Appendix B: PAG 208 Planning Background

Table of Contents

Chapter 1: Record of Changes – 2020 Update 5

Changes Reflected in the 2020 208 Plan Update 5
- New Supportive Resources 5
  - Adopted Procedures Flow Charts 5
  - Modernized Access through an Interactive Online 208 Portal 5
  - Additional Resources Appendix 5
- Changes to Adopted Procedures 6
  - Plan Updates 6
  - Processing Fees 6
  - Procedure Triggers 6
- Procedure Steps 8
- Organizational Changes and Reduction of Text 9
  - Reduction and Automation 9
  - Data Source Links 9
  - Consolidation 9
  - Strategic Action Plan Format 13
  - Terminology Updates 13
- Data Updates 13
  - Water Quality Conclusions 13
  - DMA and Facility Descriptions 13
  - Projections 13
  - Service Area Maps 13
- Integrated into this Update 13

Chapter 2: History, Regulations and Authorities 18

Regulatory Requirements For 208 Planning 18
- Federally Required Elements in a 208 Plan 18
- State Responsibilities and Plan Requirements 19
  - Statewide Coordination 19
  - DPA Funding 19
  - Local Coordination 20
  - DPA Designation 21
- DPA Plan Requirements 21
- Requirements to Update 208 Plans 22

Related Regulations 22
- Groundwater 22
- Resource Conservation and Recovery Act 23
- CERCLA 23
- WQARF 24

History of Regulations and Changes 24
- Clean Water Act 24
  - Federal and State Changes Reflected in Previous 208 Plan Updates 24

Federal and State Changes Since the 2006 PAG 208 Plan Update 25
History of Wastewater Treatment and Management in Pima County 26
Management Agency Designation Phases in Pima County 26
Previous 208 Plans, Amendments, and Policy Updates 27
Overview of the Original 208 Plan 27
Amendments and Point Source Updates to the 208 Plan 28

Chapter 3: Setting of Planning Area 32
Planning Area Description 32
Natural Setting 34
Watersheds 34
Boundaries 34
Watershed Approach 35
Climate 36
Geology 37
Hydrology 37
Groundwater Hydrology 37
Surface Water Hydrology 39
Biology 40
Vegetative Communities and Habitat 40
Wildlife 42
Aquatic Species 43
Population 44
Local Governments 45
Land Use/Ownership 46
Water Resources 48
Shallow Groundwater and Riparian Areas 48
Shallow Groundwater Areas 49
Conservation Effluent Pool 53
Central Arizona Project Water 53
Reclaimed Water 54
City of Tucson Reclaimed Water 54
Pima County Reclaimed Water 55
Recycled Water 56
Recharge 56
Effluent Rights 60
Surface Water 61
Stormwater Runoff 67

Chapter 4: Public Participation Records – 2020 Update 68
Requirements and Process 68
Documentation of Activities 69
A. Records of Advisory Group Compliance 70
208 Advisory Group Requirement Documentation 70
EPAC/WPS Meeting Management 70
Advisory Group Composition 80

B. Summary of Developmental Input 81
Meeting Schedule 82
Summary of WPS, EPAC and Interested Party Feedback 83
C: Record of WPS/EPAC Meeting to forward the 208 Plan to Public Hearing 87
D: Records of Public Hearing and Comment Period 93
E: Records of Recommendation for Plan Approval by PAG Management Committee 107
F: Records of Plan Adoption by PAG Regional Council 116
G: Summary of Submission to and Approval by ADEQ 127
H: Summary of Submission to and Approval by EPA 127

List of Figures

Figure 1. Diagram of Simplified 208 Plan Process Steps 9
Figure 2. Map of PAG 208 Planning Area: Political and Watershed Boundaries 33
Figure 3. Map of Groundwater Basins in Eastern Pima County 39
Figure 4. Photo of 1900s Vegetation along a flowing Santa Cruz River from Sentinel Peak (AZ Historical Society) 40
Figure 5. Diagram of Major Vegetation Types 41
Figure 6. Pie Chart of Land Ownership in Pima County, 2017 46
Figure 7. Pie Chart of Government Land Ownership in Pima County, 2017 46
Figure 8. Bar Chart of Land Use in Eastern Pima County, 2017 47
Figure 9. Diagram of Shallow Groundwater-Dependent Ecosystem 50
Figure 10. Map of Shallow Groundwater Areas of Eastern Pima County (PAG SGWA Report 2012) 51
Figure 11. Map of Exempt and Non-Exempt Water Production Wells in Eastern Pima County (2012) 52
Figure 12. Map of Tucson AMA Permitted Groundwater Savings Facilities 57
Figure 13. Map of Tucson AMA Underground Storage Facilities 58
Figure 14. Map of Surface Watercourses in Pima County* 64
Figure 15. Photo of an Intermittent Stream in Eastern Pima County 65
Figure 16. Photo of 1910's Santa Cruz River at El Convento (AZ Historical Society) 66
Figure 17. Agenda for the October 18, 2019 Joint Meeting of EPAC and WPS 88
Figure 18. Meeting Summary for the October 18, 2019 Joint Meeting of EPAC and WPS 90
Figure 19. October 2018 Screenshot of the Posting of the Draft 208 Plan to the WPS Webpage 93
Figure 20. Screenshot of Notice Sent to PAG Email List 94
Figure 21. December 2019 Screenshot of PAG Website 96
Figure 22. Copy of the Public Notice of the Public Hearing 97
Figure 23. Official Affidavit of Publication for Public Notice of Public Hearing 98
Figure 24. Agenda for the January 15, 2020 PAG Management Committee Meeting 108
Figure 25. Memo for the January 15, 2020 PAG Management Committee Meeting 110
Figure 26. Legal Action Report January 15, 2020 PAG Management Committee Meeting 114
Figure 27. Agenda for the January 30, 2020 PAG Regional Council Meeting 117
Figure 28. Memo for the January 30, 2020 PAG Regional Council Meeting 120
Figure 29. Legal Action Report for the January 30, 2020 PAG Regional Council Meeting 124

List of Tables

Table 1. Cross-Reference of 208 Plan Chapters - 2006 and 2020 Plan Updates 10
Table 2. Comparison of 208 Plan Processes - Private Facilities 15
Table 3. Comparison of 208 Plan Processes – Public Facilities 16
Table 4. Amendments and Updates to the 208 Plan and Other Related Regional Council Actions, 1978–2019* 29
Table 5. Population Growth in Pima County – 1980 to 2017 45
Table 6. Water Resources in Eastern Pima County 48
Table 7. Central Arizona Project Subcontracts in the Tucson AMA (CAP 2017) 53
Table 8. Recharge Information for the Tucson AMA 59
Table 9. List of Recharge Facilities in Pima County 60
Table 10. Entities Generating and/or Utilizing Effluent in Pima County (PCRWRD 2018) 61
Table 11. Perennial Streams in Pima County 61
Table 12. Intermittent Streams in Pima County 62
Table 13. List of EPAC and WPS Members 70
Table 14. List of Interested Parties 72
Table 15. PAG WPS/EPAC Membership Composition 81
Table 16. Private Facility Contacts and Results of Request for Feedback 84
Table 17. Responses to EPAC, WPS and Interested Party Feedback, February 2019 85
Table 18. Public Comments and PAG Responses (“Responsiveness Summary”) 99

Chapter 1: Record of Changes – 2020 Update

This chapter describes changes made to the 208 Plan during the most recent 208 Plan updates.

Changes Reflected in the 2020 208 Plan Update

According to federal regulations, Areawide Water Quality Management Plans (208 Plans) must be updated "as needed." An up-to-date 208 Plan is necessary to ensure efficient permitting decisions that rely on 208 Plan consistency. The previous 208 Plan update was completed in 2006. Changes in the 2020 comprehensive update were made to update data for required components and/or to streamline the plan, including efficiency of procedures. Designated Planning Agencies (DPAs) are required to maintain a minimum of a 20-year planning horizon and keep water quality conditions up to date. Multiple amendments since the adoption of the 2006 Plan regarding Designated Management Agencies (DMAs) and wastewater facilities also warranted a comprehensive update.

Streamlining was the guiding principle for the 208 Plan update. PAG's goal in streamlining the 2020 update was to create efficiency in the permit consistency review and regional coordination processes, modernize access to information, reduce redundant text, organize for ease of navigation through the plan and clarify strategies to direct funding and efforts where they are most valuable. The objective was to make the plan more efficient and effective at maintaining the purpose of regional coordination and water quality benefits. Other than the changes listed below, no other policies or procedures were changed with this update,

With adoption of the 2020 PAG 208 Plan Update, the following changes will go into effect.

New Supportive Resources

Adopted Procedures Flow Charts

New diagrams simplify navigation for wastewater permit applicants through 208 consistency processes.

Modernized Access through an Interactive Online 208 Portal

A new, interactive and online geodatabase that includes a detailed inventory of facility descriptions, allows faster data updates and generates printable facility reports. Data searches are made simpler and facilities can be sorted by DMA or watershed, depending on management needs. A facility application interface of the portal will ease the Consistency Review processes by guiding the applicant through the necessary procedures.

Additional Resources Appendix

Checklists, template letters, guides to using the 208 Portal and forms will be available in application packets to support consistency processes and submission of data updates.

Changes to Adopted Procedures

Plan Updates

The revised 208 Plan Update procedures allow policies and procedures to remain under PAG Regional Council purview and data updates to be made as needed.

- The Adopted Policies and Procedures will continue to require PAG Regional Council approval (minor changes are exempt, such as typos and edits that do not change the meaning of the text).
- The appendices can be updated administratively after 2020 208 Plan approval. These sections include water quality conditions, facility maps and descriptions, projections, projection methodology, public participation records, application materials and supplemental resources. Amendment and 208 Coordination Processes must be followed prior to updates of content that require those processes, such as DMA maps and facility descriptions. The Appendices will be updated administratively thereafter, reducing the need for a full plan update approval.
- Every 5 years, or as needed, the Arizona Department of Environmental Quality (ADEQ) and Environmental Protection Agency (EPA) will be provided notification of updates with a compilation of the revised document.

Processing Fees

An increase to fees and details of what is covered with the fees is described in the Plan Implementation section. Fees had not been increased since 1984 when it was $3,500 for an Amendment. Fees were increased using an inflation calculation for equivalent buying power and compared to other DPA rates. These new fees allow true cost recovery.

- Proposed rates are now $8,000 for significant Amendments for public and private facilities.
- To encourage regionalization, a simpler process for public facilities is warranted in certain scenarios, named the Public Facility Coordination Process (Process B), where the $3,500 fee will remain.
- Clarification is provided for additional fees of $1,000 per repeated step that extends the 208 process.
- Previously unfunded Consistency Reviews or data updates that require GIS processing by PAG will now require a fee of $1,000, which will count toward the Amendment or Public Facility Coordination Process if those processes are required.
- Provided clarification that in the event PAG must use its attorneys or retain special counsel due to unusual circumstances, PAG will bill applicant for attorney's fees at the attorney's current rate. The applicant will be notified in advance if an action may require legal counsel and associated attorney's fees.

Procedure Triggers

The criteria that trigger PAG 208 processes have not changed since the 2006 208 Plan. However, the steps of each process may have been changed in order to clarify and streamline, as

described below. See Table 2 and Table 3 below for a comparison of each trigger in this 208 Plan update to the 2006 Plan.

- The 208 Plan no longer requires a 208 Amendment process for new or expanding public Water Reclamation Facilities (WRFs) with capacities greater than 5 million gallons per day (MGD). Facilities with those criteria may now participate in a streamlined Coordination Process (Process B). The 5 MGD threshold was used to align with ADEQ's pretreatment requirement for wastewater treatment facilities (WWTFs) with capacities 5 MGD or greater which ADEQ can ensure through their permitting process. PAG's change meets the intention of 208 planning to encourage public regional facilities by easing their 208 process and allows DMAs to follow through with their capability to manage responsibilities within their areas.
- The "Consistency Report" process will no longer exist. Existing and new public facilities each with capacities less than 5 MGD and with capacities below the Consistency Factor calculation previously required a PAG Consistency Report process. Existing facilities with these criteria now only require a shorter Consistency Review and Data Update (Process A). All new public facilities will be required to participate in a streamlined Coordination Process (Process B).
- To align with state regulations regarding systems with capacities less than 0.024 MGD under Individual Aquifer Protection Permit (APP), PAG has changed this threshold for PAG Amendments for small private facilities to 0.024 MGD, instead of 0.020 MGD listed in the 2006 Plan.
- Consistency Reports was the process required in the 2006 Plan (Section 9.3) for very small, isolated WWTFs (capacities less than 0.02 MGD) meeting a number of conditions. This requirement was removed and a PAG process is no longer required. On-site systems in all DMAs with capacities less than 0.024 MGD under a Type 4 Aquifer Protection Permit and septic systems with capacities less than 0.003 MGD (3000 gallons per day) which apply under APP 4.23 General Permit are reviewed by Pima County Department of Environmental Quality (PDEQ), which has been delegated review authority by ADEQ. For APP Type 4.01 General Permits for sewage collection systems, if the facility to be constructed will be owned by the PCRWRD, the Discharge Authorization will be issued by the Tucson Office of ADEQ. A description of the approval process and application materials are available on PDEQ's website[1].
- The Consistency Factor has been updated to 25 percent, from the 20 percent to 80 percent used in the 2006 Plan. The Consistency Factor allows determinations of consistency for public facilities if expanded flows are no more than 25 percent above projected flows.
- Procedures also have been clarified if a municipality desires to gain DMA responsibilities or would like to modify an existing DMA. New DMAs must undergo a 208 Amendment process (Process C). DMA modifications must undergo a Coordination Process (Process B).
- Following the example of other DPA plans in the state, private facilities may now become wastewater management utilities (WMUs). WMU status allows private entities to gain responsibilities similar to those of DMAs. This status did not previously exist in PAG 208 Planning. Procedures for new or modified WMUs were created following the DMA and

[1] https://webcms.pima.gov/cms/one.aspx?portalId=169&pageId=63828

private facilities models. If a private entity desires to gain WMU responsibilities or modify an existing WMU, the applicant must undergo a 208 Amendment Process (Process C).

- The 208 procedures no longer require PAG Regional Council approval to initiate a 208 process nor to collect fees. DMA agreement letters help ensure agreement by key nearby stakeholders.

Procedure Steps

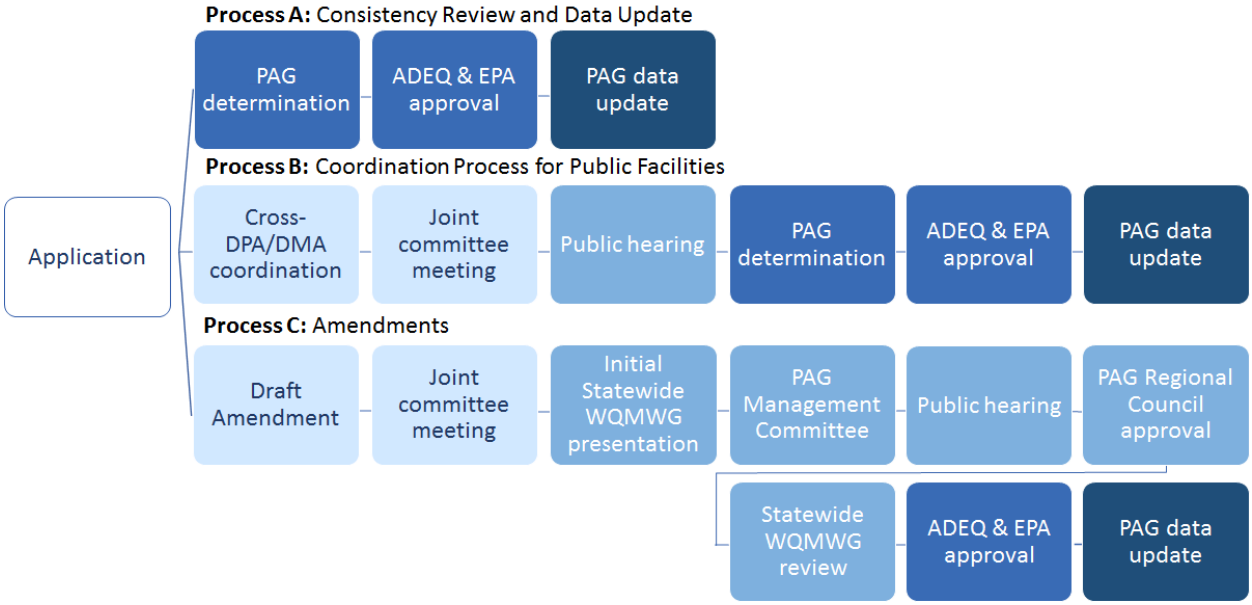
The following changes to steps in the procedures are intended to streamline and clarify. Simplified process steps are illustrated in Figure 1.

