance WWTP do not, and will not at any time, overlap with the service area for the Verrado WRF. There are no private utility sewer service areas in the area to be served by the Central Buckeye and Sundance WWTP's.	4 Figure 3
Provide POPTAC population estimates (or COG-approved estimates only where POPTAC not available) over 20-year period.	Population estimates are Town of Buckeye projections prepared by the Town Engineer, W.C. Scoutten, Inc. MAG estimates for Regional Analysis Zones 278 and 279, which are the "core" planning areas for the Central Buckeye WWTP are also provided. However, the MAG estimates are lower, so the more current Town of Buckeye projections were used.	5
Provide wastewater flow estimates over the 20-year planning period.	Wastewater flows for the Central Buckeye WWTP are estimated from the Town of Buckeye population estimates prepared by W.C. Scoutten, Inc.. The estimated wastewater flow for the Central Buckeye Planning Area at the end of the 20-year planning period is 16.6 MGD. The Sundance WWTP is located in the Central Buckeye Planning Area, however, flows going to this facility are separate from flows going to the Central Buckeye WWTP. The ultimate capacity of the Sundance WWTP is 3.6 MGD.	5
Illustrate the WWT planning and service areas.	The planning and service areas will include regional analysis zones 278 and 279, which comprise the Buckeye core population as discussed in the 208 Water Quality Management Plan. There is a potential, in the future, for the Central Buckeye WWTP service area to include the "future planning area" RAZs listed in the 208 WQMP. This area could include RAZs 277, 340, 341, and 343. The current Central Buckeye and Sundance WWTP planning and service areas are illustrated in Figure 3.	4, Figure 3

Requirement	Summary of How Requirements are Addressed	Page
Describe the type and capacity of the recommended WWT Plant.	Phase 1 - Addition of 3.025 mgd (hereafter referred to as 3.0 mgd expansion) of capacity to the existing facility. The 3.0 mgd addition includes screening and grit removal, Bardenpho secondary treatment process (for biological BOD reduction and nitrification/denitrification), secondary clarifiers, tertiary filtration, chlorination/dechlorination. Sludge handling will use an additional belt filter press. The 0.975 mgd train will not receive tertiary filtration.	7
	Ultimate - Expansion to 16.6 mgd by mirroring the process added in Phase 1 in 3.0 mgd increments, and potentially adding primary clarifiers and anaerobic digesters for sludge processing.	7
Identify water quality problems, consider alternative control measures, and recommend solution for implementation.	<p>No water quality problems are anticipated. After completion of Phase 1, effluent will meet Class B+ standards. Ultimate capacity effluent water quality will meet Class A+ reclaimed water standards for future reuse applications.</p> <p>The groundwater table on the site is high, and groundwater is pumped and discharged off-site during construction activities.</p>	14
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>There are no private WWT utilities with certificated areas within the proposed regional service area. The Sundance WWTP service area is located adjacent to the Central Buckeye WWTP Service area to the north, and the Verrado WRF service area is adjacent to the Sundance WWTP service area. The Sundance and Verrado service areas are separate from the Central Buckeye WWTP service area, are designed to service private developments, and will not overlap with the Central Buckeye service area at any time (see Figure 3). The Town of Buckeye will own and maintain the collection system and Central Buckeye WWTP.</p>	4 Figure 3

Requirement	Summary of How Requirements are Addressed	Page
Describe method of effluent disposal and reuse sites (if appropriate).	Effluent from the WWTP is currently discharged to the Arlington Canal under an AZPDES permit. The effluent will continue to be discharged to the Arlington Canal, under modifications to the existing AZPDES and Aquifer Protection Permits. Beneficial reuse of the effluent will occur downstream for irrigation of crops not intended for human consumption. Potential future reuse applications also include recharge and direct reuse for irrigation purposes. Recharge would likely need to occur off-site due to high groundwater in the vicinity of the existing WWTP.	14
If Sanitary Districts are within a proposed planning or service area, describe who serves the Sanitary Districts and when.	There are no Sanitary Districts within the proposed planning or service area.	-
Describe ownership of land proposed for plant sites and reuse areas.	The Town of Buckeye owns the land where WWTP expansions will be constructed. The Town owns, or is in the process of obtaining easements or condemning land required for 1000' noise and odor setbacks for the expansion of the facility to 4.0 mgd. Additional easements for future expansions will be obtained as needed. 1,000' setbacks for the ultimate facility capacity are shown in Figure 8.	1, 11 Figure 8
Address time frames in development of the treatment works.	The initial 3.0 MGD expansion of the WWTP to 4.0 MGD will occur in 2005-2006. Additional expansions will occur in 3.0 MGD increments as population increases.	1
Address financial constraints in the development of the treatment works.	There are no financial constraints in the development of the treatment works.	19

Requirement	Summary of How Requirements are Addressed	Page
Describe how discharges will comply with EPA municipal and industrial stormwater regulations (Section 405, CWA).	<p>The plant site is contained within a 10' high perimeter berm, which prevents the plant site from receiving stormwater runoff. Stormwater discharges from the plant site will be subject to AZPDES stormwater permitting requirements. The flows will be addressed through implementation of a stormwater pollution prevention plan.</p> <p>Stormwater currently drains to the southeast corner of the facility, where it is discharged by gravity or pumping to a channel adjacent to the property. This line can be closed with a valve to contain any spills that may occur on-site. Spills can then be cleaned up and disposed of properly, or portable pumps can return process spills to the headworks.</p>	15
Describe how open areas & recreational opportunities will result from improved water quality and how those will be used.	Not applicable	-
Describe potential use of lands associated with treatment works and increased access to water-based recreation, if applicable.	Not applicable	-
REGULATIONS		
Describe types of permits needed, including NPDES, APP, and reuse.	<p>The facility currently operates under an AZPDES Permit and an Aquifer Protection Permit. These permits are being updated to reflect the new treatment facility capacity. The facility will also require an Air Quality Permit, Stormwater Discharge Permit, Annual Operating Permit, and a Reuse permit in the future. Prior to construction, and Approval to Construct the facility must be obtained, and an Approval of Construction must be obtained once construction is complete,</p> <p>The Town is currently operating the WWTP under a Consent Agreement from ADEQ and a Cooperation Agreement through MCESD.</p>	16

Requirement	Summary of How Requirements are Addressed	Page
Describe restrictions on NPDES permit, if needed, for discharge and sludge disposal.	The quality of the effluent will meet the requirements of the Clean Water Act.	14
Provide documentation of communication with ADEQ permitting Section 30 to 60 days prior to public hearing regarding the need for specific permits.	The Town of Buckeye is in the process of amending the existing permits through ADEQ for the Phase 1 expansion capacity of 4.0 MGD. The town and its Engineer have participated in a Preapplication meeting for modifying the existing APP permit, and the APP and AZPDES permits have been submitted to ADEQ for approval. APP and AZPDES permits for the 4.0 MGD facility cannot be received until this 208 Plan Amendment is approved.	16
Describe pretreatment requirements and method of adherence to requirements (Section 208(b)(2)(D), CWA).	Wastewater flows are currently less than 5 mgd, so pretreatment for industrial users is not required. When the treatment facility capacity exceeds 5 mgd, appropriate pretreatment agreements with industrial users will be established. All industrial users will be regulated appropriately.	17
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).	The site will require dewatering during construction.	18
Describe alternatives and recommendation in the disposition of sludge generated.A45 (Section 405 CWA)	Currently, sludge is dewatered using belt filter presses, and disposed of at an offsite, permitted landfill. Anaerobic sludge digesters may be installed in the future, at which point the sludge could be land applied or continue to be disposed of at a landfill. The existing sludge drying beds will be abandoned construction of the 0.975 MGD facility.	17
Define any non-point issues related to the proposed facility and outline procedures to control them.	No non-point discharges are anticipated.	-
Describe process to handle all mining runoff, orphan sites, and underground pollutants, if applicable.	Not applicable	-

Requirement	Summary of How Requirements are Addressed	Page
If mining related, define where collection of pollutants has occurred, and what procedures are going to be initiated to contain contaminated areas.	Not applicable	-
If mining related, define what specialized procedures will be initiated for orphan sites, if applicable.	Not applicable	-
CONSTRUCTION		
Define construction priorities and time schedules for initiation and completion.	The first priority is to expand the facility to 1.5 MGD capacity, followed immediately by expansion to 4.0 MGD capacity. Initial expansion to 1.5 MGD is necessary to meet the immediate demands of the current population. Expansion to 1.5 MGD will be complete in October 2005, and expansion to 4.0 MGD will be complete in May 2006. Subsequent expansions will be designed when the facility reaches 80% capacity.	19
Identify agencies that will construct, operate, and maintain the facilities and otherwise carry out the plan.	The Town of Buckeye will create a community facilities district (CFD) through which the expansion of the existing WWTP facility will be financed. The CFD will complete all phases of the WWTP expansion, including potential future effluent reuse systems. The Town of Buckeye will operate and maintain the WWTP.	19
Identify construction activity-related sources of pollution and set forth procedures and methods to control, to the extent feasible, such sources.	Pollutants associated with construction activities are expected to be limited to solid waste, inert material, and residual construction materials such as paint or adhesives. The construction activities will be subject to stormwater permitting and will implement Best Management Practices.	18

Requirement	Summary of How Requirements are Addressed	Page
FINANCING AND OTHER MEASURES NECESSARY TO CARRY OUT THE PLAN		
If plan proposes to take over certificated private utility, describe how and when financing will be managed.	Not applicable	-
Describe any significant measure necessary to carry out the plan, e.g., institutional, financial, economic, etc.	Not applicable	-
Describe proposed method(s) of community financing.	The Town of Buckeye will create a community facilities district through which community improvements will be financed.	19
Provide financial information to assure DMA has financial capability to operate and maintain wastewater system over its useful life.	The Town of Buckeye is the DMA. The Town of Buckeye is a municipality and owns and operates the existing Buckeye WWTP.	Appendix B
Provide a timeline outlining period of time necessary for carrying out plan implementation.	The expansion to 4.0 MGD is expected to be completed in May 2006. Future expansions will be as needed based on population growth.	18 Appendix A
Provide financial information indicated the method and measures necessary to achieve project financing. (Section 201 CWA or Section 604 may apply)	The project will be financed through a communities facilities district	19
IMPLEMENTABILITY		
Describe impacts and implementability of Plan:		
Describe impacts on existing wastewater (WW) facilities, e.g., Sanitary district, infrastructure/facilities and certificated areas.	The existing WWT facility is currently being modified to 0.975 mgd capacity from 0.6 mgd. Once the expansion to 0.975 mgd is complete, the facility will be temporarily modified to a capacity of 1.5 mgd to provide interim capacity for the Town while construction of the 3.0 mgd expansion occurs. These modifications include construction of anoxic basins, and addition of pumps to transfer water between processes. Some interim improvements shall be incorporated into the 3.0 mgd expansion, and others will be abandoned. When construction of the 3.0 mgd expansion is complete, the 0.975 mgd facility will revert to operating as it currently does.	7