- DMAs' "decline-to-serve" and jurisdictional "sponsorship" letters may be merged when it is the same entity.
- For Process B, if a DMA is within 3 miles of a proposed project, DMAs write letters to support or agree to participate prior to initiating 208 procedures. This reduces the number of stakeholder meetings, while PAG can demonstrate consensus to ADEQ, and creates a regional coordination point where relevant.
- Clarification was provided for coordination within Joint Planning Areas (JPAs) and with other DPAs where relevant.
- A task force is not required for PAG 208 processes. Instead, relevant stakeholders, including DMAs, are to be invited to the Watershed Planning Subcommittee (WPS)/Environmental Planning Advisory Committee (EPAC) meeting which can be held jointly. DMA support letters fulfill the objective of prior coordination.
- Summarized regulations regarding advisory group formation and composition and described how PAG complies with these regulations.
- The Statewide Water Quality Management Working Group (WQMWG), EPAC and WPS meetings are now on flexible schedules and may now each be scheduled at a timely date, rather than requiring action items to wait until quarterly meetings.
- Clarification is provided about how and which committees can deny an application, which decisions allow PAG Executive Director discretion, and how an applicant can proceed with the new PAG 208 Appeal Process.
- PAG, the DMAs and the Joint Committee reserve the right to require a Coordination Process (Process B) or a PAG 208 Amendment (Process C) for any facility should conditions dictate.
- Process B and C can be streamlined as needed by holding the public hearing with other committee meetings.
- The Coordination Process for existing public facilities (Process B) offers more streamlined procedures when compared to both Amendments for private facilities and the previous (2006) 208 Plan's Consistency Report process for public facilities. The 208 Plan no longer requires a public hearing or mailings to residents for existing public facilities, unless the application is for a change of public facility ownership. However, public hearings and mailings still may be utilized as needed or if recommended. The Coordination Process maintains the 2006 requirements for mailings and hearings for new public facilities.
- In comparison to the 2006 PAG 208 Plan and to private facilities, public facilities undergoing the Coordination Process are no longer required to receive review by PAG

Management Committee or Regional Council unless recommended. PAG staff will instead provide an informational memo to PAG Management Committee and Regional Council at the conclusion of the Coordination Process.

- Provided clarification that permit applicants will be responsible for conducting and covering the costs of mailings and public hearings.

Figure 1. Diagram of Simplified 208 Plan Process Steps



Organizational Changes and Reduction of Text

The primary components of the 208 Plan have not changed except for the changes discussed below. See Table 1 for a cross-reference of 208 Plan chapters between 2006 and 2020.

Reduction and Automation

The Watershed Approach section (Section 8 of the 2006 Plan) was briefly summarized since this is not currently a required element of 208 planning and primarily consisted of 208 Plan contents organized per watershed. A function was created in the online Facility Inventory Portal to sort facilities by watershed and allow this management perspective.

Data Source Links

Water quality data tables that can quickly become outdated were replaced with links to online databases to maintain current information from best available sources.

Consolidation

Background information was consolidated for concise reading with current policies and regulations up-front and goals and history of past changes available in appendices.

Table 1. Cross-Reference of 208 Plan Chapters - 2006 and 2020 Plan Updates

2020 DOCUMENT	2020 PLAN CHAPTER	COMPARABLE 2006 PLAN CHAPTER	CONTENT CARRIED OVER TO 2020
Adopted Policies and Procedures	• Introduction • Responsibilities	Introduction (1)	208 plan contents and purpose, need to update the plan, required elements in a 208 Plan, purpose and scope of update
	Throughout the Policy chapters	Summary of Original 208 Plan, Amendments and Policies (2)	Policies from the original 1978 208 Plan or amendments
	• Procedures for Water Reclamation Facilities • Process Details for all Procedures • Detailed Policies and Procedures per Entity Type	Plan Descriptions and Policies (9)	Policies and procedures on regionalization, private WWTFs, facilities constructed despite lack of compliance with the 208 Plan, on-site systems, conversion of on-site facilities, priority water bodies and reuse of wastewater, AZPDES permitting
	• Introduction • Procedures for Water Reclamation Facilities • Process Details for all Procedures • Policies and Procedures for Multiple Facility Types • Conformity by other Regulated Programs	Plan Implementation and Procedures (10)	Policies and procedures for DMA designation and updates, integrated planning, groundwater, biosolids, public participation, Title VI and environmental justice, consistency determinations, PAG 208 planning processes, processing fees, 208 Plan updates, 208 Plan Amendments, Consistency Review triggers, contents of Consistency Reviews, conformity by other federal, state and local regulatory and non-regulatory water quality protection programs, and economic, social and environmental impacts of the 208 Plan update.
Appendix A: Water Quality Management	Water Quality and Management Efforts	Summary of Original 208 Plan, Amendments and Policies (2)	Recommendations/goals from the original 1978 208 Plan and amendments

Table 1. Cross-Reference of 208 Plan Chapters - 2006 and 2020 Plan Updates

2020 DOCUMENT	2020 PLAN CHAPTER	COMPARABLE 2006 PLAN CHAPTER	CONTENT CARRIED OVER TO 2020
		Planning Area Description (3)	Water quality conditions and data sources (updated for 2020)
		Existing Solid Waste Management (6)	Regulations and definitions, disposal options and emerging issues
	Wastewater Facilities Planning	Existing Wastewater Treatment Facilities and Other Point Source NPDES Discharges (5)	Methodology for delineating service areas and population projections, discharges and wastewater facilities that are not consistent with the 208 Plan, existing on-site wastewater treatment systems and effluent discharge sites
		Future Conditions (7)	Land use, population projections, wastewater flow projections, maximum flows for 208 consistency, potential future facilities
	• Wastewater Facilities Planning • Facility Inventory Report	Summary of Original 208 Plan, Amendments and Policies (2)	Point sources identified in Amendments and updates to the PAG 208 Plan since 1978
	Facility Inventory Report	Agency and Area Designations (4)	Non-DMA (non-municipal) facility maps and descriptions
		• Existing Wastewater Treatment Facilities and Other Point Source NPDES Discharges (5) • Appendix F	Maps and descriptions of public and non-municipal wastewater facilities in the PAG DPA area
	• Water Quality and Management Efforts • Facility Inventory Portal[2]	Watershed Approach to Water Quality Management Planning (8)	Surface water quality conditions and facilities sortable by watershed
	Application Resources	• Appendix C • Appendix G	Checklists for Procedures
Appendix B: PAG 208	Record of Changes	Introduction	Purposes for the Plan update and reasons for changes

[2] http://gismaps.pagnet.org/pag208plan/

Table 1. Cross-Reference of 208 Plan Chapters - 2006 and 2020 Plan Updates

2020 DOCUMENT	2020 PLAN CHAPTER	COMPARABLE 2006 PLAN CHAPTER	CONTENT CARRIED OVER TO 2020
Planning Background	History, Regulations and Authorities	• Introduction (1) • Appendix A • Appendix B • Appendix E	History, Federal and State requirements
		Summary of Original 208 Plan, Amendments and Policies (2)	Overview of the original 1978 208 Plan, table of past 208 Plan Amendments
		Agency and Area Designations (4)	DPA and DMA designation history
	Setting of Planning Area	Planning Area Description (3)	Natural setting, population, local governments, land use/ownership, water resources
		Watershed Approach to Water Quality Management Planning (8)	Description of watershed-based approach to water quality management planning
	Public Participation Records – 2020 Update	(detached records)	Documentation of public involvement during update
Appendix C: Glossary and References	Glossary of Terms and Acronyms	List of Acronyms	Commonly used terms and definitions
	References	References	Cited publications and data sources

Strategic Action Plan Format

Water quality issues are now associated with their related descriptions of past progress and future recommendations. Organized strategies help to clarify PAG staff and committees' roles in regional coordination, such as updating EPAC's Top Issues list and directing funding sources to areas of importance.

Terminology Updates

Where needed, terminology was updated to match regulatory language and reflect contemporary usage.

Data Updates

Water Quality Conclusions

Summaries of water quality issues were updated to reflect the most current information.

DMA and Facility Descriptions

Descriptions were updated with current information using data available in Consistency Reviews and Amendments since 2006 and were reviewed by the DMAs for accuracy.

Projections

Population and flow projections were updated for planned service areas. The 208 Plan is required to maintain a minimum 20-year planning horizon. The previous PAG 208 Plan in 2006 projected through 2030. This update to the 208 Plan includes projections of future wastewater volumes, using PAG Regional Council approved population projections in the last PAG Regional Mobility and Accessibility Plan, through 2045.

Service Area Maps

Boundaries were updated to reflect where there is current infrastructure and were reduced where no current infrastructure exists and to be consistent with local ordinances. PAG is not responsible for the accuracy of facility boundaries; datasets shown on PAG 208 maps and in the regionwide inventory are as reported by DMAs.

Integrated into this Update

Additional changes that were made which may have triggered a Consistency Review, Consistency Report or Amendment during the update of this PAG 208 Plan were limited to the following actions:

- The Marana DMA boundary was extended to include Saguaro Bloom and the Pima County DMA boundary was updated to exclude Saguaro Bloom, by joint request of Marana and Pima County on the signed DMA maps. The maps in the 208 Plan reflect this change to the Marana DMA and Pima County DMA boundaries.
- A formalized process was developed for coordination with other DPAs where wastewater service crosses county boundaries. A Consistency Review for Pima County to serve a

development at Eagle Crest created a need to extend the Pima County DMA into Pinal County.

- Updates to the Future Conditions section for facilities in the 208 Plan can ease future consistency reviews if a new facility is proposed in the future that was already anticipated and described in the approved 208 Plan.

The required public notice and approval by PAG Management Committee and PAG Regional Council for these actions have been folded in as part of this PAG 208 Plan Update process for approval.

Table 2. Comparison of 208 Plan Processes - Private Facilities

CONDITION	2006 PAG 208 PLAN			2020 PAG 208 PLAN			
	Consistency Review	Consistency Report	Amendment	No PAG Process	Consistency Review (Process A)	Coordination Process (Process B)	Amendment (Process C)
PRIVATE FACILITIES							
Change to an existing private facility currently in the PAG 208 Plan.	-	-	X	-	-	-	X
A new private facility (including septic or on-site private facilities) with a capacity 0.024 MGD or greater (0.02 MGD for 2006 Plan).	-	-	X	-	-	-	X
Expansion of a private facility service area with a capacity 0.024 MGD or greater (0.02 MGD for 2006 Plan)	-	-	X	-	-	-	X
Expansion of a private facility service area that crosses a DMA, DPA or JPA boundary.	-	-	X	-	-	-	X
Very small, isolated wastewater treatment facilities (capacities less than 0.024 MGD [0.02 MGD for 2006 Plan]) meeting a number of conditions including: no commercial or industrial waste, no public service available within 10 years, will connect when DMA becomes available, no discharge to waters of the US, financial and technical capacity demonstrated, no jurisdiction or water provider objects, no odor or water quality impact, all property owners within one half mile notified.	-	Determined "not inconsistent" if followed Consistency Report Process	-	Pima County review of APP Type 4 General Permits and R18-9-A309 (5) (a) (iii) if aligns with PAG 208 planning recommendations for connection to sewage collection system.	-	-	-
A new or changing WMU (new category in 2020).	-	-	-	-	-	-	X

Table 3. Comparison of 208 Plan Processes – Public Facilities

	2006 PAG 208 PLAN				THIS PAG 208 PLAN			
CONDITION	**Consistency Review**	**Consistency Report**	**Amendment**	**No PAG Process**	**Data Update Only**	**Consistency Review (Process A)**	**Coordination Process (Process B)**	**Amendment (Process C)**
PUBLIC FACILITIES								
Changes to an existing public facility with a capacity less than 5 MGD and below the Consistency Factor calculation for maximum flows, with no changes to the DMA.	-	X	-	-	-	X	-	-
A new or existing public facility that requires a change to an existing DMA or JPA boundary (such as expansion of service area).	-	-	X	-	-	-	X	-
A new public facility with design capacity 0.024 MGD or greater within an existing DMA area or JPA.	-	X, if capacity is less than 5 MGD	X, if capacity is greater than 5 MGD	-	-	-	X	-
Changes to an existing public facility with a capacity of less than 5 MGD and capacity is above the Consistency Factor* calculation.	-	X	-	-	-	-	X	-
Expanding an existing public facility to a capacity greater than 5 MGD.	-	-	X	-	-		X	-
Very small, isolated wastewater treatment facilities (capacities less than 0.024 MGD [0.02 MGD for 2006 Plan]) meeting a number of conditions.	-	Determined "not inconsistent" if followed Consistency Report Process	-	Pima County review of APP Type 4 General Permits** and R18-9-A309 (5) (a) (iii) if aligns with PAG 208 planning recommendations for connection to sewage collection system.		-	-	-
A new DMA.	-	-	X	-	-	-	-	X
Changes to an existing DMA boundary.	-	-	X	-	-	-	X	-

Table 3. Comparison of 208 Plan Processes – Public Facilities

	2006 PAG 208 PLAN				THIS PAG 208 PLAN			
CONDITION	**Consistency Review**	**Consistency Report**	**Amendment**	**No PAG Process**	**Data Update Only**	**Consistency Review (Process A)**	**Coordination Process (Process B)**	**Amendment (Process C)**
PUBLIC FACILITIES								
Expansion of a public facility's service area within an existing DMA or JPA.	X, if in DMA***	X, if in JPA***	-	-	X, if over 3 miles from other DMA	X, if less than 3 miles from other DMA	-	-
A new JPA or joint public facility.	-	X***	-	-	-	-	X	-

**Consistency Factor is a term for PAG's assigned factor that allows a 25 percent variation above the future flow projections.*

***For APP Type 4.01 General Permits for sewage collection systems, if the facility to be constructed will be owned by the PCRWRD, the Discharge Authorization will be issued by the Tucson Office of ADEQ.*

****Process needed clarification.*

Chapter 2: History, Regulations and Authorities

This chapter includes regulatory requirements for 208 Plans, the history of regulatory changes that impacted the 208 Plan, history of wastewater in Pima County and a summary of previous 208 Plans, amendments and policies.

Regulatory Requirements For 208 Planning

The following section includes current federal and state regulations related to water quality management planning under Section 208 of the Clean Water Act (CWA).

Federal laws regarding the CWA may be found in the Code of Federal Regulations[3].

Federally Required Elements in a 208 Plan

Federal regulations state that the following elements must be included in Water Quality Management (WQM) Plans or referenced as part of the plan if they are contained in separate documents:

- Total maximum daily loads
- Effluent limitations
- Identification of anticipated municipal and industrial waste treatment works
- Nonpoint source management and control
- Identification of agencies necessary to carry out the plan
- Identification of implementation measures necessary to carry out the plan
- Identification and development of programs for the control of dredge or fill material
- Identification of any relationship to applicable basin plans developed under Section 209 of the CWA [Basin Plans]
- Identification and development of programs for control of groundwater pollution, including the provisions of Section 208(b)(2)(K) of the CWA

In Arizona, these required elements are divided between the state WQM Plan and the DPAs' Areawide Water Quality Management Plans (208 Plans).

Federal regulations preclude the issuance of National Pollutant Discharge Elimination System (NPDES) permits to facilities that are not consistent with the applicable 208 Plan Section 208(e);

[3] https://www.gpo.gov/fdsys/pkg/CFR-2016-title40-vol24/xml/CFR-2016-title40-vol24-part130.xml

40 Code of Federal Regulations (CFR) § 130.6(f) (see Code of Federal Regulations below). The complete text of the relevant federal regulations is included in 40 CFR § 130.6[4].

State Responsibilities and Plan Requirements

Federal regulations require each state to have its own WQM Plan, and the regulations provide the process for updating, maintaining, and implementing the WQM Plan. The State WQM should be updated each time a newly adopted state plan component, rule, agreement or strategy is enacted.

Federal regulations require each state to establish and maintain a Continuing Planning Process (CPP) per Section 303(e)(3) of the CWA. The most recent document describing Arizona's CPP includes a checklist[5] for 208 Plan Amendment content requirements. The state requirements generally mirror the federal requirements and are subject to review by the EPA to ensure they are consistent with the CWA. CPP updates are required to incorporate the elements of the applicable 208 Plans in the state.

Statewide Coordination

The federal regulations lay out a process for "assuring adequate authority for intergovernmental cooperation in the implementation of the State WQM program" (40 CFR § 130.5). Per federal requirements, the water quality programs must be developed with local, regional and other planning agencies. Under the Arizona CPP, the Statewide WQMWG was established. It is a voluntary group that assists in the review and updates to the state WQM programs, for example, by participating in comments regarding state updates to water quality standards or by providing updates through DPA 208 Plans. The WQMWG includes staff representatives from the state DPAs.

The WQMWG assists ADEQ in ensuring that the program addresses both regional and statewide water quality needs. ADEQ's 1993 CPP Appendix IV, Page IV-2 states: "The Water Quality Management Working Group is a voluntary advisory body that meets quarterly, or as necessary, to consider and make recommendations to ADEQ regarding matters of statewide WQM policy and program implementation. The WQMWG is instrumental in the review and revision of state WQM programs, as it assists the Department in developing an integrated WQM program, from both a regional and statewide perspective."

DPA Funding

Federal regulations require planning funding be directed to and prioritized for DPAs for purposes of developing and operating a continuing areawide waste treatment management planning processes. CWA Section 208 [33 U.S.C. § 1288] Areawide Waste Treatment Management, Section 208(f)(1) requires the administrator to make grants to any agency designated under Section 208, subsection (a) for payment of the reasonable costs of developing and operating a continuing areawide waste treatment management planning process. ADEQ distributes federal funding to the DPAs for water quality programs.

[4] https://www.gpo.gov/fdsys/pkg/CFR-2013-title40-vol23/pdf/CFR-2013-title40-vol23-sec130-6.pdf
[5] https://legacy.azdeq.gov/function/forms/download/list/Continuing_Planning_Process_4_93.PDF

CWA Section 205 [33 U.S.C. § 1285] Allotment, Section 205(j)(3) requires states to give funding priority to DPAs for purposes of carrying out WQM planning and requires an allocation of 40 percent of the total available funding each year. If it has been determined that the 40 percent allocation to regional public comprehensive planning organizations will not result in significant participation by such organizations in water quality management planning, will not significantly assist in development and implementation of the WQM plan, and will not aid in achieving the goals of the CWA, then after consultation with the regional public comprehensive planning organizations and with the approval of the EPA Administrator less than 40 percent can be allocated to DPAs.

40 CFR § 130.1, Program management, Section 130.11(a) establishes that local or regional planning organizations may request CWA Section 205(j) funds from a state for planning and management activities. Federal funding for 208 planning and plan updates in Arizona is primarily available through Section 604(b) grants. Current information regarding state funding can be found on the ADEQ Statewide WQMWG Agenda and Meeting Minutes webpage[6].

Local Coordination

Federal regulations require ADEQ to consult with DPAs in the joint development, review and revision of state work program and WQM planning activities. In 40 CFR § 130.11, the Program Management Section 130.11(e) establishes the EPA, states, areawide agencies, and local and regional governments as joint participants in the water pollution control program. CWA Section 205 [33 U.S.C. § 1285] Allotment, Section 205(j)(3) also requires states to develop jointly with local, regional, and interstate entities, a plan for carrying out the WQM program. DPAs and their regional WQM plans are integral to updating and maintaining the state's CPP and WQM plan under CWA Section 303(e)(3)(B) which requires each state's CPP to include the incorporation of all elements of any applicable areawide waste management plans under Section 208. In Arizona Administrative Code (A.A.C.) § R18-5-301 Definitions, Paragraph 7 defines "State water quality management plan" to mean a planning document that includes (a) Certified Areawide Water Quality Management Plans and amendments, and (e) intergovernmental agreements (IGAs) between the Department and a designated water quality planning agency or a DMA as elements. State work programs are required to be developed jointly with regional and other comprehensive planning organizations.

DPAs have a very strong nexus with local elected officials and play key roles in assuring intergovernmental cooperation in WQM planning and implementation required under 40 CFR § 130.5(b)(5) and CWA Section 303(e)(3)(E). ADEQ's CPP further outlines this in ADEQ's 1993 CPP Appendix III, Page III-8: "The COGs and ADEQ have a unique and very valuable relationship in WQM planning, starting with the WQM planning partnership role established by CWA Section 208 (see Appendix V [of the CPP]). The COGs provide a vehicle through which local governments may participate in the WQM planning process. They provide technical assistance to local entities in the preparation, amendment and update of Areawide WQM Plans, including promoting and ensuring adequate public participation in plan development and adequacy of plan amendments. The COGs assist the local/state agency information exchange and public participation processes and help elevate local needs and priorities to ADEQ's attention for consideration in its statewide WQM program efforts. All major regional policy decisions are reviewed and approved by the COG decision making bodies, or regional boards, which are comprised of local elected officials."

[6] http://www.azdeq.gov/statewide-water-quality-management-working-group-agenda-minutes

State laws regarding the CWA may be found in Arizona Revised Statutes (A.R.S.) § R18-5[7] and A.R.S. § R18-9[8].

Please see the Adopted Policies and Procedures section on DPA Responsibilities for the list of PAG's designated responsibilities delegated by the state.

DPA Designation

Section 208 of the 1972 amendments to the CWA required the governor of each state to identify areas having water quality control problems, delineate the boundaries of these areas, and designate for each area "a single representative organization, including elected officials from local governments or their designees, capable of developing effective areawide waste treatment management plans" (CWA Section 208 [33 U.S.C. § 1288] Areawide Waste Treatment Management. Section 208(a)(2)). The law required each organization designated by the governor to develop a plan for areawide waste treatment management. The "single representative organization, including elected officials from local governments or their designees, capable of developing effective areawide waste treatment management plans" designated by the governor to develop a plan for its respective area is commonly referred to as the "Designated Planning Agency" or "DPA." The plan itself is known as the "Certified Areawide Water Quality Management Plan" or "208 Plan." These terms are defined in Arizona rule under A.R.S § R18-5-301[9].

On July 8, 1970, Arizona Governor Jack Williams signed Executive Order 70-2[10], which divided Arizona into six initial planning districts, and directed that all planning functions conducted on a district-, regional-, or areawide basis conform to the prescribed planning areas. Per the law, existing regional agencies could be designated as the DPA. In 1974, PAG was designated as the DPA for Pima County, one of eight DPAs in Arizona (Williams 1974). As the region's DPA, PAG applied for a grant to develop the 208 Plan in 1975. The 208 Plan was completed and approved in 1978. The first region-wide, comprehensive update to the 1978 plan was approved in 2006.

PAG's DPA area aligns with the Pima County boundary but PAG does not have DPA authority over Native American lands within the county. When PAG's original 208 Plan was drafted, the boundary was delineated to reflect that the Tohono O'odham Nation is not within the PAG DPA. The Pascua Yaqui Tribe received federal recognition as a sovereign government in 1978, and the PAG DPA is updated to reflect this. The Pascua Yaqui Tribe is provided wastewater service through the Pima County DMA and PAG coordinates with the Native American nations and invites them to be part of the 208 process, as desired.

DPA Plan Requirements

DPA 208 Plans identify regional priority point and nonpoint water quality problems, consider alternative solutions and recommend control measures. Control measures can include the financial and institutional measures necessary for implementing recommended solutions. In addition, 208 Plans identify existing and anticipated municipal and industrial WWTFs, as well as DMAs. The

[7] http://apps.azsos.gov/public_services/Title_18/18-05.pdf
[8] http://apps.azsos.gov/public_services/Title_18/18-09.pdf
[9] http://apps.azsos.gov/public_services/Title_18/18-05.pdf
[10] https://www.pagnet.org/documents/Water/PC208/ApxE_Apr06.pdf

DMAs are responsible for ensuring that adequate wastewater service is provided in their management areas.

Requirements to Update 208 Plans

An up-to-date 208 Plan is necessary to ensure efficient permitting decisions with regard to determining 208 consistency. Comprehensive revisions to facility, DMA or policy descriptions should occur when there have been multiple amendments to the 208 Plan or consistency reviews that provide facility updates. Population growth projections need to be updated to maintain the required 20-year planning horizon, updates to applicable local, state and federal water quality regulations should be adequately integrated, and local water quality conditions and program progress reported.

Federal regulations do not require any specific frequency for plan updates. Under 40 CFR § 130.6(e)[11] it states: "WQM plans shall be updated as needed to reflect changing water quality conditions, results of implementation actions, new requirements or to remove conditions in prior conditional or partial plan approvals… State CPPs shall specify the process and schedule used to revise WQM plans."

The CPP[12] for Arizona states: "If any WQM plan becomes so outdated as to be inconsistent with state rules or policies, the director (of ADEQ) will encourage and may require the amendment of such plan, or the creation of a new plan, as appropriate." References in the 208 Plan to state rules will be updated when applicable.

By 2020, all the changes mentioned above had occurred and warranted a comprehensive update. Additionally, PAG's goals for the 2020 update were to 1) streamline policies and procedures, 2) modernize the facility inventory and 3) consolidate background information for concise reading.

Related Regulations

The following regulations should be considered when conducting 208 planning.

Groundwater

Protection of groundwater quality from the disposal of pollutants on land or in subsurface excavations is a required element of 208 Plans [Section 208(b)(2)(K)] and has been a principal goal of PAG's 208 Planning program since its inception. In Arizona, the APP program is the major regulatory program aimed at protecting groundwater quality. PAG's 208 Plan helps ensure the success of the APP program by limiting the proliferation of potential pollutant sources and thus minimizing the strain that numerous small or non-compliant facilities would otherwise place on the monitoring and enforcement resources available for the APP program. State regulations preclude the construction of sewage treatment facilities that are not consistent with the applicable 208 Plan (A.A.C. § R18-5-303) or the issuance of an APP to sewage treatment facilities that are not consistent with the 208 Plan (A.A.C. § R18-9-A201B).

[11] https://www.gpo.gov/fdsys/pkg/CFR-2016-title40-vol24/xml/CFR-2016-title40-vol24-part130.xml
[12] https://legacy.azdeq.gov/function/forms/download/list/Continuing_Planning_Process_4_93.PDF

PAG will continue to ensure that WWTFs are sited, planned and managed in a way that ensures the protection of groundwater quality. PAG will also continue to work with local governments to inventory land uses and identify potential impacts to groundwater quality from various land uses and potential pollution sources.

Resource Conservation and Recovery Act

According to the EPA (2018b), the goals of the Resource Conservation and Recovery Act (RCRA), enacted in 1976, are to:

- Protect us from the hazards of waste disposal
- Conserve energy and natural resources through recycling and recovery
- Reduce or eliminate waste
- Clean up waste that may have been spilled, leaked or improperly disposed of

In Arizona, RCRA is implemented by ADEQ's Waste Programs Division, which is responsible for permitting facilities that treat, store, or dispose of hazardous waste and for approving solid waste facility plans. According to ADEQ (2016a), the following types of facilities are subject to solid waste facility plan approval or will be once the appropriate rules are promulgated:

- Biosolids processing facilities
- Composting facilities
- Medical waste facilities
- Municipal solid waste landfills
- Recycling facilities
- Non-municipal solid waste landfills
- Solid waste storage facilities
- Special waste facilities
- Transfer stations
- Waste tire collection sites

CERCLA

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also known as Superfund, was enacted by Congress in 1980. CERCLA provides broad federal authority to respond to releases or threatened releases of hazardous substances that may endanger public health or the environment. The EPA maintains the National Priorities List, which is a list of national priorities among the known or threatened hazardous releases. The list guides the EPA in determining which sites warrant further investigation. Long-term remedial actions may only be taken at sites on the National Priorities List. Listed in 1983, the Tucson International Airport Area is the only site in Pima County on the National Priorities List.

WQARF

Arizona's Water Quality Assurance Revolving Fund (WQARF) supports the cleanup of hazardous substance releases in Arizona. It is funded by legislative appropriations, cost recovery from responsible parties, taxes and fees. ADEQ maintains the "WQARF" registry, which is a list of the sites most in need of cleanup. WQARF sites in Pima County are discussed in Appendix A.

History of Regulations and Changes

The following section includes historical federal and state regulation development as well as local wastewater management related to 208 planning.

Clean Water Act

The CWA began as the Federal Water Pollution Control Act of 1948. Growing concern over water pollution led to major amendments in 1972. The amendments include a prohibition on the discharge of any pollutant to waters of the United States from a point source unless the discharge is authorized by a permit issued pursuant to the NPDES. With additional amendments in 1977, the law became commonly known as the CWA. The objective of the CWA is to restore and maintain the biological, chemical, and physical integrity of the nation's waters.

Federal and State Changes Reflected in Previous 208 Plan Updates

Several key changes had occurred in state government since the original 208 Plan was adopted; these were incorporated into the previous PAG 208 Plan updates. Foremost was the creation of the ADEQ by passage of the Environmental Quality Act in 1986 (A.R.S. § 49-102). Whereas the original 1978 PAG 208 Plan identified the Arizona Department of Health Services – Bureau of Water Quality Control as the state water pollution control agency, the Environmental Quality Act established ADEQ as the agency responsible for all major federal water quality legislation.

The 1986 Environmental Quality Act also established the aquifer protection program to protect the quality of the state's aquifers. All discharging facilities (including WWTFs) must obtain APPs.

In 1987, Congress amended the CWA, Section 402(p), to require implementation of the stormwater program in two phases to address stormwater discharges. In 1990, the EPA issued regulations authorizing the creation of an NPDES permitting system for stormwater discharges from certain industrial activities. The NPDES program is designed to track point sources and requires the implementation of the control measures necessary to minimize or eliminate the discharge of pollutants to waters of the United States. The first phase of the program, commonly referred to as "Phase I," was promulgated on November 16, 1990 (55 FR 47990). Phase I requires NPDES permits for stormwater discharge from priority sources, including municipal separate storm sewer systems (MS4s) generally serving populations of 100,000 or more. On August 7, 1995, the EPA promulgated a final rule that required facilities to be regulated under Phase II to apply for an NPDES permit. In 1999, the EPA published rules to expand Phase II permit coverage to include small municipalities and construction sites that disturb between 1 and 5 acres. ADEQ was delegated authority from the EPA to implement the NPDES stormwater program in Arizona (except on Native American lands) on December 5, 2002, also known as the Arizona Pollutant Discharge Elimination System (AZPDES). Arizona obtained primacy for the

NPDES in 2002. With state primacy, ADEQ issues AZPDES permits as well as APPs. ADEQ also regulates the reuse of treated effluent and enforces reclaimed water quality standards.