Requirement	Summary of How Requirements are Addressed	Page
Describe how and when existing package plants will be connected to a regional system	Not applicable	-
Describe the impact on communities and businesses affected by the plan.	No impacts on communities and businesses affected by the plan.	-
If a municipal WW system is proposed, describe how WWT service will be provided until the municipal system is complete: i.e., will package plants and septic systems be allowed and under what circumstances. (Interim services).	Not applicable. The Town of Buckeye WWTP is currently operational, and the plan consists of expanding the existing facility to meet future demands. The existing facility will remain on-line during construction of the expansion. The construction will be completed in phases to increase the capacity of the facility to meet growing demands.	-
PUBLIC PARTICIPATION		
Submit copy of mailing list used to notify the public of the public hearing on the 208 amendment. (40CFR, Chapter 1, Part 25.5)	Public participation requirements will be satisfied through MAG.	20
List location where documents are available for review at least 30 days before public hearing.	Public participation requirements will be satisfied through MAG.	20
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.	Public participation requirements will be satisfied through MAG.	20
Submit affidavit of publication for official newspaper publication.	Public participation requirements will be satisfied through MAG.	20
Submit responsiveness summary for public hearing.	Public participation requirements will be satisfied through MAG.	20

1.0 20-Year Needs

The Maricopa Association of Governments (MAG) is the Designated Planning Agency (DPA) with the authority required by Section 208(a)(2)(B) of the Clean Water Act (CWA) to prepare the water quality management plan for the Maricopa County Planning Area. The Town of Buckeye is requesting an amendment to the MAG 208 Water Quality Management Plan for the 'Town of Buckeye Wastewater Treatment Plant,' located south of Beloit Road, between Miller and Apache Roads, which is currently identified for a 2.0 mgd build-out capacity with an AZPDES permit discharge. With this amendment, the MAG 208 Plan will be modified to identify a facility expansion to 16.6 mgd ultimate capacity, and a change of the facility name to the 'Central Buckeye Wastewater Treatment Plant.' The expanded facility will continue to have an AZPDES permit discharge.

The Central Buckeye WWTP service area corresponds to MAG Regional Analysis Zones (RAZs) 278 and 279, with the exception of the service area for the existing Sundance WWTP, which serves a small portion of RAZ 278, however, most of the Sundance WWTP service area falls into RAZ 279. Growth in RAZs 278 and 279 is now projected by MAG and the Town to be more rapid than what was projected in the year 2002 208 Plan update. The 2002 208 Plan projected a Central Buckeye WWTP influent flow of 3.64 mgd in the year 2020. Based on MAG interim population projections from 2003, the projected wastewater flow at the conclusion of the 20 year planning period in year 2025 for RAZs 278 and 279 is 10.7 mgd. The Town of Buckeye has also developed population projections for the Buckeye core planning area during the 20-year planning period. The Town projections estimate a population of 165,830 in the year 2025, which corresponds to a wastewater flow of 16.6 mgd. As a result, significant additional expansion of the existing facility will be required.

This 208 Plan Amendment includes information on the proposed development of the existing Central Buckeye WWTP. The Town is underway on design of the addition of a 3.025 mgd treatment train (hereafter referred to as 3.0 mgd) to expand the capacity to 4.0 mgd. This expansion will be completed in two phases. Phase 1A shall expand the treatment capacity of the facility to 1.5 mgd, and is planned to be constructed and operating by October 2005. Phase 1B shall expand the treatment capacity of the facility to 4.0 mgd.

1.1 Site Location and Property Ownership

The Buckeye WWTP is located southeast of the corner of 7th Street and Irwin Road in the Town of Buckeye, approximately 1 mile south of the downtown area. The existing site area, enclosed within a berm, totals 3.56 acres. The Town owns a 3 acre parcel to the south and a 40 acre parcel to the east, both contiguous to the existing WWTP site. These parcels can be used as needed for future expansions. Figure 1 provides an aerial view of the site and its relationship to the Town, adjacent properties and the Arlington Canal. A map of the existing site is provided in Figure 2.

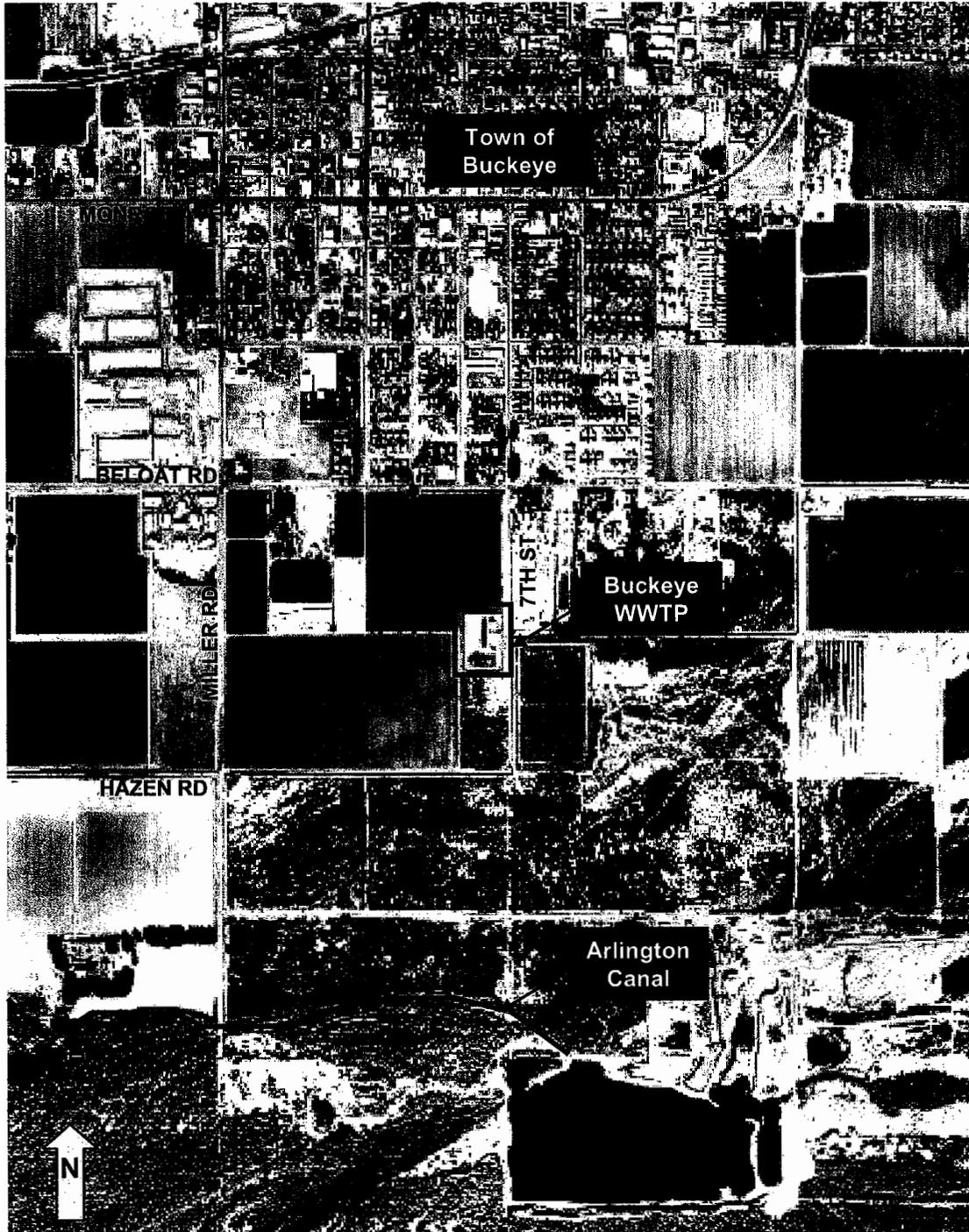


Figure 1 Aerial View of Buckeye WWTP and Surrounding Area

1.2 WWTP Service Areas

Figure 3 depicts the following key areas in the Buckeye Planning Area:

MAG 208 Regional Analysis Zones (RAZs) 278 & 279 (Buckeye “Core”):

RAZ 278 and 279 combine to make the Buckeye core area that was defined in the MAG 208 WQMP as the contributing area to the Buckeye WWTP. This area is generally bounded to the north by McDowell Rd, to the south by the Gila River, to the west by SR-85 and to the east by Perryville Rd. The Central Buckeye and Sundance WWTPs serve the Buckeye core area constituted by RAZ 278 and 279. The entire area of RAZ 278 and 279 is incorporated within the Town of Buckeye. Future Planning Areas for the Town of Buckeye include RAZ 277, 340, 341, and 343, as stated in the MAG 208 WQMP.

Central Buckeye WWTP Service Area:

The Buckeye Central Service Area falls within RAZ 278 and 279 and is what the Town of Buckeye has developed as the appropriate contributing area to the Central Buckeye WWTP. This area is bounded to the north by I-10, to the south by the Gila River, to the west by Turner Rd. and to the east by 231st Ave. Part of the Central Buckeye WWTP service area is located in RAZ 277, which services a truck stop located on I-10. The Town of Buckeye Planning Area includes also includes RAZs 277, 340, 341, and 343 as future planning areas. Since these RAZs are in the Buckeye Planning Area, there is the potential for the Central Buckeye WWTP to extend the service area to include these areas in the future. However, population projections presented are only for the Buckeye Core Planning Area of RAZs 278 and 279.

Sundance WWTP Service Area:

The Sundance WWTP Service Area is comprised of the Sundance and Blue Horizons land developments. This area is bounded to the north by Thomas Rd. (between Tuthill Rd. (207th Ave.) and Perryville Rd.) and I-10, to the south by the RID Canal and Lower Buckeye Rd., to the west by I-10 and Watson Rd., and to the east by Perryville Rd. A portion of this area in the middle, bounded by Tuthill Rd to the east and halfway between the Dean Rd. and Airport Rd. alignments is not incorporated into the Sundance or Blue Horizons service area at this time. The 20-year projected wastewater flow from this area, according to the 208 Plan, is 3.6 mgd. The service area for the Sundance WWTP does not, and will not, overlap with the service area for the Central Buckeye WWTP.

Verrado WRF Service Area:

The Verrado WRF is located north of McDowell Rd. and west of Tuthill Rd. The Verrado WRF Service Area is comprised of the Verrado development area. This area is bounded by Tuthill Rd. to the east, a staggered boundary to the west, ranging from 215th Ave to Apache Rd, Northern Ave. to the north, and I-10 to the south. The southern boundary dips slightly below I-10 between the Dean Rd. and Airport Rd. alignments.