A groundwater-related change at the state level was the passage of the Arizona Groundwater Management Act (GMA) in 1980. The purpose of the GMA is to address the issue of groundwater overdraft in several critical areas of the state. The GMA requires the Arizona Department of Water Resources (ADWR) to develop and promulgate a series of management plans that promote regulatory conservation programs for the Industrial, Municipal, and Agricultural water use sectors. The Tucson Active Management Area (AMA) is one of five in the State of Arizona and has a safe-yield goal to be achieved by the year 2025. The AMAs are areas in the state that have experienced severe groundwater overdraft. The safe-yield goal and assured water supply requirements have led to increased emphasis on the use of Central Arizona Project (CAP) water and reclaimed water supplies. The GMA is incorporated into A.R.S. Title 45.

At the federal level, changes related to the CWA have also occurred since 1978. One change is the level of funding available for 208 Planning and 208 Plan implementation. In the 1970s and early 1980s, funding authorized by Section 208 of the CWA for developing and operating the 208 Plans was approximately $100 million per year. Today, federal funding for 208 Planning in Arizona is primarily available through Section 604(b) grants, which in Arizona are limited to a total of $40,000 for the entire state plus any remaining budget from the previous year. Current information regarding state funding can be found on the ADEQ Statewide WQMWG Agenda and Meeting Minutes webpage[13].

Other changes include the establishment of the Clean Water State Revolving Fund in 1987, recently amended in 2014, which provides states with funds for water quality infrastructure projects.

Federal and State Changes Since the 2006 PAG 208 Plan Update

In October 2011, EPA's Office of Water and Office of Enforcement and Compliance Assurance issued a joint memo encouraging EPA Regions to assist their state and local partners in pursuing an integrated planning approach to CWA waste and stormwater obligations. The memo identifies green infrastructure (GI) as one comprehensive solution that can improve water quality and provide other benefits that enhance the vitality of communities.

In a 2012 evaluation of ADEQ's AZPDES process, the EPA required that ADEQ reissue MS4 permits to local jurisdictions and that they include measurable and enforceable standards for low impact development (LID).

In 2017, ADEQ revised the A.A.C. to allow the use of advanced treatment of recycled water for potable use (A.A.C. Title 18, Chapter 9, Article 7). ADEQ now regulates the use of recycled water and enforces recycled water quality standards.

The federal Water Infrastructure Improvement Act (Public Law 115-436), signed by the president in January 2019, provides flexibility to municipalities wishing to prioritize investments in wastewater and stormwater projects needed for CWA compliance and requires the EPA to promote the option of GI, which allows communities to use natural processes to infiltrate or reuse stormwater runoff beneficially on-site where it is generated. This helps communities use GI to meet

[13] http://www.azdeq.gov/statewide-water-quality-management-working-group-agenda-minutes

critical water management goals, while protecting the health, safety and well-being of their residents by authorizing the incorporation of GI practices into plan permits under the integrated municipal stormwater and wastewater planning approach framework issued by the EPA. The Act amended 33 U.S.C. § 1342 to add the opportunity for integrated plans and 33 U.S.C. § 1362 to add and promote GI.

Arizona's intrastate Drought Contingency Plan in 2019 included approval of state legislation granting an increase from 50 percent to 95 percent credit for six managed recharge projects in the state, among them the two Santa Cruz River in-channel projects. One is downstream of Tucson and the second is at the Heritage Project near downtown. This legislation incentivizes recharging effluent in riverbeds at these six locations, as opposed to recharging the effluent in constructed basins elsewhere.

History of Wastewater Treatment and Management in Pima County

Prior to the CWA, the first public sanitary sewers in Pima County were installed in Tucson in 1900 and the first WWTF was constructed in 1928. Prior to construction of the treatment facility, wastewater was used directly for agricultural irrigation. In 1951, Phase 1 of the City of Tucson's Roger Road WWTF began operation, and in 1961 the Pima County Sanitary District #1 installed the first wastewater treatment lagoon at the Ina Road site. This sanitary district was dissolved in 1968 and replaced by the Pima County Department of Sanitation.

In 1974, the City of Tucson and Pima County formed the Metropolitan Utilities Management Agency, through an IGA. This agency was created to operate water and sewerage systems within the Tucson city limits and in the unincorporated areas of Pima County (PAG 1975). However, the City of Tucson and Pima County continued to operate their respective sewerage systems. The joint agency was dissolved in 1976.

In 1978, the County's sanitation department was renamed the Pima County Wastewater Management Department and has since been renamed the Pima County Regional Wastewater Reclamation Department.

Management Agency Designation Phases in Pima County

PAG, as the region's DPA, initially identified both Pima County and the City of Tucson as DMAs responsible for sewerage facilities. However, based on input from the EPA that preferred a single management agency, the 1978 208 Plan recommended consolidation of sewage treatment programs in the metropolitan area (PAG 1978).

In 1979, ownership and all responsibilities for the construction, operation, and maintenance of the City of Tucson's sewerage systems were transferred to Pima County through an IGA. In recognition of the pending consolidation of facilities, the PAG Regional Council passed resolution 78-12-07 in December 1978 requesting that the Governor designate Pima County as the single 208 DMA for municipal wastewater treatment and sewer system operations. This designation is noted in a 1980 amendment[14] to the 1978 208 Plan and was considered a success for the 208 regionalization principle.

[14] http://apps.pagnet.org/paglibrary/Electronic/Environmental/Wastewater/Water-PAG-1980-Amendment-to-208-Areawide-WW-Mgmt-Plan-1981.pdf

The 1979 IGA transferring the sewerage system stipulated that the City of Tucson would own and have unilateral control over the use and disposition of effluent discharged from metropolitan WWTFs. The IGA stated that Pima County was entitled to up to 10 percent of the effluent for use at the consolidated metropolitan facilities, including County parks, golf courses, and recreational facilities. A supplemental IGA was negotiated in 2000 that addressed control of effluent from non-metropolitan (sub-regional) Pima County facilities, access by other water providers to effluent derived from their water supplies, and establishment of a conservation pool of up to 10,000 acre-feet per year for use of effluent in habitat conservation plans and other approved projects. This Conservation Effluent Pool (CEP), Pima County, Tucson and other municipal use takes second priority to the Tohono O'odham Nation's Southern Arizona Water Rights Settlement Act (SAWRSA) entitlement. SAWRSA, passed in 1982 and subsequent related Acts in 2004 and resolved and executed in 2006 requires the first 28,200 acre-feet of effluent generated each year to be allocated to the Tohono O'odham Nation. Bureau of Reclamation assists in the implementation of the SAWRSA settlement.

Pima County remained the only DMA in the PAG planning area until March 1999, when the PAG Regional Council approved a 208 Plan Amendment designating the Town of Sahuarita as a DMA. The 2006 208 Plan identified a JPA outside the Sahuarita DMA boundaries that could be served by either the Sahuarita DMA or the Pima County DMA in the future. These areas are considered a part of both DMAs.

On March 27, 2014, an amendment to the 208 Plan[15] established the Town of Marana as a DMA to provide wastewater collection and treatment services in a boundary area agreed to by the Town of Marana and Pima County. No additional DMAs have been proposed.

Previous 208 Plans, Amendments, and Policy Updates

Development of the 208 Plan since the original plan in 1978 is described in the section below.

Overview of the Original 208 Plan

The PAG Regional Council approved the 208 Plan for Pima County on June 22, 1978. The 208 Plan identified the roles of federal, state, regional, and local governments in water pollution control and addressed both point and nonpoint sources of pollution. The 208 Plan identified the City of Tucson and Pima County as DMAs for their respective parts of the Tucson metropolitan area sewerage system. Pima County was identified as the DMA for rural parts of Pima County.

The final 1978 208 Plan (PAG 1978), which was essentially a summary report based on numerous supporting documents, noted that facility needs in the Tucson metropolitan area would be addressed in a parallel 201 facilities planning program under Section 201 of the CWA; the 201 Facility Plan, once adopted, would become part of the 208 Plan. The 208 Plan stated that 201 facilities planning and best management practices planning would be the prime responsibility of the City and County sewerage management agencies and that all 201 planning would be consistent with the recommendations for wastewater treatment contained in the approved 208 Plan.

[15] http://apps.pagnet.org/paglibrary/Electronic/Environmental/Wastewater/Water-PAG-208-Plan-Marana-Amendment-2013.pdf

The adopted 201 Facility Plan, *Metropolitan Tucson Regional Wastewater Management System* (Brown and Caldwell 1978), consisted of five documents: a summary/background report and four supplements. The four supplements were:

1. Regional Wastewater Treatment System
2. Regional Interceptor System
3. Environmental Impact Assessment
4. Outlying Facility Plans

The Facility Plan provided a much more detailed description of the WWTFs identified in the PAG *Areawide Wastewater Management Plan*. However, it did not identify any additional facilities, with the exception of a replacement facility for the Catalina Wastewater Treatment Plant, proposed to be located 2 miles south of the existing (at that time) facility.

Amendments and Point Source Updates to the 208 Plan

The 1978 208 Plan listed numerous point sources, including public WWTFs in the metropolitan area, public WWTFs outside the metropolitan area, and point sources from private WWTFs. Various 208 Plan Amendments and minor updates approved since 1978 have identified additional point sources, including facilities that existed at the time and facilities that were proposed for the future.

In June 1998, the PAG Regional Council adopted criteria for a 208 Plan Amendment to change the status of a DMA and to create a new DMA. At the time that these criteria were adopted, Pima County was the only DMA in the PAG region.

The 2006 208 Plan consolidated the original 1978 208 Plan and the various individual amendments and updates into one document. Updates included changes to municipal and industrial WWTFs and other point sources identified in the current plan and integration of policies that have been adopted through amendments. Changes that were incorporated into the 2006 update included the designation of the Town of Sahuarita as a DMA in 1999, negotiation of a supplemental IGA between the City of Tucson and Pima County in 2000 regarding treated wastewater effluent, additional IGAs between the City of Tucson, the Metro Water District, and Oro Valley, and passage of SAWRSA in 1982 and a subsequent settlement in 2004. The 2006 208 Plan also updated the list of WWTFs that had been constructed, updated, expanded or closed from the original 1978 208 Plan.

Parts of PAG's original 1978 208 Plan, particularly the nonpoint source elements, were developed on a watershed basis to a limited extent. The 2006 208 Plan included an analysis of what it would take to realign 208 planning on a watershed scale, to be consistent with the EPA's and ADEQ's growing emphasis on multi-disciplinary, multi-stakeholder watershed planning (PAG 2006) and to prepare for any future related regulations. The Watershed approach section of the 2006 208 Plan repeated and resorted much of the 208 Plan per watershed. At the time, it was expected that future regulations would require greater use of the watershed approach in water quality planning, but as of the date of this 208 Plan update there are no additional requirements.

Since the 2006 208 Plan, the Town of Marana was designated as a DMA in 2014 and several WWTFs have been constructed or upgraded, a number of existing facilities have been expanded, and some facilities have been closed. New procedures were included in the 2020 208

Plan update to clarify the process to establish a new DMA for a public entity or a WMU for a private entity. The PAG region does not have any WMUs as of December 2019. Additional changes included in the 2020 208 Plan update have been documented in the Record of Changes - 2020 Update chapter for clarity during the approval process and can be incorporated here after adoption.

Table 4 contains all 208 Plan amendments and updates along with other Regional Council actions significantly affecting the 208 Plan from 1978 through 2018. The point sources identified since the creation of the 1978 208 Plan and each amendment and update since then are available online in the PAG Facility Web Portal[16]. Additionally, maps showing the locations of all public and non-municipal point sources (existing, closed, proposed and no longer planned) previously identified in the 208 Plan and up to date as of December 2019 are available in the Wastewater Facilities Planning chapter.

Table 4. Amendments and Updates to the 208 Plan and Other Related Regional Council Actions, 1978–2019*

#	Title	Author	Year	Link
1	PAG Areawide Wastewater Management Plan 1980 Amendment	PAG	1980	Link
2	El Conquistador Wastewater Reclamation Facility and Service Area	PAG	1981	Link
3	Amendment to PAG 208 Plan Point Source Element: Mt. Lemmon	PAG	1981	Link
4	Domestic Point Source Water Quality Planning Update Report for Areas A1 & A2	PRC Toups for PAG	1982	Link
5	Domestic Point Source Water Quality Planning Update Report for the Upper Canada del Oro Area	PRC Toups for PAG	1982	Link
6	Metropolitan Tucson Regional Wastewater Management System Facility Plan: Sludge Management and Disposal Program for the Roger Road Wastewater Treatment Facility	Pima County Wastewater Management Department	1983	Link
7	Regional Council Implementation of Processing Fee of $3500 for administration of 208 Plan Amendments	PAG	1984	Link
8	Facility Plan Report Proposed 208 Point Source Element Amendment for MSP Companies WWTF	Greiner Engineering	1984	Link
9	Foothill Utility Wastewater Reclamation Facility Broadmoor Golf Course	Dooley-Jones & Associates	1984	Link
10	Green Valley Cortaro Area Management Plans	PAG	1984	Link
11	Areawide Wastewater Management Plan Point Source Update	PAG	1985	Link
12	Continental Ranch 208 Consistency Report – Continental Ranch Pump Station	WLB Group	1986	Link

[16] https://gismaps.pagnet.org/PAG208Plan/Default.aspx

Table 4. Amendments and Updates to the 208 Plan and Other Related Regional Council Actions, 1978–2019*

#	Title	Author	Year	Link
13	Catalina 208 Consistency Report and Plan Amendment (one document 1985 and 1987)	Pima County Wastewater Management Department	1987	Link
14	208 Plan Amendment for Canada Hills Development Company L.P.	Arthur Beard Eng	1987	Link
15	Marana Study Area 208 Consistency Report	Pima County Wastewater Management Department	1988	Link
16	Regional Council statement that the Target Area concept may be acceptable for the 208-planning process only when the plan amendment or consistency analysis is initiated by a public jurisdiction which is subject to land acquisition regulation	PAG	1988	Link
17	Guide to Areawide Water Quality Management Planning as Required Under Section 208 of the Clean Water Act	PAG	1990	Link
18	208 Consistency Report for MSP Companies WWTF	WLB Group	1992	Link
19	208 Plan Amendment for Management & Training Corporation – Marana Treatment Facility, Wastewater Reclamation Facility	Moore and Associates, Inc.	1993	Link
20	208 Plan Amendment for La Mirage Estates WWTF	ICON Consultants	1995	Link
21	Criteria for Establishing New DMAs in Pima County (Regional Council policy)	PAG	1998	Link
22	The Wastewater Management Plan for Sahuarita – An Amendment to the PAG Areawide 208 Plan	Town of Sahuarita	1999	Link
23	Ajo Improvement Company 208 Plan Amendment	Ajo Improvement Company	1999	Link
24	Standard Outline guidance document for private wastewater facilities pursuing a 208 Plan Amendment (Regional Council policy)	PAG	1999	Link
25	Marana 208 Areawide Water Quality Management Plan Update	Malcolm Pirnie	2000	Link
26	Corona de Tucson WWTF Expansion Consistency Report	Pima County Wastewater and PAG	2004	Link
27	Miraval Resort, LLC. 208 Plan Amendment	WestLand Resources, Inc., for Miraval Resort Tucson and PAG	2007	Link

Table 4. Amendments and Updates to the 208 Plan and Other Related Regional Council Actions, 1978–2019*

#	Title	Author	Year	Link
28	Ina Road Wastewater Reclamation Facility and New Water Reclamation Campus at Roger Road (Regional Optimization Master Plan – ROMP)	Greeley & Hansen for Pima County Regional Wastewater Reclamation Department	2009	Link
29	Areawide Water Quality Management Plan Amendment for Town of Marana Facilities and DMA	WestLand Resources, Inc., for Town of Marana and PAG	2013	Link

**While the time period reflected in this table spans 1978-2019, no amendments or updates occurred prior to 1980 and as of December 2019, no amendments or updates have occurred since 2013.*

Chapter 3: Setting of Planning Area

This chapter provides a watershed settings overview and describes water resources in the PAG region. The purpose of this chapter is to support an integrated planning approach to water quality management.