The 20-year projected wastewater flow, according to the 208 Plan amendment prepared for the Whitestone Water Reclamation Facility (name later changed to Verrado WRF) in 2001 is 3.35 mgd. The Verrado WRF facility service area falls within RAZ 253, which is not within the Buckeye Core Planning Area. The service area for the Verrado WRF does not, and will not, overlap with the service area for the Central Buckeye WWTP

Current Septic System Area:

Within RAZ 278 and 279 there is an area that currently has on-site disposal using septic tanks. This area is bounded to the north by Durango St., to the south by Lower Buckeye Rd., to the west by Watson Rd., and to the east by Dean Rd. Other dwellings in RAZ 278 and 279 may also be on septic tanks. In the future, flows from these septic systems will be added to the Central Buckeye WWTP service area.

1.3 Estimated Wastewater Generation

Table 1.1 presents population projections based on 2003 MAG Interim Projections for the Town of Buckeye core planning area. According to the MAG 208 Water Quality Management Plan, the Central Buckeye Wastewater Treatment Plant will serve a core area consisting of Regional Analysis Zones (RAZ) 278 and 279. RAZ 278 and 279 boundaries are shown in Figure 3. Population projections prepared by the Town of Buckeye Engineer (W.C. Scoutten, Inc.) are also included in Table 1.1. The population projections that the Town developed for the 20-year planning period are based on currently approved subdivisions, as well as predicted future subdivisions. The Town projections are higher than the MAG projections, and will be used for estimating wastewater flows for the Town of Buckeye core planning area for the 20-year planning period. The wastewater flow projections for the WWTP are also presented in Table 1.1, based on the Town of Buckeye population projections and a 100 gpcd annual average flow.

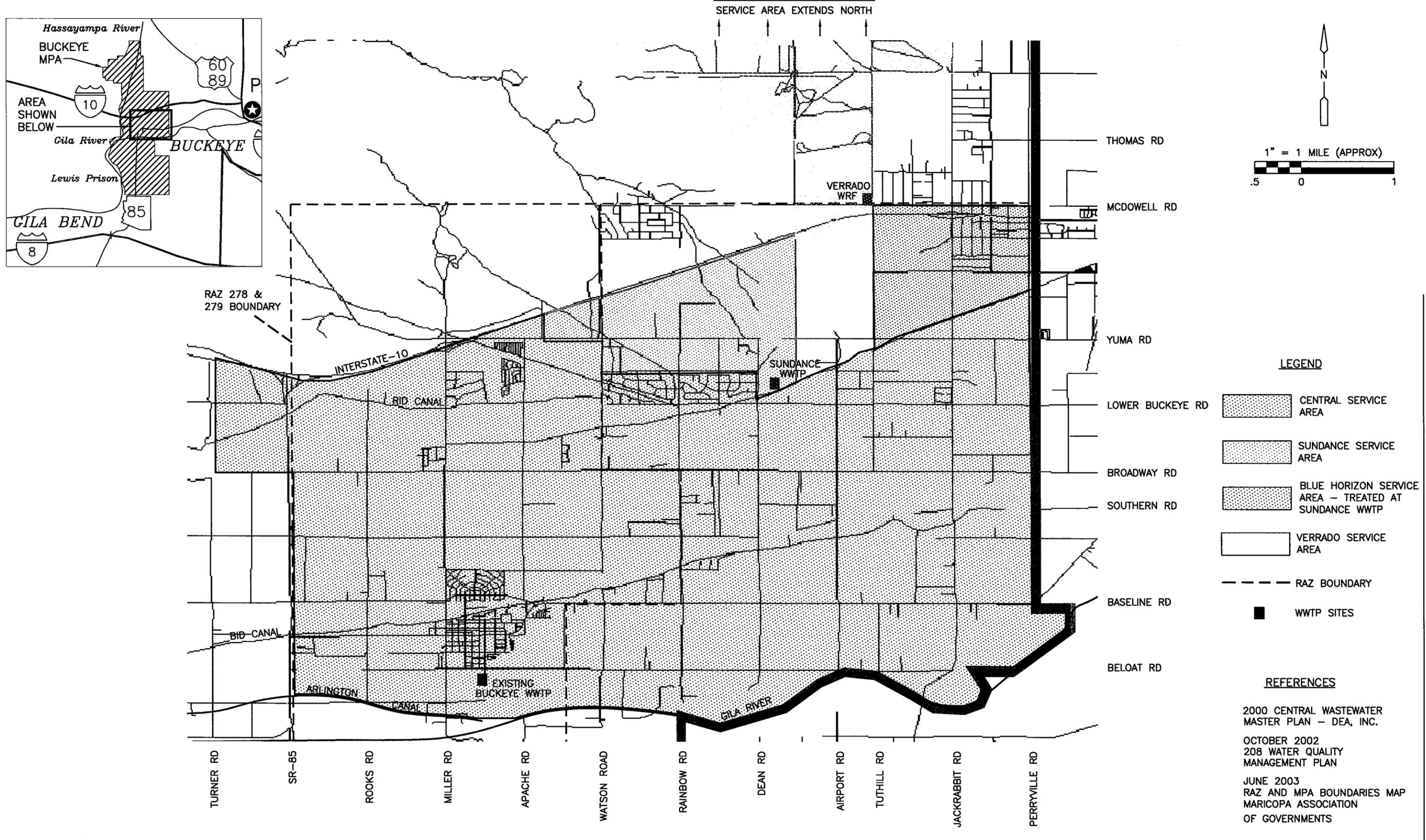
**Table 1.1 Population and Wastewater Flow Projections
Central Buckeye Wastewater Treatment Plant**

Year	2003 MAG Population Projections (RAZ 278 & 279) ¹	2005 Town of Buckeye Population Projections	WW Flow (based on Town Projections) (mgd)
2000	10,644	-	-
2005	-	14,000	1.4
2010	32,544	41,780	4.2
2015	-	107,420	10.7
2020	69,103	140,720	14.1
2025 ²	107,000	165,830	16.6
2030	158,219	-	-

1. Data from *Draft Revised Interim Projections of Population, Housing and Employment by Municipal Planning Area and Regional Analysis Zone – June 2003*.

2. Value is interpolated from 2003 interim projections to give population for capacity at the conclusion of the 20 year planning period.

P:\Buckeye WWT\7.6 Permit Applications and Approvals\7.6.5 208 Plan Amendment\Figures\Figure 3 03/22/05 15:20 islojld



CENTRAL BUCKEYE WASTEWATER TREATMENT FACILITY
208 WATER QUALITY MANAGEMENT PLAN AMENDMENT

FIGURE 3
CENTRAL BUCKEYE WWTP PLANNING AREA

1.4 Description of Existing Wastewater Treatment Facilities

The existing Buckeye WWTP consists of a 0.6 million gallon per day (mgd) treatment plant with screenings removal facilities, oxidation ditch with boat clarifier, effluent chlorination, and belt filter press. Effluent is discharged to the Arlington Canal under an AzPDES permit. Expansion of the WWTP to 0.975 mgd is currently underway, with an estimated completion date of April 2005. This expansion includes constructing a secondary clarifier and RAS/WAS pump station.

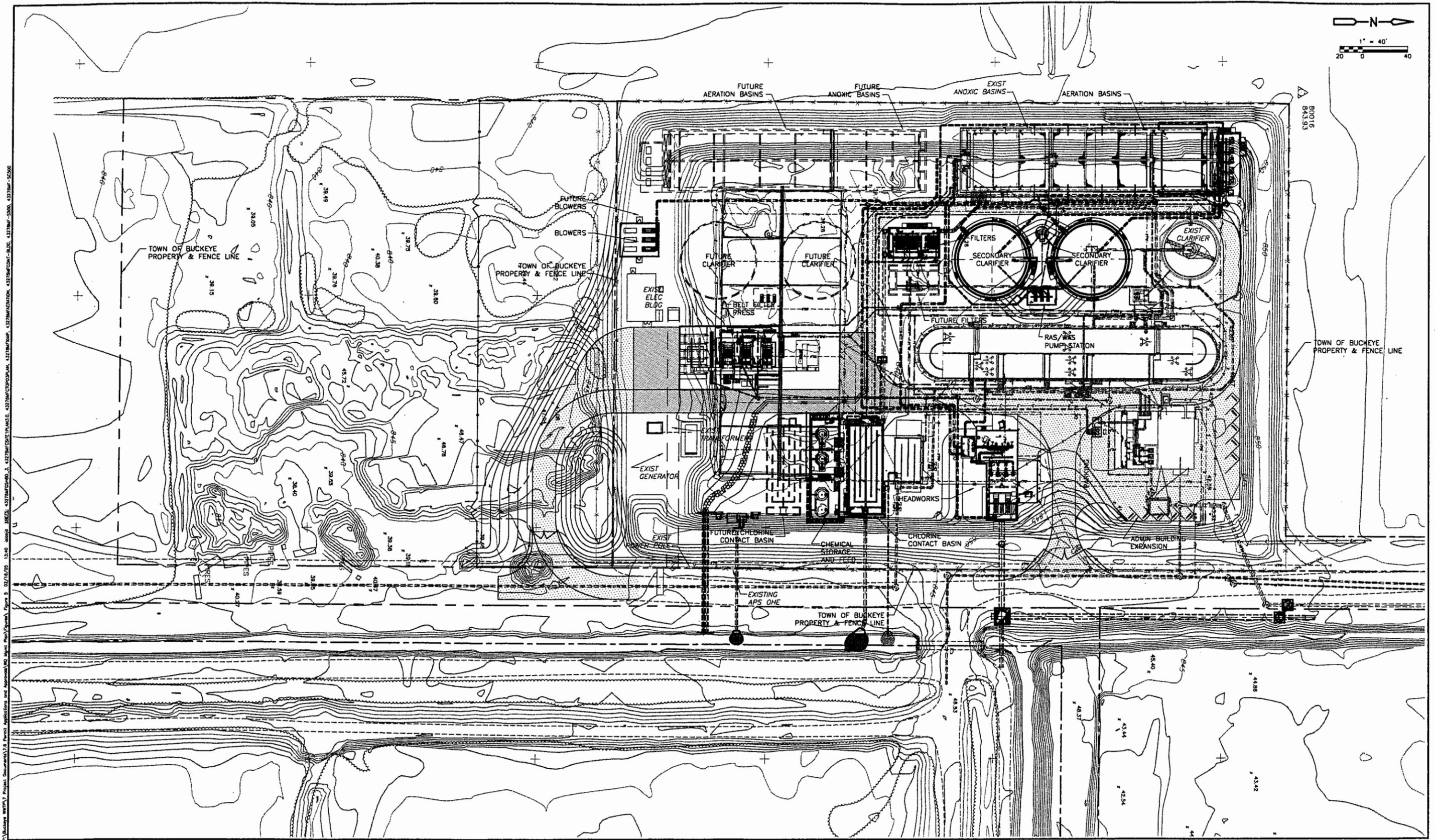
1.5 Wastewater Treatment Plant Expansion Description

The WWTP expansion will consist of multiple phases of construction, resulting in an ultimate capacity of 16.6 mgd. Expansion to 4.0 mgd, which is currently being designed, will be accomplished by adding a 3.0 mgd treatment train to the 0.975 mgd treatment train. The 3.0 mgd expansion will consist of the following processes:

- Influent pumping
- Mechanically and manually cleaned bar screens
- Grit removal
- Secondary treatment (Bardenpho process for nitrification/denitrification)
- Secondary clarification
- Tertiary filtration
- Chlorination/dechlorination
- Effluent discharge to Arlington Canal
- Belt filter presses for sludge handling prior to landfill disposal.

Expansions to the WWTP will be conducted in multiple phases. Phase 1A will expand the treatment capacity to 1.5 mgd. Phase 1B will expand the capacity to 4.0 mgd. The interim expansion of the treatment plant to 1.5 mgd will occur to meet the immediate needs of the Town. This will include the early construction of the anoxic basins, using the existing oxidation ditch for the aerobic portion of the secondary treatment process. The combination of anoxic and aerated basins will be used to achieve denitrification. Temporary piping and equipment will be installed to accomplish the interim expansion. A site layout of the 1.5 mgd facility is presented in Figure 4, and the 4.0 mgd facility is presented in Figure 5. The 4.0 mgd treatment system schematic is presented in Figure 6.

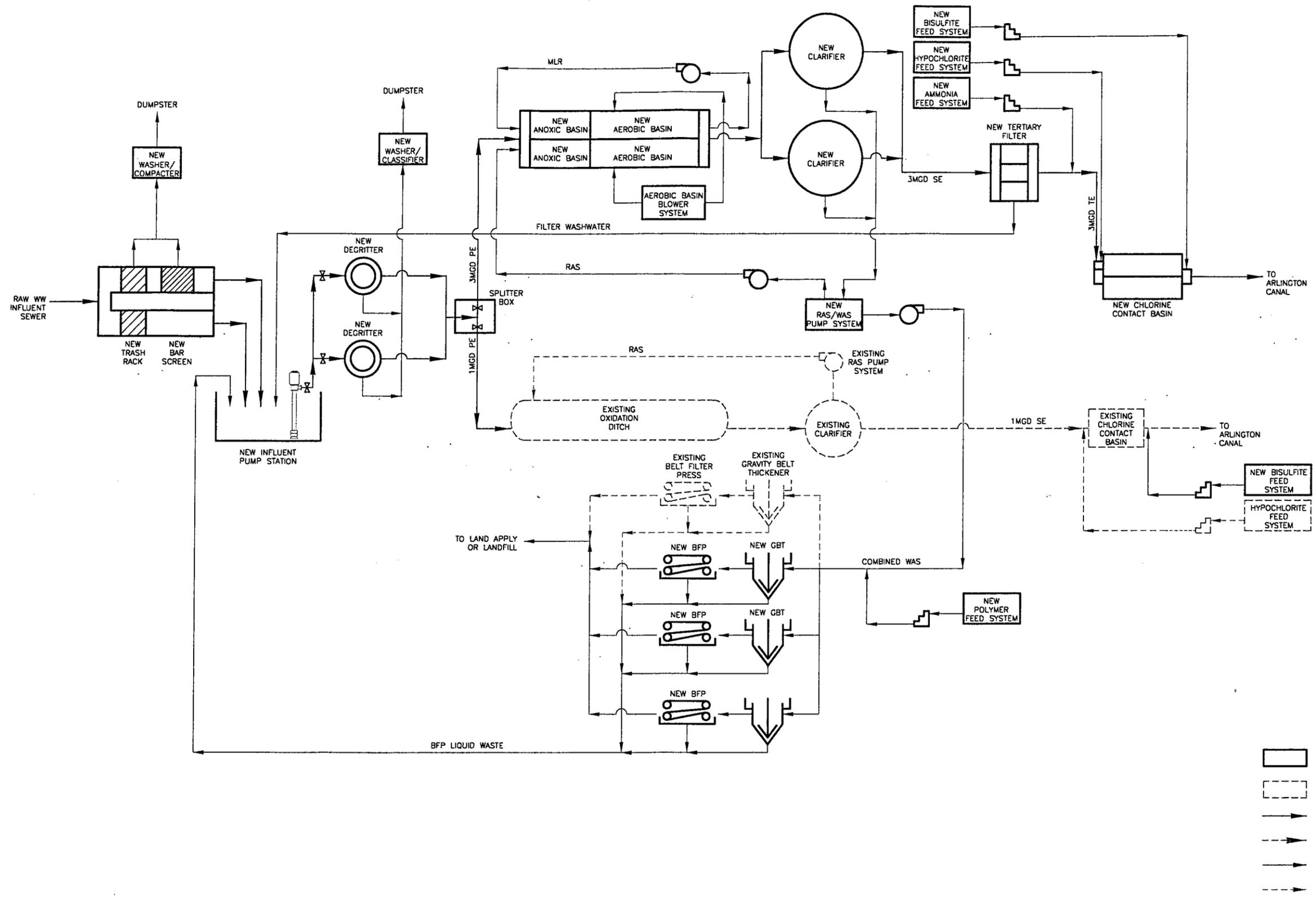
Future expansions to the WWTP will occur as needed, and may be financed through a CFD or other means. The phasing will be dependent upon the increase in population within the Town of Buckeye core planning area. The Town is planning at least one more expansion to 7.0 mgd in the immediate future by adding a 3.0 mgd treatment train to the 4.0 mgd facility. Design of the expansion to 7.0 mgd will likely occur during construction of the 4.0 mgd expansion. Additional treatment capacity may be added by constructing primary clarifiers, which would increase the capacity of a 3.0 mgd treatment train to approximately 4.5 mgd. This would require decommissioning the 0.975 mgd train, leaving two trains of 4.5 mgd each, or 9 mgd. This facility could then be mirrored to reach an ultimate capacity of 16.6 mgd.



TOWN OF BUCKEYE, ARIZONA
CENTRAL BUCKEYE WASTEWATER TREATMENT FACILITY
208 WATER QUALITY MANAGEMENT PLAN AMENDMENT

FIGURE 5
4.0 mgd PLANT SITE LAYOUT

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LEGEND

- NEW PROCESS/EQUIPMENT
- EXISTING PROCESS/EQUIPMENT
- NEW MAJOR PROCESS LINE
- EXISTING MAJOR PROCESS LINE
- NEW MINOR PROCESS LINE
- EXISTING MINOR PROCESS LINE



TOWN OF BUCKEYE, ARIZONA
CENTRAL BUCKEYE WASTEWATER TREATMENT FACILITY
208 WATER QUALITY MANAGEMENT PLAN AMENDMENT

FIGURE 6
4.0 mgd PLANT FLOW SCHEMATIC

Figure 7 presents a conceptual site layout for the ultimate capacity facility of 16.6 mgd. In addition to the land shown in Figure 7, the Town also owns 40 acres of land to the east of the existing facility, which is sufficient to accommodate expansions needed to reach the ultimate capacity facility. 1,000' setbacks are shown in Figure 8. The Town will need to obtain easements from private land owners within the 1,000' setback limit. If easements cannot be obtained, then the land within the 1,000' setback limit could be condemned, or odor and noise controls could be installed at the facility, allowing for smaller setbacks.

1.5.1 Unit Processes

Preliminary Treatment

Preliminary treatment will consist of manual screening, mechanical screening, influent pumping and grit removal. Grit removal for the planned 4.0 mgd facility will consist of flow-generated vortex type degritters. Two units will be used for the 4.0 mgd facility, with additional grit removal equipment being added with future treatment capacity expansions.

Primary Treatment

Primary clarifiers may be added in the future as a means of increasing treatment capacity. Primary treatment is not included in the planned expansion to 4.0 mgd.

Biological Treatment

Biological treatment will consist of a Biological Nitrogen Removal (BNR) process to meet a TN limit of 10 mg/L and a fecal coliform limit of 2.2/100 ml. The Bardenpho process, which utilizes anoxic and aerobic zones and mixed liquor recycle will be used.

Tertiary Treatment

The current expansion to the Central Buckeye WWTP will include tertiary filtration to meet Class A+ effluent standards for future water reuse goals. Fabric filters were selected as the desired treatment technology. The fabric filters will reduce the effluent TSS and turbidity, as well as decrease the downstream chlorine dosing requirements.

Flow from the 0.975 mgd treatment train will not receive tertiary filtration. The 0.975 mgd train will receive secondary treatment, chlorination, and dechlorination prior to discharge.

Disinfection

The existing disinfection system will remain in service without modification through the 1.5 mgd interim expansion. The existing chlorine contact basins can maintain a contact time of 15 minutes for flows up to 2.9 mgd. Flows higher than 2.9 mgd, such as peak hourly flows, will require slightly higher chlorine doses. After completion of the 3.0 mgd expansion, the existing disinfection system will return to normal operations of 1.0 mgd design flow and 2.0 mgd peak flow, and will be operated in parallel with a new disinfection and dechlorination facility that will be added to chlorinate and dechlorinate the 3.0 mgd train at the new 4.0 mgd facility. At peak flow of 2.0 mgd, the existing chlorine contact basin will provide chlorine contact time of 22 minutes.

The new chlorination system for the 4.0 mgd facility will include two new chlorine contact basins, ammonia storage and feed facility and sodium hypochlorite storage and feed facility. It is anticipated that the disinfection process of the new 3.0 mgd treatment train and future expansions will require ammonia feed to minimize chlorine dose requirements.

The new dechlorination system will also include sodium bisulfite storage and feed facility sized to provide dechlorination for chlorinated effluents at both the existing and new disinfection systems. It is anticipated that these chlorination/dechlorination facilities will be mirrored for further expansion of the WWTP to the ultimate capacity of 16.6 mgd.

Emergency Power Generator

An emergency diesel powered generator is being provided at the site so the facility can operate in the event of a power failure. Additional generators will be added with future expansions of the facility based on facility power requirements.

1.5.2 Effluent Disposal and Quality Requirements

Treated effluent from the Central Buckeye WWTP is currently discharged to the Arlington Canal, where it is used downstream for irrigation of non-edible crops such as alfalfa and cotton. The Central Buckeye WWTP currently has an AzPDES permit for this discharge. Effluent from the WWTP will continue to be discharged to the canal after the expansion to 4.0 mgd is complete. An AzDPES permit application is being prepared for the 4.0 mgd facility.

The Town may implement direct reuse as well as recharge of reclaimed water in the future. The Town may also pursue an exchange of reclaimed water for potential drinking water supplies. Reclaimed water systems may be developed in the future based on the water reuse applications used. Due to high groundwater in the area of the WWTP, recharge will likely need to occur at an off-site location, possibly north of the site where the water table is lower.