Integrated, watershed-based planning and management of water resources are necessary because water sources are not always physically isolated from one another. For example, groundwater originates from perennial and intermittent natural surface water sources in Pima County as well as discharged and recharged effluent. Groundwater is also replenished by CAP water that is directly recharged or incidentally recharged through agricultural use. Thus, in many instances, the quality and quantity of one water source can affect the quality and quantity of another. Further, it is valuable to evaluate and coordinate water quality planning on a watershed basis since water crosses political boundaries.

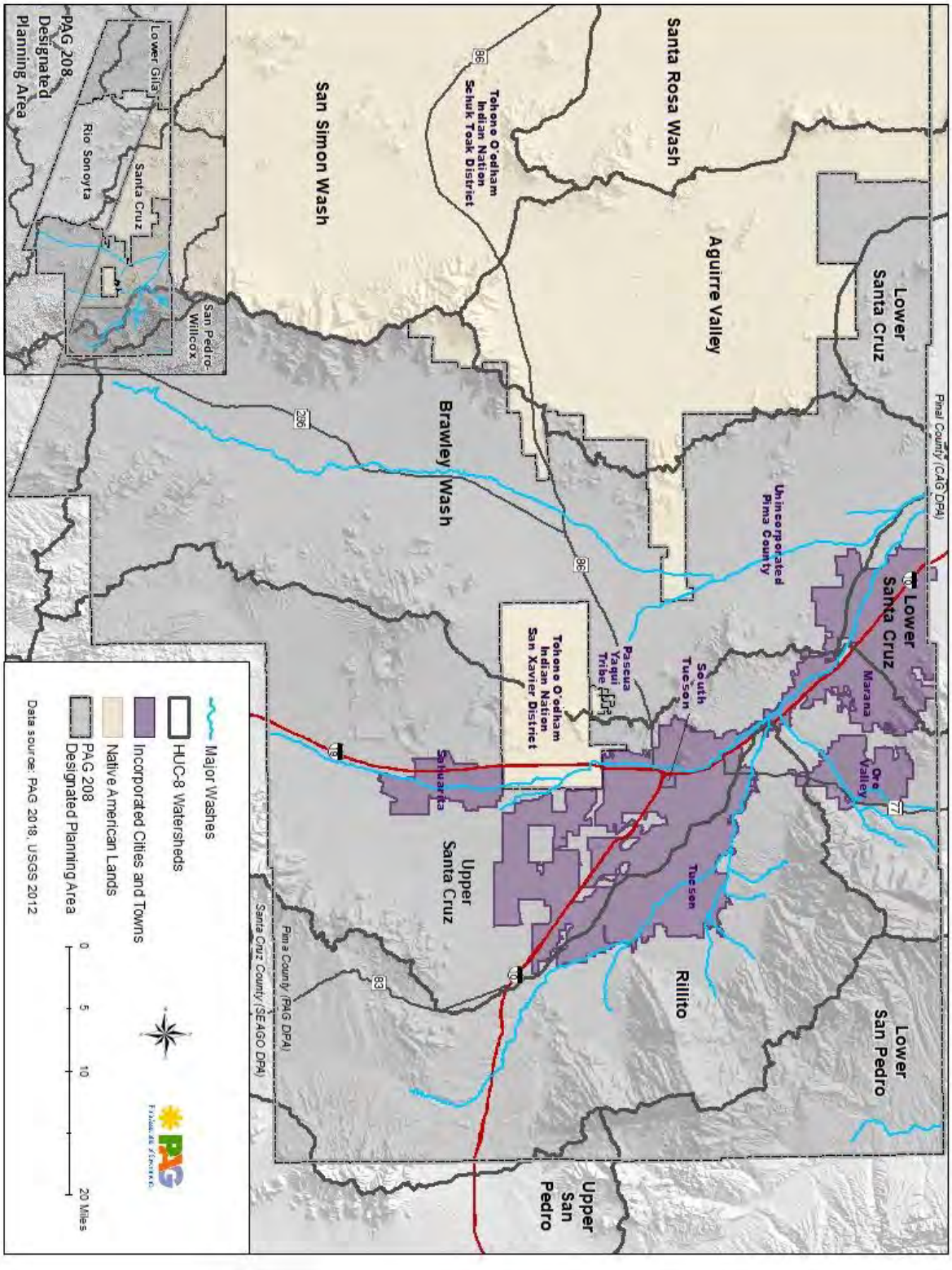
Equally, water quantity and reliability have direct ties to water quality. Geology, hydrology and biology relate to pollutant sources, distribution, impacts and management. Drought conditions have been shown to significantly impact water quality (Mosley 2015). Population and land use also play an important role in how groundwater resources are managed. Groundwater depletion can lead to deterioration of water quality (U.S. Geological Survey 2019).

Planning Area Description

PAG's DPA designation legally encompasses all of Pima County, excluding Native American lands, Tohono O'odham Nation and the Pascua Yaqui Tribe, which have their own authority. However, PAG coordinates with the Native American nations and invites them to be part of the 208 process, as desired. The Pascua Yaqui Tribe is provided wastewater service through the Pima County DMA. The 208 Plan applies to all remaining areas within Pima County, including the City of Tucson, the Town of Oro Valley, the Town of Marana, the City of South Tucson, the Town of Sahuarita, and unincorporated Pima County, which includes Green Valley, Ajo and Summerhaven (Figure 2).

Because the majority of PAG's DPA planning area falls within eastern Pima County (as do the majority of the population, water resources, and wastewater treatment plants), this area receives greater geographic focus in this chapter than western Pima County.

Figure 2. Map of PAG 208 Planning Area: Political and Watershed Boundaries



Natural Setting

The natural setting of Pima County is diverse in many ways, especially with respect to elevation. Pima County is approximately 9,200 square miles in area, with land surface elevations ranging from 1,200 feet to more than 9,000 feet above mean sea level (PAG 2003). The lower elevations of Pima County lie within the Sonoran Desert, which covers approximately 100,000 square miles in southern Arizona, southeastern California, most of the Baja Peninsula, and the Mexican state of Sonora (Arizona-Sonora Desert Museum 2019). Near Tucson, the Santa Catalina, Rincon, and Santa Rita Mountains are the highest mountain ranges in the county, with deciduous woodlands, coniferous forests, and perennial streams. The wide elevation span leads to diverse climate regimes and ecosystems.

Watersheds

Boundaries

Watersheds in Pima County include large alluvial basins separated by mountain ranges. The Santa Cruz River watershed encompasses most of eastern Pima County, whereas a portion of the Lower Gila River watershed covers the western third of Pima County (Figure 2). The eastern Pima County drainage network generally flows north to northwest, while the central Pima County drainage network generally flows north to south into Mexico. The western Pima County drainage network generally flows north to northwest toward the Gila River. A portion of the Lower San Pedro River watershed is in the northeast corner of Pima County. All natural drainages in Pima County ultimately connect to the Colorado River, although the actual flows may not perennially reach the river. The majority of the watercourses in Pima County are ephemeral, with some intermittent and perennial watercourses located in eastern Pima County.

Pima County intersects the ADEQ-defined Colorado-Lower Gila, Santa Cruz-Magdalena-Rio Sonoyta, and San Pedro-Wilcox Playa-Rio Yaqui watersheds. The following bulleted list and Figure 2 indicate which Hydrologic Unit Code (HUC) watersheds intersect Pima County.

Colorado-Lower Gila

- San Cristobal Wash
- Tenmile Wash

Santa Cruz-Magdalena-Rio Sonoyta

- Aguirre Valley
- Brawley Wash
- Rillito
- Lower Santa Cruz
- Rio de la Concepcion
- Rio Sonoyta
- San Simon Wash
- Santa Rosa Wash

- Tule Desert
- Upper Santa Cruz River

San Pedro-Wilcox Playa-Rio Yaqui

- Lower San Pedro River
- Upper San Pedro River

The United States Geological Survey (USGS) provides maps and lists of watersheds according to their HUC here: USGS Maps[17].

Watershed Approach

Watershed planning can occur at various scales. Scales of watersheds using the U.S. Geological Survey's HUC are classified with higher numbers for more subdivided units and lower numbers for the more encompassing regions. Arizona fits almost entirely within a HUC 2 scale watershed (Lower Colorado Region). HUC 4 aligns fairly well with DPA scale planning (PAG's metro area is mostly contained by the Middle Gila Watershed). As a Council of Governments, PAG is a beneficial entity to conduct watershed planning because it assists with the challenge of planning across political boundaries on a regional level with the legal authority to develop and implement plans and ensure compliance with environmental regulations. At the regional (i.e., DPA) level, it is useful to conduct watershed planning at the HUC 6 or 8 scale because these individual watersheds are distinct from one another. For example, the Upper Santa Cruz and Rillito watersheds encompass much of the Tucson metropolitan area and include an Outstanding Arizona Water (OAW), several perennial streams flowing down the slopes of high mountains, and an effluent-dependent water, whereas the Brawley Wash watershed is predominantly rural in nature, consisting of low-elevation desert rangeland. The San Simon Wash watershed is within the low-elevation desert of the Tohono O'odham Nation. PAG recommends that as issues arise, to consider watershed planning at a scale that takes into account the specific challenges and needs associated with the individual waterbodies (PAG 2006).

Watersheds with the highest population, variety of land uses, economic development, and water resources in the PAG area are the Upper Santa Cruz, Rillito and Brawley Wash watersheds. Planning for the Upper Santa Cruz watershed as a whole, however, including the southern and northern limits, requires coordination with Central Arizona Governments (CAG) and South-Eastern Arizona Governments Organization (SEAGO) through the statewide Water Quality Management Working Group and with individual planning efforts or Memoranda of Understanding (MOUs), as needed.

EPA guidelines promote the use of Section 319 (Federal Register 2003) funding for developing and implementing watershed-based plans. The 2006 208 Plan, Chapter 8 (Watershed Approach to Water Quality Management Planning) contained three of the nine key elements recommended by the EPA for watershed-based water quality plans and can be used in combination with other planning efforts. In the PAG region, Nonpoint Education for Municipal Officials (NEMO) Watershed-Based Plans serve the purpose of Watershed Improvement Plans (WIPs) required to receive implementation funds. PAG created a Green Stormwater Infrastructure Plan to

[17] https://viewer.nationalmap.gov/advanced-viewer/

supplement the NEMO Plan for the Santa Cruz Watershed[18] with new information about the effectiveness of and priority locations for GI as a recommended best practice for stormwater quality management.

To align with the watershed approach, watershed information has been integrated into various sections of the current 208 Plan, including the Future Conditions and Solid Waste Management sections of the Water Quality Management appendix and the Surface Water section of this chapter. The PAG Facilities Web Portal allows the end-user to sort point sources by watershed.

Past 208 Plans serve as a valuable reference for additional watershed information. Parts of PAG's original 1978 208 Plan, particularly the nonpoint source elements, were developed on a watershed basis to a limited extent. Please see the 1978 208 Plan for information on soil losses calculated on a watershed basis. The Watershed Approach section of the 2006 208 Plan provides additional water quality management information sorted by watershed.

Climate

Southeastern Arizona is known for its low annual precipitation, clear skies, and year-round warm weather; however, climate variability is very pronounced in the U.S. Southwest. Relatively dry, wet, cool and warm periods fluctuate on time scales from seasons to centuries due to changes in oceanic and atmospheric circulatory patterns (Sheppard et al. 1999). For example, droughts in Arizona are often associated with atmospheric changes due to the El Niño-Southern Oscillation (Garfin et al. 2013). According to paleoclimatology records, such large-scale shifts have led to droughts in the Colorado River Basin around once or twice a century over the past 1,000 years, with some droughts spanning multiple decades (Garfin et al. 2013). Notably, the region experienced dry periods during the 1890s and the 1950s (Sheppard et al. 1999). Arizona has experienced continuous drought conditions since 1994 (ADWR 2019). Reservoir levels and stream flows have declined, and some climatologists suggest that the U.S. Southwest has entered an abnormally dry period.

Current drought status information is available at the following links.

ADWR Drought Program[19]

EPA Climate Change Indicators - A Closer look: Temperature and Drought in the Southwest[20]

University of Arizona Climate Assessment for the Southwest (CLIMAS)[21]

Arizona State Climate Office[22]

Seasonal precipitation patterns are evident in Pima County. Summer precipitation is primarily due to intense, localized convective thunderstorms associated with the North American monsoon. Winter precipitation is due to the remnants of tropical storms from the south or frontal storms that occasionally track more southerly to reach Arizona. In both cases, winter precipitation tends to be in the form of widespread, soaking rains, with snow in the upper elevations. Tucson and statewide

[18] https://legacy.azdeq.gov/environ/water/watershed/download/nemo-santa_cruz-wp.pdf
[19] https://new.azwater.gov/drought
[20] https://www.epa.gov/climate-indicators/southwest
[21] http://www.climas.arizona.edu/sw-climate/drought
[22] https://azclimate.asu.edu/drought/

historical and current seasonal climate data can be explored at National Weather Service Forecast for Tucson, Arizona[23].

Geology

Pima County is in the Basin and Range physiographic province, which extends from eastern California to central Utah and from southern Idaho to the Mexican state of Sonora. Characterized by northwest-trending mountain ranges separated by alluvial valleys, the basin and range physiography was created by volcanic activity and normal faulting in areas where the earth's crust underwent lateral extension. Along the north/south-trending faults, mountains uplifted and valleys down-dropped. Vertical relief between the valley floors and mountain peaks regularly exceeds 6,000 feet. Rock types in Pima County span from acidic volcanic and intrusive rocks to limestone, basalt, andesite, and metamorphic schists (USGS 2001).

Eroded sediments from the mountains created deep basins in the valleys. Basin units consist of (from oldest to youngest) mountain bedrock, moderately to highly consolidated pre-basin and range sediments, consolidated lower basin fill, less consolidated upper basin fill, and unconsolidated stream alluvium (USGS 1990).

Detailed information regarding the surficial geologic conditions in Pima County and the Tucson Metropolitan Area is included at Pima County GIS Geology Metadata[24] and Arizona Geological Survey Surficial Geologic Maps of the Tucson Metropolitan Area[25].

Hydrology

The Tucson AMA is one of five AMAs created under the Groundwater Management Act of 1980 to stop groundwater depletion. The Tucson AMA encompasses 3,866 square miles largely within eastern Pima County but including portions of Pinal and Santa Cruz counties. The goal of the Tucson AMA is to achieve Safe Yield, a long-term balance between groundwater withdrawals and recharge, by 2025.

The following ADWR websites provide information about the Tucson AMA and statewide maps related to water resources.

Arizona Water Atlas, Volume 8[26]

ADWRGIS GIS Data and Maps[27]

Groundwater Hydrology

Most aquifers in Pima County have historically existed in the unconsolidated units such as the Pleistocene Fort Lowell Formation in the Tucson basin and the upper Tinaja Beds in the Avra Valley basin. Although large aquifers are laterally separated from each other by mountain piedmonts (Anderson et al. 1990), faults and fractures create vertical conduits between saturated

[23] http://www.weather.gov/twc/#
[24] http://gis.pima.gov/data/contents/metadet.cfm?name=geology
[25] http://repository.azgs.az.gov/uri_gin/azgs/dlio/346
[26] http://infoshare.azwater.gov/docushare/dsweb/Get/Document-10433/Volume_8_final.pdf
[27] https://new.azwater.gov/gis

units. Perched aquifers exist in some areas where a clayey layer acts as an aquitard between the main aquifer and the perched aquifer.