1.6 Collection System Description

The existing collection system is in the center of the core planning area, primarily located to the south of Interstate 10 and north of Beloat Road, between Miller Road on the west and Apache Road on the east. There is one sewer trunk line along Apache Road from Broadway Road to the treatment plant, providing the backbone of the existing collection system. The collection system currently requires no pumping for transport of wastewater to the treatment plant.

Numerous expansions of the collection system are being planned as the service area develops. The first major project under which these improvements are being designed is called the Northeast Sewer CFD. This project is bounded by Yuma Road to the north, Beloat Road to the south, Miller Road to the west, and Rainbow Road to the east, with an area of 3,500 acres. Improvements include installation of approximately 55,000 linear feet of sewer lines, costing approximately \$7.55 million to install.

Additional sewer improvements will be required as the Town of Buckeye is further developed. These improvements may include installing trunk sewer lines down each major road, beginning south of the Sundance WWTP service area, and continuing south the Beloat Road, between Rooks Road and Perryville Road, branching off as needed to service future development areas. Approximately 29 miles of trunk lines, and an unknown distance of branch lines would be required. Estimated cost for installation of the trunk lines, based on costs estimated for the Northeast Sewer CFD, is \$21.4 million.

1.7 Stormwater Discharge

On-site stormwater retention is not provided. The groundwater in the vicinity of the site is very close to the surface, and during periods of high water levels in the Gila River, or during periods of intense irrigation in adjacent properties, the site can be prone to saturation. Therefore, run-off from rainfall within the site must be drained quickly and reliably. Currently, site drainage is collected at the southeast corner of the site for discharge (either by gravity or by pumping) to a drainage channel along the east side of the plant. This discharge line to the drainage channel can be closed using a valve in the event of a spill or overflow of a process basin. Spills and overflows can then be cleaned up on-site, and either disposed of properly, or returned to the headworks for treatment. By closing the stormwater discharge line in the even of a spill, spills are prevented from leaving the property. It is planned that stormwater will continue to be handled in this manner with each expansion of the plant.

Once the facility capacity exceeds 1.0 mgd, the facility stormwater discharge will be regulated under the Environmental Protection Agency Multi-Sector General Permit for stormwater discharges. A Notice of Intent to discharge stormwater from an industrial facility and a Stormwater Pollution Prevention Plan (SWPPP) are currently being prepared for the facility so requirements of the permit are met. Facility siting will consider the need to maintain adequate site drainage, and siting of new or future facilities

in the southeastern portion of the site will not interrupt site drainage. The site does not receive stormwater runoff from adjacent properties.

1.8 Summary of Alternatives

Several alternatives for treatment processes and site layouts were considered before the optimal design was selected. Several site layouts were considered to make full use of the available space without having to acquire additional land or reconstruct the berm around the facility for expansion of the facility to 4.0 MGD.

It was decided by the Town to increase the capacity of the existing treatment facility in phases to meet the treatment needs of the growing population. The 0.6 MGD facility is currently being expanded to 0.975 MGD. That 0.975 MGD facility will be expanded to 1.5 mgd on an interim basis. An additional 3.0 mgd of treatment capacity will be constructed, bringing the total capacity of the facility to 4.0 mgd. This approach was taken to meet the immediate demands of the Town while a larger facility could be designed and constructed. If the existing facility had not been expanded incrementally, the facility would not be able to meet the demands of the Town. Additionally, there was not sufficient time to design and construct a larger facility before the capacity of the existing facility was exceeded.

It is anticipated that additional expansions will be needed based on Town flow projections for the 20-year planning period. These additions will likely occur in 3.0 mgd increments, mirroring the 3.0 mgd expansion to the 0.975 mgd facility. The capacity of each 3.0 mgd train could be increased with the addition of primary clarifiers, and anaerobic digesters could be added to process the wasted sludge. The Town owns sufficient land adjacent to the existing site to accommodate future expansions to 16.6 mgd.

1.9 Permitting Requirements

The Buckeye WWTP will require multiple environmental permits or clearances for current and future construction and operation activities. These permits are listed in Table 1.2. Applications for the APP and AZPDES permits for the expanded facilities are currently being prepared, or have been submitted to ADEQ for approval.

Table 1.2 Potential Permits Required for the Central Buckeye WWTP

Permit	Regulatory Agency
Aquifer Protection Permit (APP)	Arizona Department of Environmental Quality (ADEQ)
AzPDES Permit	ADEQ
Stormwater Discharge Permit (NOI)	ADEQ/EPA
Sludge Disposal Agreement	ADEQ
Reclaimed Water General Permit for Direct Reuse of Class A+ Reclaimed Water (future)	ADEQ
Reclaimed Wastewater Recharge Permit (future)	Arizona Department of Water Resources (ADWR)
Air Quality Permit	ADEQ
Wastewater Facility Approval to Construct	MCESD
Wastewater Facility Approval of Construction	MCESD
Reclaimed Water System Approval to Construct (future)	MCESD
Annual Operating Permit	MCESD
Hazardous Materials Management Plan (HMMP)	Town of Buckeye Fire Department
Grading Permit	Town of Buckeye
Architectural Approval	Town of Buckeye
Building Permit	Town of Buckeye

1.10 Pretreatment Requirements

Title 40 of the Code of Federal Regulations (CFR), part 403, section 403.8 states that “Any POTW (or combination of POTWs operated by the same authority) with a total design flow greater than 5 million gallons per day (mgd) and receiving from Industrial Users pollutants which Pass Through or Interfere with the operation of the POTW or are otherwise subject to Pretreatment Standards will be required to establish a POTW Pretreatment Program.” Currently, the Central Buckeye WWTP is not regulated under this rule because the total flow is less than 5 mgd. If industrial users are added to the service area of the facility, a pretreatment program will be developed with the industrial user being subject to pretreatment standards as regulated by the EPA.

1.11 Biosolids Handling Requirements

The sludge from the Buckeye WWTP will be wasted from the secondary clarifiers, and potentially primary clarifiers in the future. Currently, the sludge is processed through a belt filter press with gravity belt thickening section prior to disposal in a licensed landfill. This method of sludge handling will likely be used in future expansions of the facility as well. The existing sludge drying beds are being abandoned as part of the 0.975 MGD facility.

Future treatment of the sludge may also include anaerobic digesters, which will achieve Class B pathogen reduction. By meeting the requirements for sludge reuse, the biosolids produced at the facility will be available for restricted land application or fertilization of non-contact crops.

2.0 CONSTRUCTION, OPERATION, AND MAINTENANCE

A project schedule through construction of the 4.0 mgd facility is included in Appendix A.

2.1 Construction Responsibility

The Town of Buckeye is sponsoring the Buckeye WWTP for purposes of the 208 Plan Amendment.

The Northeast Sewer CFD is currently being designed, and is scheduled for construction in November 2005.

Expansion of the Buckeye WWTP to 4.0 mgd is currently in design. Construction will occur in phases to meet interim flows that have been forecasted prior to build-out of the 4.0 mgd plant. This is illustrated in Figures 4 and 5. The Town of Buckeye is responsible for funding the construction of this expansion project to the WWTP through internal funding and a separate CFD formed by the Town.

2.2 Operation and Maintenance Responsibility

The Town of Buckeye currently is responsible for operation and maintenance of the Central Buckeye WWTP. This responsibility will remain with the Town following the completion of expansion projects.

2.3 Source of Construction Pollution

The construction of Central Buckeye WWTP expansions will not generate significant pollution. Anticipated pollution will be generated in the form of dust, equipment noise and exhaust emissions, construction related solid waste, inert materials and residual construction materials such as paint and adhesives. Any waste generated during construction will be disposed of properly in a permitted waste facility.

The water table at the site is high, often within 5-feet of the ground surface or closer. Groundwater is being pumped, dewatering the site to facilitate construction. Pumped groundwater is discharged under a discharge permit to the Buckeye Irrigation District ditch that runs through the property.

3.0 FINANCING AND OTHER ACTIONS TO IMPLEMENT PLAN

3.1 Financing Plan

Funding for the current expansion of the Central Buckeye WWTP will come from both Town funds, capacity/connection charges, grants, loans, and a Community Facilities District (CFD) formed by the Town of Buckeye. The CFD funding will be developed to provide financing to add 3.0 mgd of treatment capacity to the existing Central Buckeye WWTP.

The Town of Buckeye will collect monthly user fees to finance the operation and maintenance of the expanded treatment plant. A letter from the Town stating financial capability is included in Appendix B.

3.2 Financing Capacity to Operate

The Town of Buckeye will collect monthly user fees to finance the operation and maintenance of the treatment plant. It is anticipated that the fees will offset the total cost of operation and maintenance through build out.

4.0 IMPACTS AND IMPLEMENTATION PLAN

4.1 Implementation Plan

The initial phase of the Buckeye WWTP expansion will develop a total interim plant capacity of 1.5 mgd to meet projected wastewater flows. This interim expansion is expected to be completed in October 2005.

Concurrent to this interim expansion, a 3.0 mgd expansion will also be constructed. This expansion will begin in May 2005 and be completed in May of 2006. This expansion will bring the total plant capacity to 4.0 mgd by May 2006.

An additional 3.0 mgd expansion is currently being planned by the Town of Buckeye. Design of this expansion is expected to be during construction of the first 3.0 mgd expansion. The second 3.0 mgd expansion will bring the capacity of the plant to 7 mgd in the year 2008.

4.2 Impacts of Proposed Plan

The effect of the expansion of the Buckeye WWTP is not expected to impact the operation of any adjacent municipality, nor any existing sanitary district or certificated area, nor any communities or businesses.

A letters of no objection from Maricopa County has been included in Appendix C, because the Central Buckeye WWTP is located within three miles of the Maricopa County.

5.0 PUBLIC PARTICIPATION

MAG is responsible, with cooperation from the Town of Buckeye, for ensuring that the following actions are taken as the 208 Plan Amendment process proceeds:

1. Submittal of a mailing list that will be used to notify the public of the hearing on this 208 Amendment
2. 30-day notification to the public of the location where documentation pertaining to this 208 Amendment is available for review.
3. Publication of a public notice with information on the date, time, subject, and location of the public hearing on this 208 Amendment at least 45 days prior to the hearing.
4. Submittal of an affidavit of publication of the public notice.
5. Submittal of a responsiveness summary for the public hearing.

APPENDIX A

Buckeye WWTP Expansion Summary Schedule for 1.5 and 3.0 mgd Construction

CDM
February 1, 2005

TASKS	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05	Jan-06	Feb-06	Mar-06	Apr-06	May-06
1.5 MGD																	
Procurement																	
Underground Piping																	
Anoxic Basin																	
Interim Lift Station																	
Electrical and Instrumentation																	
3.0 MGD																	
Demolition																	
Underground Piping																	
Influent PS / Headworks																	
Aeration Basin																	
Secondary Clarifier1																	
Secondary Clarifier2																	
Tertiary Filters																	
Chlorine Contact Basin																	
Disinfection Facility																	
Solids Facility																	
Electrical and Instrumentation																	

APPENDIX B



TOWN OF BUCKEYE

April 13, 2005

Ms. Brenda Day
Environmental Planning Program Manager
Maricopa Association of Governments
302 North 1st Avenue Suite 300
Phoenix Arizona 85003

Re: Central Buckeye Wastewater Treatment Plant

Dear Ms. Day:

The Town of Buckeye is responsible for the construction, operation, maintenance, and closure of the Central Buckeye Wastewater Treatment Plant located in the Town of Buckeye, Arizona. Funding for expansion of the Central Buckeye WWTP will come from both Town funds, capacity/connection charges, grants, loans, and a Community Facilities District (CFD) formed by the Town of Buckeye, with financing of the CFD provided by developers who plan to build in the Town.

The estimated cost of the facility's operation and maintenance at a capacity of 16.6 mgd is \$5.8 million per year. The Town of Buckeye will collect operation and maintenance costs from individual users through monthly service fees.

The total estimated closure costs for the Central Buckeye Wastewater Treatment Plan are \$1.32 million. The Town of Buckeye is financially capable of meeting these costs. Closure costs will be collected over the life of the facility through monthly service fees from the individual users. There are no post-closure costs expected for this facility.

Sincerely,

Ron Brown
Finance Director
Town of Buckeye

APPENDIX C

ENVIRONMENTAL SERVICES
DEPARTMENT

Albert F. Brown, RS, MPA, Director

1001 N. Central Avenue, Suite 150
Phoenix, Arizona 85004



WATER AND WASTE MANAGEMENT
DIVISION

John A. Power, PE, Division Manager

(602) 506-6666
FAX (602) 506-6925
TT (602) 506-6704

April 14, 2005

Maricopa Association of Governments
302 North 1st Avenue, Suite 300
Phoenix, Arizona 85003

Attention: Ms. Lindy Bauer, Environmental Program Coordinator
Re: Town of Buckeye Proposed 208 Amendment for Central Buckeye Wastewater Treatment Plant

Dear Ms. Bauer:

CDM has submitted a proposed 208 Amendment to the Maricopa County Environmental Services Department (MCESD) for expansion of the Central Buckeye Wastewater Treatment Plant. The facilities are located near 7th Street and Irwin Road in the Town of Buckeye.

In accordance with the MAG 208 Water Quality Management Plan, the proposed 208 Amendment for the facility was submitted to this Department for comment, since the facility is located within three miles of the unincorporated area of Maricopa County.

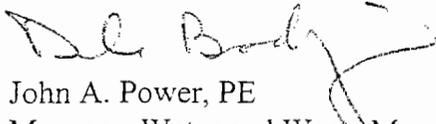
Based on a review of the proposed 208 Amendment, dated April 2005, the Maricopa County Environmental Services Department, Water and Waste Management Division supports the expansion of the Central Buckeye Wastewater Treatment Plant. It should be noted that the required Air Quality Permit referenced in the document is issued by the Maricopa County Air Quality Department, not ADEQ.

Please note that MCESD 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 this 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.

Page 2 of 2
April 14, 2005
Ms. Lindy Bauer
Central Buckeye Wastewater Treatment Plant

If you have any questions or comments, please feel free to contact Mr. Dale Bodiya or myself, at 506-6666.

Sincerely,



for
John A. Power, PE
Manager, Water and Waste Management Division

cc:

Mr. Dale Bodiya, PE, Manager, Water / Wastewater Treatment Section, MCESD
ADEQ, Manager, Water Permits and Plan Review Section
Mr. Carroll Reynolds, Town Manager, Town of Buckeye
Mr. Chris Young, PE, Public Works Director, Town of Buckeye
Mr. Paul Gustafson, PE, CDM
File

PUBLIC HEARING ON THE DRAFT MAG 208 WATER QUALITY MANAGEMENT PLAN AMENDMENTS FOR THE EXPANSION OF THE CENTRAL BUCKEYE WASTEWATER TREATMENT PLANT AND CITY OF SURPRISE SPECIAL PLANNING AREA 2 REGIONAL WATER RECLAMATION FACILITY

Tuesday, July 12, 2005 at 4:00 p.m.

MAG Office, Suite 200 - Saguaro Room
302 North 1st Avenue Phoenix, Arizona 85003

The Maricopa Association of Governments (MAG) will conduct a public hearing on the Draft MAG 208 Plan Amendments for the Expansion of the Central Buckeye Wastewater Treatment Plant and the City of Surprise Special Planning Area 2 Regional Water Reclamation Facility. The purpose of the hearing is to receive public comments on the draft amendments.

The Central Buckeye Wastewater Treatment Plant is identified in the current MAG 208 Plan as the "Town of Buckeye Wastewater Treatment Plant" with a capacity of 2.0 million gallons per day (mgd) and an Arizona Pollutant Discharge Elimination System (AZPDES) permit discharge. The proposed facility expansion would increase capacity to 16.6 mgd and the facility name would be changed to the "Central Buckeye Wastewater Treatment Plant." The expanded facility would continue to have an AZPDES permit discharge.

The proposed Surprise Special Planning Area 2 Regional Water Reclamation Facility would have a capacity of 10.5 mgd and would be located in the northeast quarter of Section 18 of Township 4 North, Range 1 West. Reclaimed effluent would be disposed of through reuse, recharge and a potential future AZPDES permit discharge to the McMicken Dam Outlet Channel or the Agua Fria River.

Following consideration of comments received, it is anticipated that the MAG Water Quality Advisory Committee will make a recommendation to the MAG Management Committee. On July 13, 2005, the MAG Management Committee is anticipated to make a recommendation to the MAG Regional Council. It is anticipated that the MAG Regional Council will take action on the draft plan amendments on July 27, 2005.

The draft documents will be available for public review at the MAG Office from 8:00 a.m. to 5:00 p.m. Monday through Friday beginning May 27, 2005.

Copies will also be available for review at the Glendale Public Library, 5959 West Brown Street; Mesa Public Library, 64 East First Street; and Phoenix Central Public Library, 1221 North Central Avenue. Public comments are welcome at the hearing, or may be submitted in writing by 4:00 p.m. on July 12, 2005 to MAG staff at the address below.

Contact Person:
Julie Hoffman
302 North 1st Avenue, Suite 300 Phoenix, AZ 85003
Fax: (602) 254-6490
05306-May 26, 2005

THE ARIZONA REPUBLIC

STATE OF ARIZONA }
COUNTY OF MARICOPA } SS.

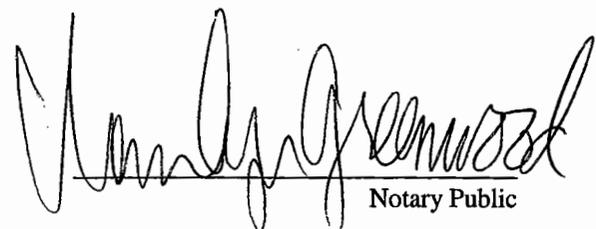
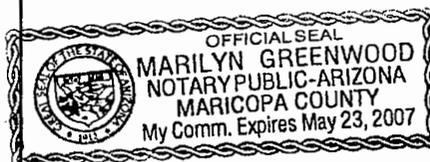
Tabitha Antoniadis, being first duly sworn, upon oath deposes and says: That she is a legal advertising representative of the Arizona Business Gazette, a newspaper of general circulation in the county of Maricopa, State of Arizona, published at Phoenix, Arizona, by Phoenix Newspapers Inc., which also publishes The Arizona Republic, and that the copy hereto attached is a true copy of the advertisement published in the said paper on the dates as indicated.

The Arizona Republic

May 26, 2005



Sworn to before me this
9TH day of
August A.D. 2005


Notary Public

May 26, 2005

TO: Interested Parties for Water Quality

FROM: Julie Hoffman, Environmental Planner

SUBJECT: PUBLIC HEARING ON THE DRAFT MAG 208 WATER QUALITY MANAGEMENT PLAN AMENDMENTS FOR THE EXPANSION OF THE CENTRAL BUCKEYE WASTEWATER TREATMENT PLANT AND CITY OF SURPRISE SPECIAL PLANNING AREA 2 REGIONAL WATER RECLAMATION FACILITY

Public Hearing

July 12, 2005 at 4:00 p.m.
MAG Office, Saguaro Room
302 N. 1st Avenue, Second Floor
Phoenix, Arizona 85003

The Maricopa Association of Governments (MAG) will conduct a public hearing on the Draft MAG 208 Water Quality Management Plan Amendments for the Expansion of the Central Buckeye Wastewater Treatment Plant and the City of Surprise Special Planning Area 2 Regional Water Reclamation Facility on July 12, 2005. The purpose of the hearing is to receive public comments on the draft plan amendments.

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For your information and convenience, a copy of the public hearing notice is enclosed. The draft documents are available for public review at the MAG Office, third floor from 8:00 a.m. to 5:00 p.m. Monday through Friday. Copies are also available for review at the Glendale Public Library, 5959 West Brown Street; Mesa Public Library, 64 East First Street; and Phoenix Central Public Library, 1221 North Central Avenue. For further information or to submit written comments on the draft amendments prior to the hearing, please contact me at (602) 254-6300.

**PUBLIC HEARING ON THE DRAFT MAG 208 WATER QUALITY MANAGEMENT PLAN
AMENDMENTS FOR THE EXPANSION OF THE CENTRAL BUCKEYE WASTEWATER
TREATMENT PLANT AND CITY OF SURPRISE SPECIAL PLANNING AREA 2 REGIONAL
WATER RECLAMATION FACILITY**

Tuesday, July 12, 2005 at 4:00 p.m.
MAG Office, Suite 200 - Saguaro Room
302 North 1st Avenue
Phoenix, Arizona 85003

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Contact Person: Julie Hoffman
302 North 1st Avenue, Suite 300
Phoenix, AZ 85003
Fax: (602) 254-6490

Maricopa Association of Governments
Received

AUG 12 2005

MARICOPA ASSOCIATION OF GOVERNMENTS
WATER QUALITY ADVISORY COMMITTEE AND PUBLIC HEARING
ON THE DRAFT MAG 208 WATER QUALITY MANAGEMENT PLAN
AMENDMENTS FOR THE EXPANSION OF THE CENTRAL BUCKEYE WWTP
AND CITY OF SURPRISE SPECIAL PLANNING AREA 2 REGIONAL WRF

Phoenix, Arizona
July 12, 2005
4:05 p.m.