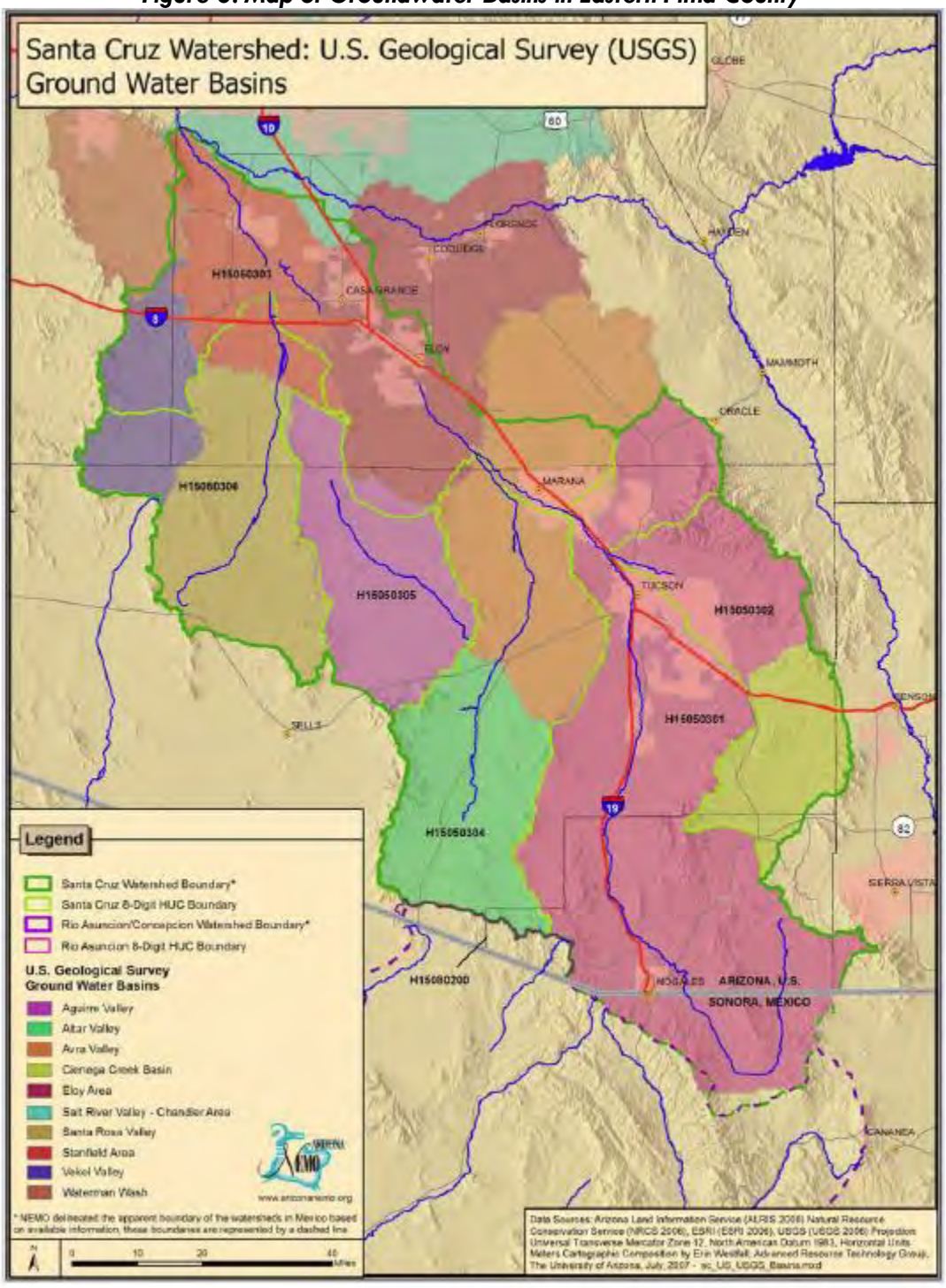
Most groundwater in Tucson basin is within a single regional aquifer, largely unconfined, hosted in basin-fill alluvium and spanning most of the basin. The regional aquifer of the Tucson basin is approximately 10,000 feet below the surface (Estoe 2016).

From youngest to oldest, the three sedimentary units in the Tucson basin are the Pleistocene Fort Lowell Formation, the Tertiary Tinaja Beds, and the Tertiary Pantano Formation (Davidson 1973). The saturated portion of the Fort Lowell Formation and the upper Tinaja beds historically composed the most productive part of the aquifer (CH2M Hill 1988). The Fort Lowell Formation unconformably overlies the Tinaja Beds, which consist of upper, middle and lower units. The Tinaja Beds range from a few feet thick near the edge of the basins to more than 5,000 feet thick near the center of the Tucson basin (Davidson 1973). The Tinaja Beds unconformably overlie the Pantano Formation. The thickness of the Pantano Formation is unknown but may be thousands of feet thick in the Tucson basin (USGS 1987). Quaternary alluvial deposits can be found in alluvial fans, terrace deposits and stream channels. Groundwater generally flows in a north-to-northwest-trending direction and exits the Tucson basin at the Rillito narrows (Davidson 1973). The groundwater basins in eastern Pima County are shown in Figure 3.

Primary inputs and outputs to the aquifer include recharge and groundwater withdrawal, respectively. Precipitation naturally recharges the aquifers through infiltration of streamflow, mountain front recharge, and underflow. Recharge also occurs via anthropogenic projects. In the Tucson basin, groundwater pumpage since the mid-20th century has dewatered much of the Fort Lowell Formation, leaving the Tinaja Beds as the principal groundwater supply for the Tucson AMA (ADWR 2014a). Information specific to the groundwater conditions in the Tucson AMA can be viewed at ADWR Tucson AMA Groundwater Authorities[28], City of Tucson Groundwater Maps[29] and Shallow Groundwater Areas in Eastern Pima County, Arizona, prepared by PAG, October 2012[30].

[28] http://infoshare.azwater.gov/docushare/dsweb/View/Collection-90
[29] https://www.tucsonaz.gov/water/groundwater-maps
[30] http://www.pagnet.org/documents/water/SGWAReport2012.pdf

Figure 3. Map of Groundwater Basins in Eastern Pima County



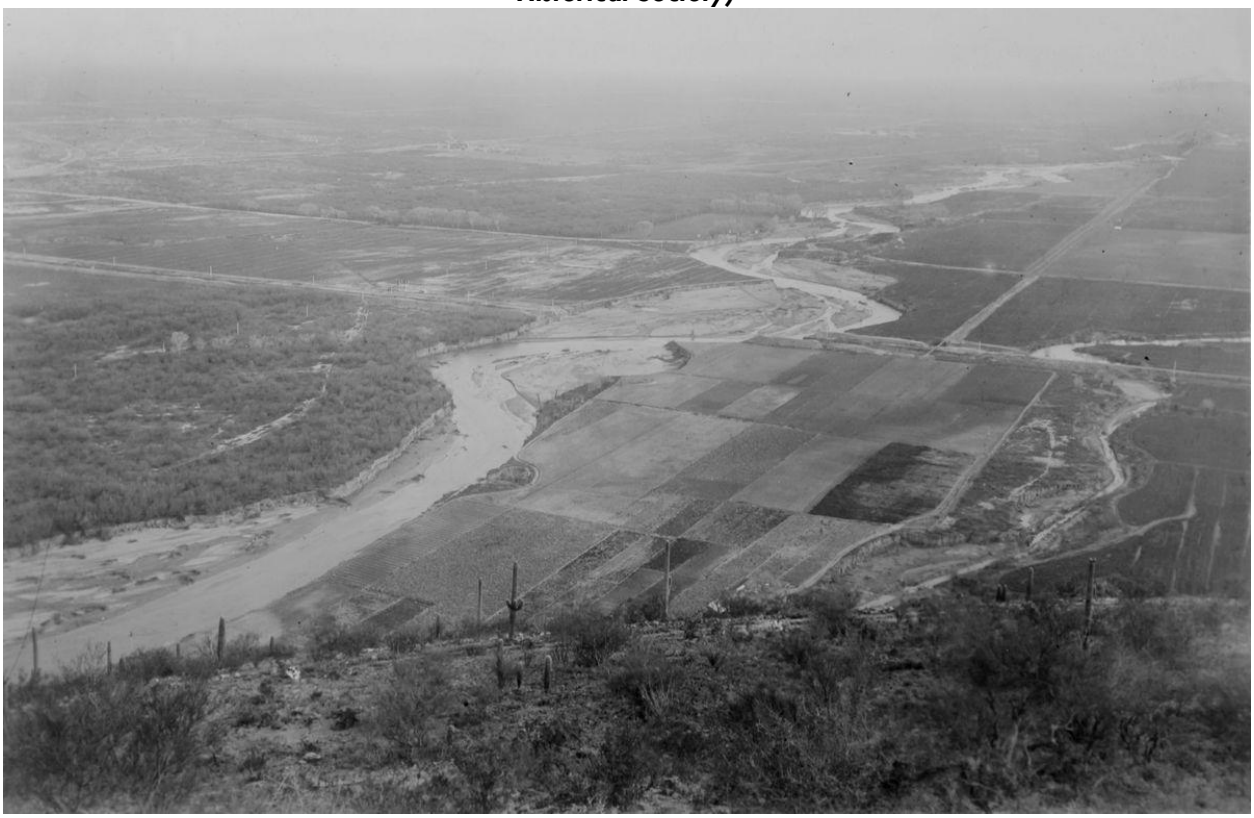
Surface Water Hydrology

The Santa Cruz River originates in the San Rafael Valley, flows southward and enters Mexico. During its 25-mile course through Mexico, the river continues its southward flow for a short distance and then bends northward and enters Arizona 5 miles east of Nogales (ADWR 1999a). From the International Border, the Santa Cruz River continues northward for 105 miles to the

confluence of the Gila River (ADWR 1999, 1999a). Mostly ephemeral, there are two effluent-dependent reaches downstream of Nogales, Arizona, and Tucson, Arizona. Significant tributaries of the Santa Cruz River include Cienega Creek, Pantano Wash, Rillito Creek also known as the Rillito River, Julian Wash, Rincon Creek, Tanque Verde Wash, Sabino Creek and Cañada del Oro Wash. Brawley Wash is a tributary of the Lower Santa Cruz River.

The majority of the surface watercourses in Pima County are currently ephemeral, flowing only in response to runoff events. Figure 4 shows the Santa Cruz River flowing in the 1900s. In a 2000 report, 32 perennial streams were identified in Pima County (PAG 2000). Surface water sources are discussed in more detail later in this appendix.

Figure 4. Photo of 1900s Vegetation along a flowing Santa Cruz River from Sentinel Peak (AZ Historical Society)



Biology

Vegetative Communities and Habitat

There are six native vegetative communities in Pima County, categorized based on elevation ranges (Figure 5). Sonoran Desert scrub and desert grasslands exist between 2,000 and 4,000 feet above mean sea level. Creosote bush, saltbush, palo verde trees, saguaro, and other succulents are present at this elevation range. Lower temperatures and increased precipitation in the mountains support mid-elevation oak and juniper woodlands, and at the highest elevations, coniferous forests (PAG 2003).

Along riparian reaches, native cottonwood, willow, and velvet mesquite can be found. However, non-native species such as Lehmann lovegrass, salt cedar (tamarisk), Johnson grass, and giant reed are displacing native vegetation in riparian areas (PAG 2003a) as well as in desert areas. Escaped landscape plants have been identified in wild areas (Pima County 2002).

Figure 5. Diagram of Major Vegetation Types



Source: https://uanews.arizona.edu/story/ua-college-science-produces-mount-lemmon-audio-tour

In addition to the proliferation of non-native vegetative species, habitat destruction stemming from other causes is also occurring. Urban growth in eastern Pima County, upper elevation fires, and drought conditions have displaced animal and plant species. Over the last two decades, fires of differing magnitudes have burned in the mountains surrounding Tucson and other Pima County locations: the 2003 Aspen Fire[31] and 2002 Bullock Fire[32] (Santa Catalinas), 2012 Montezuma Fire[33] (Baboquivari Peak Wilderness), and 2017 Burro Fire[34] (Santa Catalinas). Fires can lead to increased sediment discharge, flood potential, and water quality changes in associated valleys (Meixner et al. 2004, Woodhouse 2004).

The Pima County Sonoran Desert Conservation Plan (SDCP) was developed in the early 2000s to help mitigate habitat loss. It designates priority habitat areas for identified vulnerable species and general biodiversity purposes and directs urban growth into other areas. Priority habitat areas include the Altar Valley, Baboquivari Mountains, Cienega Creek, Eastern Tucson Riparian Complex, Organ Pipe/Goldwater Complex, Sabino Canyon, San Pedro River, Santa Rita Mountains, Silverbell Mountains, Tortolita Mountains and Tucson Mountains (Pima County 2004). As part of the SDCP, Pima County developed the Multi-Species Conservation Plan (MSCP) to address endangered species compliance under the Endangered Species Act (ESA) Section 10 Permit. The MSCP was approved by the U.S. Fish and Wildlife Service in 2016 and will be in effect for 30 years. This plan details what development activities are covered by the permit, how to mitigate

[31] http://www.tucsonfirefoundation.com/wp-content/uploads/2012/07/2003-Aspen-Fire-MLFD.pdf
[32] http://www.tucsonfirefoundation.com/wp-content/uploads/2012/07/2002-Bullock-Fire-MLFD.pdf
[33] https://web.archive.org/web/20120616031705/http://inciweb.org/incident/2897/
[34] http://ktar.com/story/1642291/burro-fire-tucson-26000-51-percent/

any impacts, and how to manage covered species encountered during development. In addition, Pima County has developed a Habitat Conservation Plan as part of the SDCP to mitigate incidental takes of listed species.

Local conservation plans that have been adopted or are under development are available at the following website links.

Pima County Sonoran Desert Conservation Plan[35]

City of Tucson Habitat Conservation Plan[36]

Town of Marana Draft Habitat Conservation Plan[37]

PAG coordinates 208 planning with conservation land use planning. The local governments' habitat conservation efforts tend to focus on areas that serve as wildlife corridors to publicly protected lands such as national parks or forests and cover several aquatic and riparian-based ecosystems. The diverse vegetative communities present on mountain ranges support a variety of vulnerable species and habitats, especially for animals with large ranges. In addition, some of the last remaining perennial streams are located in the upper elevations. It is therefore important to maintain connections between these areas for wildlife.

The Regional Transportation Authority's (RTA) Wildlife Linkages[38] program aims to incorporate wildlife crossing improvements into new roadway projects and retrofit existing roadways with improved crossings. The RTA has worked with the Arizona Department of Transportation to incorporate wildlife crossings into the State Route 77 widening project north of Tucson. As of 2018, an overpass and underpass for wildlife have been completed, along with fences to help to funnel wildlife to these crossings. As of June 2018, camera surveillance by the Arizona Game and Fish Department had recorded a total of 4,418 wildlife crossings at these locations (Arizona Game and Fish Department 2018).

Wildlife

The extensive elevation range in Pima County yields a diversity of animals and plants in the Sonoran Desert and surrounding mountains. Most of the wildlife in Arizona depends on watercourses for at least one critical life stage for their survival, either through shelter, crossings and connectivity, or ephemeral or perennial water sources (Arizona Riparian Council, 2004). Common year-round mammals include bobcats, javelinas, and coyotes. Most native amphibians, reptiles (including many rattlesnakes) and rodents hibernate over the winter and emerge in the spring. Common Sonoran Desert reptile species include the Gila monster, desert iguana, gopher snake and banded gecko. Native avian species include the cactus wren, Gila woodpecker, Gambel's quail, roadrunner and Harris's hawk. Many species of butterflies, bats and birds migrate through the desert washes, riparian woodlands and pine forests between their wintering areas in the subtropics to their nesting areas. Non-native aquatic species such as bullfrogs, mosquitofish, green sunfish, and crayfish have displaced native species such as leopard frogs, Gila topminnow and Gila chub in much of the region (Pima County 2002).

[35] http://webcms.pima.gov/government/sustainability_and_conservation/conservation_science/the_sonoran_desert_conservation_plan/

[36] https://www.tucsonaz.gov/pdsd/city-tucson-habitat-conservation-plan-hcp

[37] https://www.fws.gov/southwest/es/arizona/Documents/HCPs/Marana/09_TOM_dHCP.PDF

[38] http://www.rtamobility.com/RTAProjects/WildlifeLinkages/tabid/102/Default.aspx

In 2013, the only fish species found in the Santa Cruz River in Pima County was the non-native western mosquitofish. Water quality improvements for discharged effluent, however, have made it possible for native fish to return to the river. In 2017, the endangered Gila topminnow was one of six species found in the effluent-dependent stretch of the Santa Cruz River in Pima County (Sonoran Institute 2018b).