Glennie
Reporting Services

5333 North 7th Street
Suite B110
Phoenix, Arizona 85014-2840

(602) 266-6535 Phone
(602) 266-9661 Fax

Prepared by:
Cecelia Brookman, RPR
Arizona Certified Court
Reporter No. 50154

Prepared for:

MAG

(Original)

THE PUBLIC HEARING

1
2 was taken on July 12, 2005, commencing at 4:05 p.m., at
3 the offices of the Maricopa Association of Governments,
4 302 North First Avenue, Suite 200, Saguaro Room, Phoenix,
5 Arizona; before CECELIA BROOKMAN, a Certified Court
6 Reporter, Certificate No. 50154, for the State of
7 Arizona.

8 Mr. Roger Klingler for the City of Scottsdale
9 acted as the Chairman.

10 Members attending were Greg Stack, City of
11 Avondale; Robert Goff, City of Chandler, appearing
12 telephonically, for Jacqueline Strong; Lonnie Frost, Town
13 of Gilbert; Chris Ochs, City of Glendale; David Iwanski,
14 City of Goodyear; Bill Haney, appearing telephonically,
15 City of Mesa; Steven Bontrager, appearing telephonically,
16 City of Peoria; Robert Hollander, City of Phoenix, Rich
17 Williams, Sr., City of Surprise; David McNeil, City of
18 Tempe; Dale Bodiya for John Power, Maricopa County;
19 Patrick Clay, U of A Cooperative Extension; Eugene
20 Jensen, citizen representative.

21 Also present were Brenda Day, Maricopa
22 Association of Governments; Doug Kobrick, CDM; Richard
23 Rhoads, PERC; Julie Hoffman, Maricopa Association of
24 Governments; Joe Giudice, Town of Buckeye; Lucky Roberts,
25 Town of Buckeye; Jessica Marlow, CDM; Rachel Aja,

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Homebuilders Association of Central Arizona; Mark Edelman, Richmond American Homes of Arizona; Guy Carpenter, HDR Endineering; Scott Switzer, Lennar Communities; Dave Imoshita, Pulte Homes; Edwina Vogan, Arizona Department of Enviornmental Quality; Julie Finke, Arizona Department of Environmental Quality.

PUBLIC HEARING - 7/12/2005

1 CHMN. KLINGLER: Good afternoon, thank you
2 for attending our meeting.

3 I'd like to call the meeting to order. We
4 do have a quorum, and I would like to double-check here
5 with folks. Just remember that we need to speak into the
6 microphone. We are expecting some folks that are going
7 to join us by audio conference or videoconference and
8 they can only hear you if you speak into the mike, and
9 let's again, as we do, go around the table and introduce
10 ourselves so everybody knows who is here. Let's start at
11 Rich and go around.

12 MR. WILLIAMS: Rich Williams, City of
13 Surprise.

14 MR. IWANSKI: Dave Iwanski, City of
15 Goodyear.

16 MR. JENSEN: Gene Jensen, citizen
17 representative.

18 MR. McNEIL: Dave McNeil, City of Tempe.

19 MR. HOLLANDER: Robert Hollander, City of
20 Phoenix.

21 CHMN. KLINGLER: Roger Klingler, City of
22 Scottsdale.

23 MR. OCHS: Chris Ochs, City of Glendale.

24 MR. STACK: Greg Stack, City of Avondale.

25 MR. FROST: Lonnie Frost, Town of Gilbert.

1 MR. CLAY: Patrick Clay, University of
2 Arizona Cooperative Extension.

3 CHMN. KLINGLER: Do we have anybody, Jackie
4 or Bill joining us?

5 MR. GOFF: This is Bob Goff from Chandler.

6 MR. HANEY: Bill Haney from Mesa. I have to
7 excuse myself probably about 25 till.

8 CHMN. KLINGLER: We'll see if you're excused
9 Bill, the Chair will rule on that. Thank you for joining
10 us there.

11 We do have an item, our number two item on
12 the agenda is for agencies' report on any activities of
13 interest occurring, if they would have anything to
14 report, go to that today.

15 (No response.)

16 CHMN. KLINGLER: Hearing none, let's go to
17 our call to the audience. So it's an opportunity for any
18 citizen to comment on any items that are not scheduled on
19 today's agenda that fall under the jurisdiction of MAG or
20 on items on the agenda for discussion but not for action.
21 This is the only opportunity for comment on non action
22 items.

23 Because of state law the committee may not
24 discuss or take action on any items not scheduled on the
25 agenda. For members of the audience who wish to speak,

1 cards are available. Does anyone want to speak from the
2 audience that turned in a card?

3 (No response.)

4 CHMN. KLINGLER: Hearing none, let's proceed
5 to the next item of business, which is the approval of
6 our minutes from the last meeting of May 19th. Those
7 minutes were distributed in advance and I've had an
8 opportunity to review them. Are there any comments, any
9 changes or additions to the minutes, or corrections?

10 (No response.)

11 CHMN. KLINGLER: Hearing none, the Chair
12 will entertain a motion for approval.

13 MR. FROST: Move to approve.

14 CHMN. KLINGLER: Move to approve. Is there
15 a second?

16 MR. WILLIAMS: Second.

17 CHMN. KLINGLER: Seconded. Any further
18 discussion?

19 (No response.)

20 CHMN. KLINGLER: All in favor, please say
21 aye.

22 (Chorus of ayes.)

23 CHMN. KLINGLER: Proposed, nay.

24 (No response.)

25 CHMN. KLINGLER: Motion carries unanimously.

1 Let's just open our public hearing on the
 2 draft MAG 208 plan amendment for the expansion of the
 3 central Buckeye wastewater treatment plant and the City
 4 of Surprise Special Planning Area 2 water reclamation
 5 facility. We'll begin with a briefing on each draft
 6 amendment, and following the briefing, hearing
 7 participants are invited to make comments for the public
 8 record.

9 A court reporter is present to provide an
 10 official record of the hearing. Written comments are
 11 also welcome. For those wishing to speak on any of the
 12 draft amendments please fill out a yellow card
 13 available --

14 MR. BONTRAGER: Steven Bontrager, City of
 15 Peoria.

16 CHMN. KLINGLER: Welcome, Steve.

17 MR. BONTRAGER: Thank you.

18 CHMN. KLINGLER: Any member of the audience
 19 fill out a yellow card and hand it to MAG staff. First
 20 we'll have Doug Kobrick of CDM provide a briefing on the
 21 draft central Buckeye expansion amendment. Doug.

22 MR. KOBRICK: Thank you. This is the same
 23 presentation basically you saw from me before, at the
 24 previous meeting.

25 This is a proposed 208 plan amendment for

1 the central Buckeye wastewater treatment plant formerly
2 known as the Buckeye wastewater treatment plant.

3 Basically, the central Buckeye service area
4 is what used to be referred to as the core area of
5 Buckeye. It's the existing town as we know it, and
6 surrounding area, approximately both MAG RAZs 278, 279.
7 It's everything north of the Gila River and most of
8 everything south of I-10, except for the Sundance area,
9 and it spans from approximately State Route 85 on the
10 west all the way over to the corporate boundary with the
11 City of Goodyear on the east side of Buckeye.

12 You will note there are a couple of other
13 treatment plants in the area. The green shaded area is
14 the Sundance planning area. There is a treatment plant
15 already in existence that serves the Sundance project
16 there. A little further to the north is the Verrado
17 wastewater treatment plant operated by Arizona American.
18 It serves the Verrado project. To the west is another
19 planning area for another proposed treatment plant, the
20 Palo Verde Road wastewater treatment plant.

21 These are the population and flow
22 projections for the central Buckeye service area for the
23 next 20 years. You'll note that the cumulative
24 population at the end of the 20-year period will be about
25 165,000 people, up from somewhere around 12,000 right

1 now. So a tremendous amount of growth expected in this
 2 area, and it will continue after this planning period is
 3 over as well.

4 So a large increase in flow. Converting
 5 that into MGD you can see that using 100 gallons per
 6 capita per day, we wind up with projected flow of 16.6
 7 MGD at the end of the planning period.

8 There's a phased expansion strategy for this
 9 treatment plant. Right now the plant gets about one-half
 10 of an MGD, about 500,000 gallons per day of effluent
 11 flow. You can see obviously there's going to be a large
 12 jump in flow to 16.6. Right now there's an expansion to
 13 .97 MGD that is complete and is in the start-up phases
 14 right now, already constructed.

15 This layout shows the .97 MGD facility.
 16 Basically, it amounts to some modifications of the
 17 previously existing oxidation ditch, the construction of
 18 a new secondary clarifier, the abandonment of the
 19 existing sludge drawing beds, replacing them with a belt
 20 filter press for dewatering the biosolids from the plant,
 21 and some upgrades to the chlorine contact system.

22 The next step in our phased expansion
 23 strategy is to take the plant to one and a half MGD but
 24 we're making a stop along the way. One and a half MGD
 25 interim capacity, which will be in-service temporarily,

1 and we're accomplishing that by building some of the
2 portions of the 4 MGD plant early, and combining them
3 with the .97 MGD plant to yield one and a half MGD of
4 capacity. That project is already in motion. That's
5 within the previously existing two MGD planning for the
6 City of Buckeye so we didn't require an amendment for
7 that capacity. The project that we have completed design
8 on now takes the plant adds 3 MGD to the plant, taking it
9 to 4 MGD.

10 This shows the layout for the one and a half
11 MGD plant. Basically what we're doing is constructing
12 the anoxic cells of our future anoxic, oxic
13 denitrification process early so we can combine them with
14 the existing oxidation ditch and achieve a higher flow of
15 denitrification of the plant. It requires a fair amount
16 of temporary piping and pumping, but basically it's early
17 construction of the anoxic basins.

18 When we go to 4 MGD we'll be adding an
19 entirely new 3 MGD train, and this summarizes the
20 treatment processes. There will be new headworks for the
21 3 MGD. Secondary treatment will consist of our inflow
22 process for denitrification. We went beyond the
23 conventional MLE process of our inflow because of the
24 high input nitrogen concentration that had been monitored
25 in Buckeye, and we're seeing, in some of the other

1 treatment facilities in the area, on the order of total
2 kilo nitrogen from around 50 to 60, so that kind of
3 leaves the realm of MLE effectiveness. So we've upgraded
4 our inflow tertiary treatment with aquadisk type filters.
5 We're going to intervene with the chlorine disinfection
6 hyperchlorite facility, additional belt filter presses
7 for solids dewatering. The sludge will be disposed of at
8 a licensed landfill and the effluent will be discharged.
9 The plant has a discharge permit to the Gila River and
10 you see two alternatives there, an outfall pipe or a
11 Buckeye irrigation district ditch. The town is very
12 close to completing arrangements with the BID to make use
13 of the ditch as the disposal point for the effluent from
14 the plant.