The U.S. Fish and Wildlife Service (FWS) maintains a current Endangered Species List[39] for plant and animal species along with critical habitats located in Pima County.

Aquatic Species

Arizona's native fish have managed to survive drought and flash floods while inhabiting all forms of waterways, from small springs, ponds, and lakes to the Colorado River; however, the native fish species have been in sharp decline. This decline has been attributed to the introduction of non-native fish and loss or alteration of habitat. In Pima County, the decline in native aquatic species has been due to the introduction of nonnative species such as the mosquitofish and bullfrog and the decrease in perennial surface waters, most notably the Santa Cruz River and Rillito Creek.

There are several native aquatic species in the Santa Cruz River watershed. Native species include, but are not limited to, the Chiricahua leopard frog, Sonoran Desert toad, Great Plains toad, Mazatlan narrow-mouthed toad (Tucson Herpetological Society 2019) Southwestern Woodhouse's toad, narrow-mouthed toad, canyon tree frog, lowland leopard frog (PAG 2001), longfin dace, desert sucker, Sonora sucker, desert pupfish, Gila chub, Gila topminnow, Quitobaquito pupfish, Sonoyta mud turtle, Tarahumara frog and speckled dace (Pima County 1999).

Historically, these species would be found all along the Santa Cruz River. However, many species disappeared from Pima County by 1940, while some can still be found in tributaries such as Cienega Creek. The Chiracahua leopard frog is a threatened species and has limited natural habitat in Pima County. The Sonora sucker and desert pupfish can no longer be found in Pima County, whereas the Gila topminnow and Gila Chub can still be found in limited areas and are federally listed as endangered. The Gila topminnow was federally listed as endangered in 1967 and the Gila Chub was listed in 2002.

In 2002, Pima County began developing the MSCP as part of the SDCP to "avoid, minimize, and mitigate impacts to both listed and unlisted species and their habitats" due to private development, construction, and maintenance activities in the region. Many native aquatic species were identified in 2002 as vulnerable[40], threatened or endangered[41]. The Final 2018 MSCP[42] covers 44 species, including five species of native fish and two species of native frogs. Two of the fish species are federally listed as endangered and one of the native frogs is listed as threatened.

Native fish conservation efforts have been undertaken by the Arizona Game and Fish Department and other governmental agencies with the goal to "manage and conserve the state's native fish species through on-the-ground conservation projects; threatened and endangered species

[39] https://ecos.fws.gov/ipac/location/JK5QY5MNV5HC3GKUDARXGRDLSQ/resources
[40] http://www.pima.gov/cmo/sdcp/reports/d25/131PRIOR.PDF
[41] http://www.pima.gov/cmo/sdcp/reports/d25/135THREA.PDF
[42] http://webcms.pima.gov/cms/one.aspx?portalId=169&pageId=52674

recovery; statewide population monitoring; creation and implementation of conservation agreements; provision of research grants; and, public education and outreach" (Arizona Game and Fish Department 2019).

Population

In Tucson, Arizona, the population was just a few thousand in the 1870s. Urban population growth in the semi-arid southwestern region of North America occurred primarily after the end of World War II (Plummer et al. 2004). In the time since the original 208 Plan was adopted in 1978, the population and the geographic extent of the metropolitan area have grown rapidly. At the time PAG submitted the grant application in 1975 for developing the original 208 Plan, Pima County's population was estimated at 435,000 (PAG 1975). The 2017 Arizona Office of Economic Opportunity (OEO) population estimates[43] showed a Pima County population of roughly one million. The metropolitan area depended on groundwater and the protection of that groundwater quality until a major engineering project brought Colorado River water to the city by canal in 1992 (Gelt et al. 1999). Population growth is associated with increases in nonpoint source pollutants and in the demand for sewage treatment. This Plan looks at the water quality conditions of each of these water sources.

All incorporated jurisdictions in Pima County and unincorporated areas increased in population between 2010 and 2017 (Table 5). Over those years, the population of Arizona and Pima County has grown by 8.98 percent and 4.68 percent, respectively, making Arizona the sixth fastest growing state in the nation. Pima County contains about 15 percent of Arizona's population (U.S. Census Bureau 2017). Based on 2017 census estimates, Tucson, the largest incorporated city in the county, contains slightly more than half the county's total population. Unincorporated Pima County is somewhat unique, composing about 35 percent of the metro-area population.

From 2000 to 2017, cities and towns within the PAG region have annexed a total of 73,711 acres. Over that period, Marana, Tucson, Sahuarita and Oro Valley annexed 30,080, 27,605, 10,678, and 4,560 acres, respectively. Eighty-one percent of the annexation occurred from 2000 to 2002 (Pima County 2018).

The towns of Marana and Oro Valley were the fastest and second-fastest growing towns in Arizona in the 1990s. Sahuarita was incorporated in 1994. Since 2000, Sahuarita and Marana have been the incorporated areas with the fastest population growth rates in the PAG region but with some slowing of the population growth rate since the downturn in the economy in the first decade of the 2000s. For example, Marana increased 158 percent from 2000–2010 and 30 percent from 2010–2017. Unincorporated Pima County and the City of Tucson have gained the most people since 2000.

The Pascua Yaqui population living on reservations was 3,315 in 2000 (PAG 2003) and in 2017 it was estimated at 3,761 (Eastern Pima County Adjusted Arizona OEO Sub-County Population Forecast). The population on the Tohono O'odham Nation was estimated to be 2,181 in 2017 by OEO.

[43] https://population.az.gov/population-estimates

Table 5. Population Growth in Pima County – 1980 to 2017

Year	Arizona	Pima County	Unincorporated Pima County	Tucson	South Tucson	Marana	Oro Valley	Sahuarita
1980	2,716,546	531,443	191,179	330,537	6,554	1,674	1,489	*
1990	3,665,228	666,880	247,540	405,390	5,093	2,187	6,670	1,629*
2000	5,130,632	843,746	305,059	486,699	5,490	13,556	29,700	3,242
2010	6,392,017	980,263	353,264	520,116	5,652	34,961	41,011	25,259
2017	6,965,897	1,026,099	363,857	537,634	5,664	45,378	44,517	29,049
Change 2000–2010	1,261,385	136,517	48,205	33,417	162	21,405	11,311	22,017
Percent Change 2000–2010	24.59%	16.18%	15.80%	6.87%	2.95%	157.90%	38.08%	679.12%
Change 2010–2017	573,880	45,836	10,593	17,518	12	10,417	3,506	3,790
Percent Change 2010–2017	8.98%	4.68%	3.00%	3.37%	0.21%	29.80%	8.55%	15.00%

* Sahuarita incorporated in 1994. 1990 population estimated from census tracts approximate to the incorporation limits of the town.

U.S. census numbers are used for 1980–2010. The population estimates from 2011 to 2015 were produced under the Arizona Department of Administration (ADOA). The state demographer's office was transferred to OEO in August 2016. Newer estimates are under OEO.

For future projections of population see the Water Quality Management chapter.

Local Governments

PAG's membership when the original 208 Plan was adopted in 1978 included only Tucson, Pima County, and South Tucson (PAG 1975). Over time, PAG's membership has grown to include Tucson, Pima County, South Tucson, Oro Valley, Marana, Sahuarita, the Tohono O'odham Nation, the Pascua Yaqui Tribe and the Arizona Department of Transportation. Each jurisdiction is governed by an elected board (i.e., Mayor and Council, Native American council, board of supervisors), and the cities and towns also directly elect a mayor and appoint management staff. Department staff members for publicly provided services (i.e., transportation, human resources, planning, police) are appointed in each jurisdiction. One elected official from each jurisdiction serves on the PAG Regional Council, which acts on regional transportation, environmental, and planning issues.

In August 2004, legislation was passed to allow a Regional Transportation Authority (RTA) governed by the PAG Regional Council to plan and fund regional transportation projects in eastern Pima County. In 2006, an excise tax was approved by voters to use the generated income to fund projects, as part of a voter-approved plan.

Land Use/Ownership

Approximately 87 percent of Pima County consists of land owned by the federal and state governments and Native American nations. Native American nations account for 43 percent of the total land area, primarily in central Pima County. The State of Arizona owns 14 percent, and the U.S. Government owns 30 percent, which consist of national parks, monuments, forests, wildlife refuges, and an Air Force base. Local government and private and corporate ownership account for the remaining 13 percent. Overall land ownership in Pima County is shown in Figure 6, and government land ownership in Pima County is shown in Figure 7.

Figure 6. Pie Chart of Land Ownership in Pima County, 2017

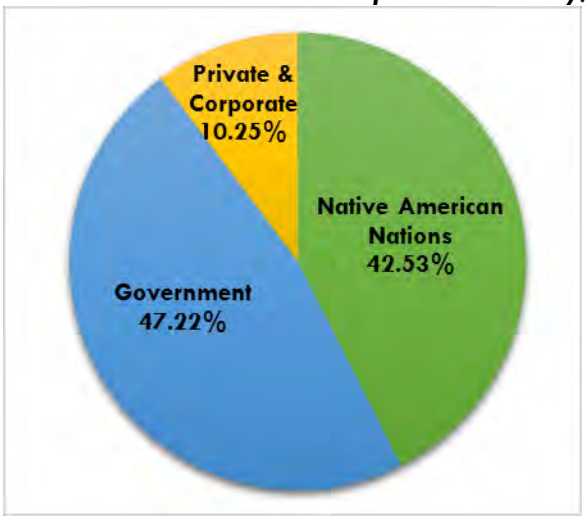
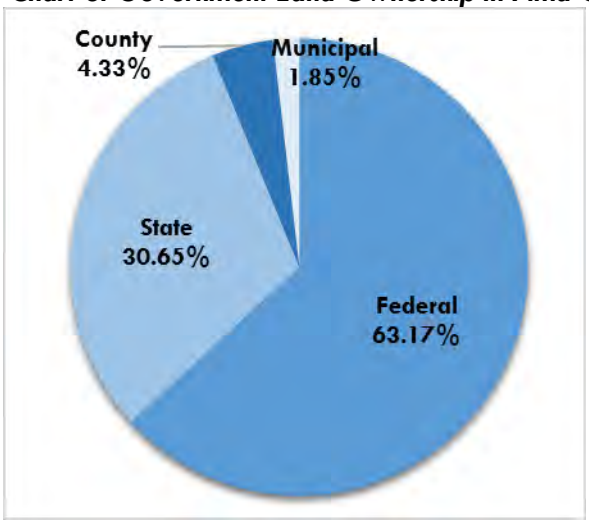


Figure 7. Pie Chart of Government Land Ownership in Pima County, 2017

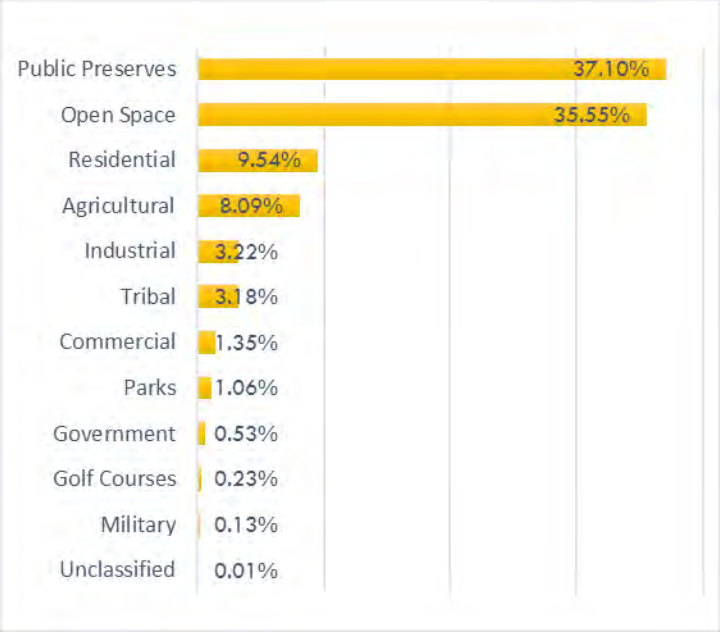


Data Source: Arizona Department of Revenue Property Use Code Manual

Land uses in Pima County are diverse, with sometimes quite disparate land uses occurring in the same geographic area. In western Pima County, small, unincorporated communities and open space cover the landscape. Public preserves are parcels and land units that are managed for the preservation of biological values and environmental and cultural resources. They are owned by a

variety of public and private entities, and in some cases, the owner and manager are not the same. Open space includes vacant, undeveloped land parcels. Central Pima County contains 97 percent of all county Native American lands and is mostly undeveloped vacant land and open space. In contrast, eastern Pima County consists of urbanized areas, especially around the Tucson metropolitan area. Agricultural use is most prevalent along the I-10 corridor in Marana in the downstream part of our watershed, and vacant ranchlands and open space make up the southeastern, northeastern and eastern corners of the county (the southern and eastern portions of which are in the upper portions of our watershed). Also, upstream, heavy industrial use parallels the I-10 and I-19 corridors including the operational mines near Sahuarita. Incorporated areas in eastern Pima County continue to expand as open space and developed areas are annexed. Figure 8 shows the land uses in eastern Pima County in 2017.

Figure 8. Bar Chart of Land Use in Eastern Pima County, 2017



The data sources for PAG's analysis for land uses consisted of the Arizona Department of Revenue Property Use Code Manual and these Pima County GIS files:

- *paregion* (July 12, 2018) – contains parcel data and property use codes
- *preserve* (June 27, 2018) – identifies protected public lands
- *golf* (March 12, 2015) – identifies golf courses in Pima County
- *park_rec* (May 16, 2018) – identifies public parks in Pima County

Water Resources

Five principal water resource categories are present in Pima County (Table 6).

Table 6. Water Resources in Eastern Pima County

Resource
Groundwater
CAP water
Reclaimed water (treated effluent)
Surface water
Stormwater runoff

Although these resources can be hydrologically linked, they are not necessarily managed as such. For example, surface water and groundwater use are regulated separately by the state through an assigned water rights system (Water Education Foundation et al. 2007). In addition, water management criteria consider groundwater, CAP water and effluent as regulated water resources, whereas harvested stormwater is not, unless it becomes subject to surface water rights, per Arizona Revised Statutes. § 45-141.

The following links provide the best available water resources data for the Tucson AMA.

ADWR Tucson AMA Home Page[44]

Arizona Water Atlas Volume 8: Active Management Areas Atlas[45]

ADWR Groundwater Authorities in AMAs[46]

Shallow Groundwater and Riparian Areas

Historically, groundwater has been the most extensively used water resource in Pima County. Most of the groundwater demand has occurred in eastern Pima County, in the Upper Santa Cruz and Avra Valley subbasins. Groundwater in these areas is used for public drinking water supplies, landscape irrigation, agricultural irrigation, and industrial uses (including mining). Throughout most of the county, groundwater is withdrawn from wells that tap deep aquifers found in the alluvial basins. Elsewhere, groundwater is drawn from shallow wells tapping comparatively localized sources, such as fractured bedrock, floodplain aquifers or perched aquifers.

According to the Tucson AMA Fourth Management Plan prepared by ADWR, groundwater withdrawal in the Tucson AMA has been declining since 2002 as reliance on renewable supplies has increased. Groundwater demand in 2002 was 287,745 acre-feet, dropping to 193,349 acre-feet in 2013. From 2010–2013, the annual aquifer gains (i.e., groundwater inflow and recharge) exceeded the annual aquifer losses (i.e., groundwater outflow, pumping, riparian evapotranspiration) within the Tucson AMA resulting in a safe-yield condition. However, the ADWR management goal of safe-yield is defined as achieving a "long-term balance" between

[44] https://new.azwater.gov/ama/tucson
[45] http://infoshare.azwater.gov/docushare/dsweb/Get/Document-10433/Volume_8_final.pdf
[46] http://infoshare.azwater.gov/docushare/dsweb/View/Collection-90

withdrawals and recharge. Increasing use of renewable water sources and continuing to conserve water are necessary for the Tucson AMA to achieve and maintain safe-yield.