15 This is a layout that shows the facilities
16 we're adding, a new headworks, second clarifiers, set of
17 anoxic and aeration basins on the west, which is the west
18 in this view; the disk filters just to the south of the
19 clarifiers, belt filter presses further to the south, and
20 then chlorine disinfection on the east side of the plant.

21 As I mentioned, there's quite a bit
22 additional flow anticipated at Buckeye. The concept for
23 future expansions is to continue to construct 3 MGD
24 increments of capacity as time goes on.

25 For starters, we're looking at mirroring the

1 current expansion. If permit requirements change in the
2 future we may have to revisit that, but there's no
3 indication that we will. We are taking a look right now
4 at the potential to add primary clarifiers, and anaerobic
5 digestion in the plant at some point in the future.

6 We're doing the site master plan study
7 that's noted here. We're about halfway through that
8 study. I'm trying to evaluate some of these additional
9 concepts for the future.

10 The projected flow from the plant at the end
11 of the 20-year planning period is 16.6 MGD, and this
12 layout shows how we could accomplish that treatment on
13 the existing site, and some additional land that the town
14 owns to the south of the berm dock ferry that constitutes
15 the treatment plant right now.

16 In addition, the town owns a sizable parcel
17 of land across the street, to the east. It's about
18 another 40 acres on the east side of Buckeye and Seventh
19 Street. So the total plant site amounts to about 46
20 acres, and we believe it's going to be sufficient for all
21 future expansions. As I mentioned, the flow will go
22 beyond 16 MGD ultimately. Could be as high as 40 MGD, we
23 believe, at full buildout.

24 Future treatment process options. As I
25 mentioned, some consideration is being given to adding

1 primaries, or anaerobic digesters. We're evaluating the
2 feasibility of UV disinfection in place of chlorine. And
3 in the future, the town will be seeking potential
4 alternative methods of biosolids disposal besides just
5 the landfilling option. That could be land application
6 or other beneficial reuse.

7 At the last meeting there was a question
8 about the layout for the future plant site so I brought
9 this board here. I'm going to try to point to the board
10 without losing contact with the mike here, which may be
11 difficult. But if you look on what's your right side of
12 this sheet, you'll see a line of a number of treatment
13 trains. That's a layout for a 40 MGD plant, adding
14 33 MGD east of Seventh Street, and keeping the 7 MGD on
15 the west side of the street. There's sufficient space,
16 and we reserved space for additional biosolids processes
17 if we need them, and also for effluent storage and
18 potential distribution facilities, and effluent pump
19 station, for example.

20 Effluent quality goals. The plant is being
21 designed now to be Class A plus water quality, it will
22 stay that way. As I mentioned right now, the town
23 discharges its effluent from the treatment plant, but
24 certainly the goal in the long-term is to make a
25 beneficial reuse of that water. Biosolids, the current

1 design is to dewater the material to meet landfilling
2 requirements, and the possibility of going to a higher
3 grade product for the future is certainly there. But
4 right now the plan is landfilling.

5 This is a summary of the permitting
6 requirements we're addressing in the project.

7 And summary of our schedule. The one and a
8 half MGD interim capacity is under construction now.
9 Garney Construction is the cement risk firm building the
10 project. The 4 MGD capacity is scheduled for mid 2006.
11 There are some items that need to be resolved to get the
12 CFD in place to fund that project, but they're moving
13 forward. It may be late 2005, mid 2006, but it's still
14 on track for 2006.

15 The seven or perhaps expansion to 10 MGD is
16 in the planning phases right now. We've begun studies
17 and design work for the expansion. Basically, we are
18 going to be designing another 6 MGD there. The town and
19 the group of developers that are funding that project may
20 elect to build just three initially or they may build the
21 full six, depending on how the development proceeds there
22 in that central Buckeye area. As I mentioned, there's
23 considerable room for future expansions as needed, based
24 on the growth of the community.

25 Here's a summary of some of the

1 implementation actions. The town will own and operate
2 and maintain the plant throughout. They'll be in charge
3 of getting all the permits and holding them. They will
4 provide or obtain funding for designing construction.
5 The 4 MGD increment capacity expansion, 2.4 MGD, is being
6 funded by the CSD, it's in the process of being formed
7 right now. The next couple of expansions is probably
8 going to be funded in cash by a consortium of developers
9 working with the town to expand the treatment plant, and
10 beyond that it will have to be worked out on a as-needed
11 basis. The town will pay the costs of O&M for the
12 facility and recoup them from customer rates and charges.
13 There aren't any impacts anticipated on any wastewater
14 utilities or businesses, and the town has received a
15 letter of no objection from Maricopa County, which is the
16 only government jurisdiction adjoining or within three
17 miles of the plant.

18 That concludes my presentation. Any
19 questions?

20 CHMN. KLINGLER: Thank you, Doug. We did
21 have an opportunity at the last meeting to have the
22 committee ask a lot of questions at that point and you
23 expanded on some of those here. What we'd like to do is
24 go through the next presentation, and have any public
25 comments and if you could hang around for after that, if

1 there's any committee comments. We'll move on to the
2 next one right now. Thanks, Doug.

3 That was our Buckeye presentation, and then
4 we're going to talk about the Surprise amendment, and
5 Rich, you wanted to introduce that. Were you going to
6 address the letter that's at folks' desk or did you want
7 the staff to do that too, or is that part of the
8 presentation?

9 MR. WILLIAMS: If staff could address the
10 letter I think that would be appropriate. I just wanted
11 to take a few seconds and restate that the Lennar group
12 and the city are partnering on the Asante project in
13 developing in the new planning area, Special Planning
14 Area 2, as part of our six planning areas that we
15 provided for our city general plan and, too, for better
16 management.

17 Again, I restate we have a wastewater master
18 plan in place. We have an ongoing technology assessment.
19 After the developer phase, which is represented here
20 today, we're working with a larger group of developers
21 for the city to design and construct a regional facility
22 in phases, in nodule phases, two to three million gallons
23 per day, and to again restate that the city will be the
24 permit holder and own and operate the facility once the
25 construction and the performance testing is concluded.

1 CHMN. KLINGLER: Rick, Go ahead with the
2 presentation, then.

3 MR. RHOADS: I'm Rick Rhoads. I'm
4 operations manager for Pacific Environmental Resources
5 Corporation and on behalf of PERC I would like to thank
6 you for the opportunity to make this presentation.

7 SPA 2 regional water reclamation facility
8 will serve the Asante, Desert Oasis, and other
9 developments located in the SPA 2 service area of
10 Surprise. We'll discuss the population and wastewater
11 projections for this area and what type of treatment
12 process and effluent disposal.

13 Phase I of the SPA 2 facility will be
14 financed by Lennar Corporation. Upon completion of the
15 facility, ownership will be conveyed to the City of
16 Surprise. The City of Surprise will operate the facility
17 with city staff or with contract operations.

18 This is a map illustrating the City of
19 Surprise special planning areas. The area in blue is the
20 SPA 2 service area. The SPA 2 regional water reclamation
21 facility will be designed to handle the Asante master
22 planned community, Desert Oasis and other developments
23 within the SPA 2 service area.

24 By 2020, it's estimated the population of
25 the SPA 2 service area will be approximately 96,600

1 people. That equates to 10.5 million gallons per day in
2 expected flows to that area. The SPA 2 regional water
3 reclamation facility will be designed in phases capable
4 of expanding to accommodate the ultimate buildout of the
5 surrounding development with the ultimate buildout being
6 10.5 MGD, first phase being 1.2 MGD.

7 The SPA 2 site was selected for the
8 following reasons: Wastewater flows by gravity to this
9 facility; there are sufficient setbacks at the site;
10 makes effective use of the land; and it's close to
11 possible discharge locations.

12 Phase I of the facility will be a 1.2 MGD
13 PERC ASP facility, which is a hybrid SBR tertiary
14 treatment using disk filtration and UV disinfection. The
15 facility will meet ADEQ Title 18 Class A plus effluent
16 standards as well as EPA Class B biosolids requirements.

17 The treatment process will be completely
18 enclosed and supplied with odor control equipment. You
19 can see the basins will be underneath the buildings.

20 This slide illustrates the treatment process
21 schematics from the headworks through disinfection
22 process. The SPA 2 water reclamation facility will
23 produce Class A plus effluent meeting Arizona Title 18
24 requirements.

25 This is an overview of the regulatory

1 agencies we are working with to obtain the necessary
2 permits for the facility.

3 This is the anticipated schedule for the
4 facility. The first phase design will be complete in
5 September of this year. Construction will begin December
6 of this year and continue through December of 2006, with
7 start-up commencing in January of 2007.

8 These are the primary and secondary effluent
9 disposal options. Potential irrigation of golf courses
10 and parks; on-site reuse for processed water; potential
11 lake source water; landscaped irrigation; discharge to
12 adjacent recharge basins; underground storage and
13 recovery; and possibly an AZPDES discharging plan.

14 CHMN. KLINGLER: Thank you, Rick, I
15 appreciate it. If you would stand by after the public
16 comment, if there's any questions we'll get to that, I'd
17 appreciate it. Thank you.

18 I'd like to give Brenda the chance to go
19 over the letter that's at your desk.

20 MS. DAY: I wanted to explain real quickly
21 why the letter was handed out. The City of Peoria
22 revised their objection, no objection letter as a
23 jurisdiction within three miles. They wanted to clarify
24 they have no concern with the planning area boundaries
25 for the special planning area facility, just to clear it

1 up. It was mentioned in the initial letter, and a
2 concern with the plan area boundary was mentioned and it
3 turned out that was actually a concern with our October
4 2002 MAG 208 plan map for the City of Surprise. That's
5 what he was referring to. So he just wanted to clarify
6 in this letter here.

7 CHMN. KLINGLER: There's just so many going
8 on in Surprise, even Peoria can't keep up. Thank you,
9 Brenda, appreciate the letter. Thank you for clarifying.

10 What we're going to do next, the public
11 comments are invited on each of these amendments, and
12 right at the beginning of the cards at this point is
13 there anyone in the audience that wants to provide public
14 comment at this public hearing on these two amendments?

15 (No response.)

16 CHMN. KLINGLER: Hearing none then at this
17 time I'd like to officially close the public hearing and
18 request the court reporter end the transcription. Thank
19 you.

20 (TIME NOTED: 4:29 p.m.)

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STATE OF ARIZONA)
)
COUNTY OF MARICOPA)

I, CECELIA BROOKMAN, a Certified Court Reporter, Certificate No. 50154, in the State of Arizona, do hereby certify that the foregoing pages constitute a full, true, and accurate transcript of all proceedings had in the foregoing matter, all done to the best of my skill and ability.

I FURTHER CERTIFY that I am not related to nor employed by any of the parties hereto, and have no interest in the outcome.

WITNESS my hand this 1st day of August, 2005.



Cecelia Brookman, RPR
Arizona Certified
Court Reporter No. 50154