Current groundwater conditions in the Tucson AMA can be reviewed at the following links.

ADWR Fourth Management Plan for the Tucson AMA[47]

ADWR Hydrology Division Tucson Regional Model[48]

NEMO Watershed-Based Plan Santa Cruz Watershed[49]

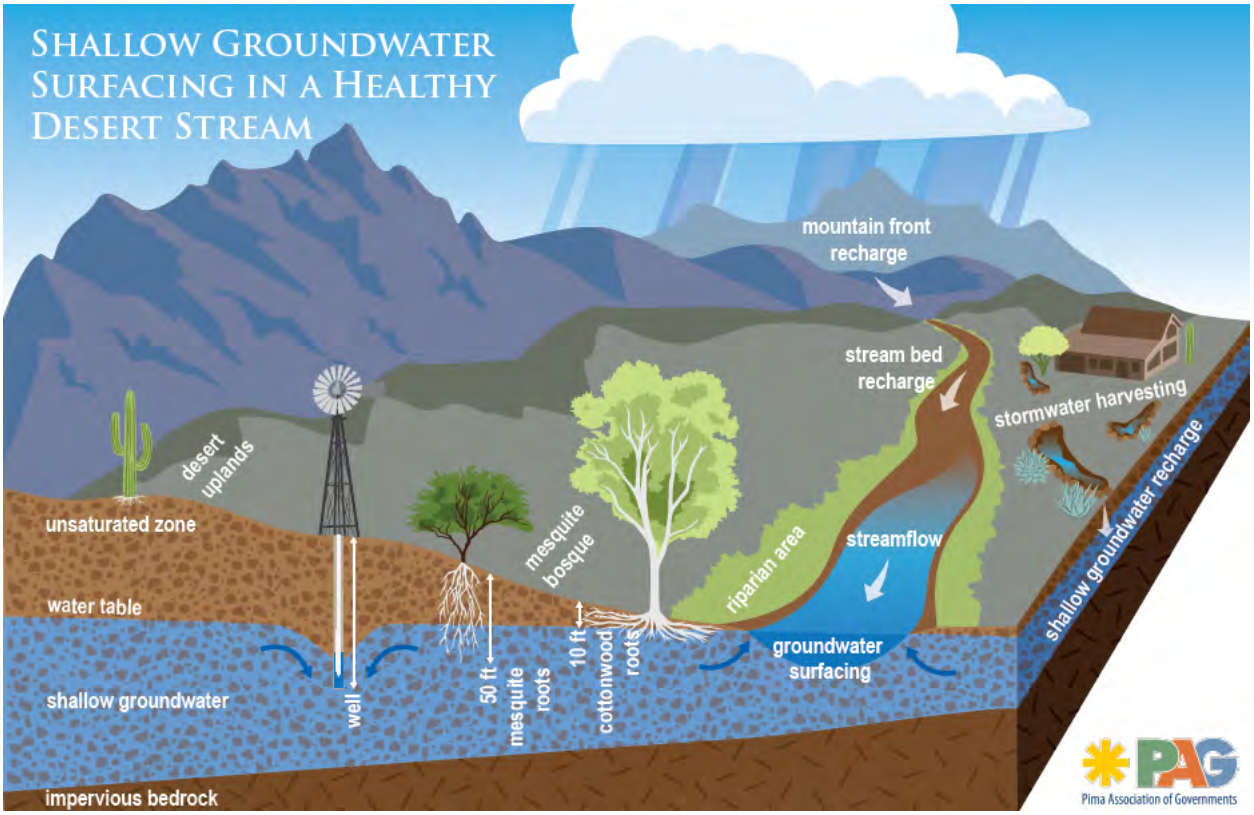
Shallow Groundwater Areas

As our region's population expands and groundwater pumping continues, it becomes increasingly important to understand pumping trends for sensitive areas (e.g., shallow groundwater areas [SGWAs]) so that riparian habitats and private well owners are not compromised. SGWAs have water tables that lie less than 50 feet below the ground surface, and they are often demarcated by indicator vegetation, such as mesquite and cottonwood trees. Figure 9 provides a diagram illustrating shallow groundwater-dependent aquifers. Because riparian trees depend on groundwater, they become vulnerable if groundwater levels decline. While habitat supported in SGWAs is critical to the region's wildlife, the water resources in these basins also provide water to numerous private well owners and public water systems. With continued warming and drought, there will undoubtedly be increased competition for water resources in these delicately balanced systems.

PAG released the updated and expanded report, Shallow Groundwater Areas in Eastern Pima County, Water Well Inventory and Pumping Trend Analysis, in 2012. The study identifies 32 SGWAs, grouped into 10 regions (Figure 10), and uses ADWR and PAG well data to describe water level changes, water use trends, well densities and drilling histories. The report includes a series of trend analyses on pumping data from non-exempt wells, but it also provides a general summary of data collected from the exempt wells. Exempt wells are permitted to withdraw up to 35 gallons per minute (GPM), but no pumping data are available for these wells. Non-exempt wells may pump more than 35 GPM and are required to monitor pumping using approved measuring devices, report pumping volumes to the state and pay fees associated with pumpage. In addition, withdrawing groundwater from a non-exempt well requires a groundwater right or permit and the use of that water is pursuant the use(s) specified in that right or permit (correspondence with ADWR contact, January 2020). The trend analysis helps identify those areas that have experienced increased or decreased groundwater withdrawals from non-exempt wells over the last two decades. Overall, as of 2012, the total number of exempt wells drilled in the buffered areas has steadily increased since 1990 (PAG 2012).

[47] http://infoshare.azwater.gov/docushare/dsweb/Get/Document-10038/TAMA_4MP_Complete.pdf
[48] https://new.azwater.gov/hydrology/groundwater-modeling/tucson
[49] https://legacy.azdeq.gov/environ/water/watershed/download/nemo-santa_cruz-wp.pdf

Figure 9. Diagram of Shallow Groundwater-Dependent Ecosystem



PAG's efforts to inventory wells and monitor riparian health in the region have revealed that increasing numbers of active wells on the region's urban periphery impact remaining perennial creek flows that are dependent on SGWAs (Figure 11). This has resulted in a growing number of model groundwater management strategies, projects, outreach, and partnerships. Monitoring water levels and improving education to private well owners are essential to ensure that riparian corridors associated with SGWAs are not adversely impacted in the future. More information about these efforts is available on the PAG Water Resources webpage[50].

Figure 10. Map of Shallow Groundwater Areas of Eastern Pima County (PAG SGWA Report 2012)

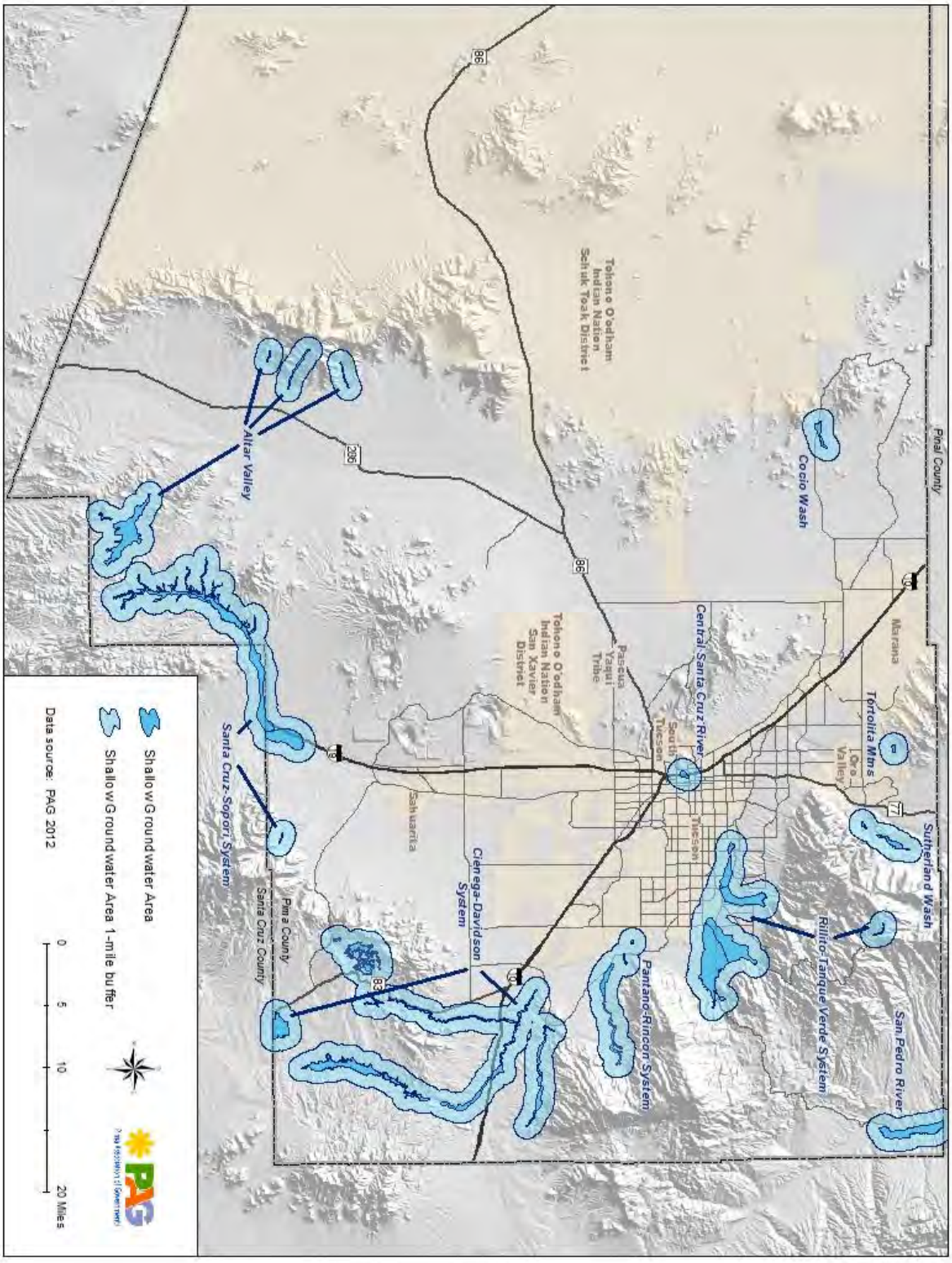
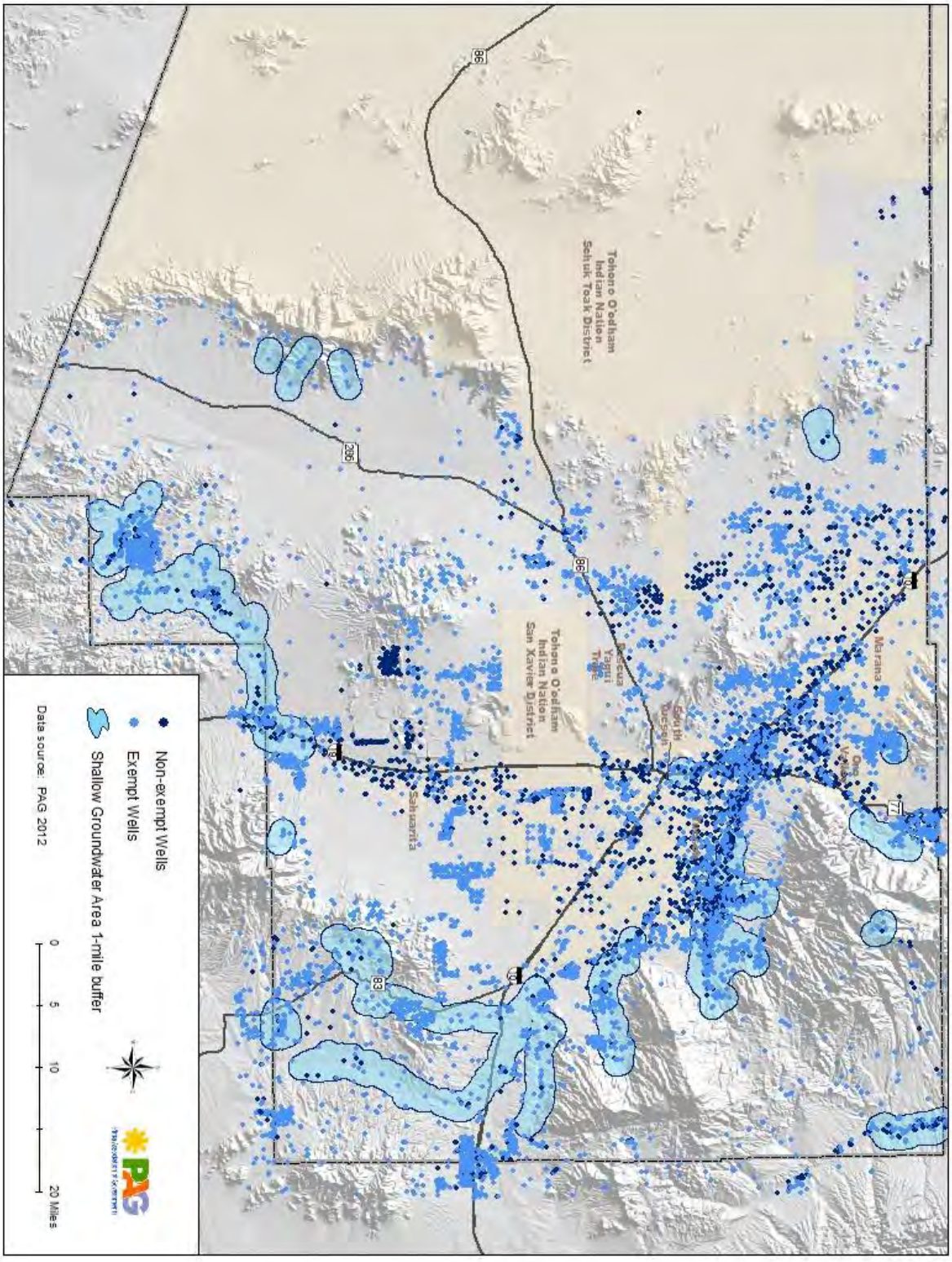


Figure 11. Map of Exempt and Non-Exempt Water Production Wells in Eastern Pima County (2012)



Conservation Effluent Pool

Pima County and the City of Tucson have set aside 10,000 acre-feet per year of effluent for use in riparian restoration projects. This effluent is designated as the CEP. The CEP was established in 2000 to provide water for future riparian projects. Program progress was made through an implementation IGA in 2011, and later through identification of potential priority sites by a Task Force in 2013 and the appointment of administrators in 2014 (Pima County Regional Wastewater Reclamation Department 2018).

No CEP water has been allocated at this time; however, many logistical barriers have been removed and applications are now available online for use by qualified jurisdictions. The CEP administrative procedures have established the process for considering CEP requests, addressed how allocations and apportionments will be made, required an accounting of quantities used, addressed how CEP water will be delivered and scheduled, and require project status reporting. Contributors to the CEP, plus the Pima County Regional Flood Control District (RFCD), are qualified to apply for CEP water for riparian projects under the IGA. Community organizations can work with qualified applicants to use the CEP. The largest barrier to implementation may be costs associated with implementing a riparian project.

Prospective sites have been identified for use of CEP water, including the Tucson Water's Santa Cruz River Heritage Project[51]. As of June 2019, Tucson Water discharges reclaimed water into the Santa Cruz River near downtown Tucson to restore the habitat and vegetation along this reach and provide new economic and recreational opportunities.

Another potential use of the effluent pool under consideration is for riparian mitigation projects under Section 7 or Section 10 of the ESA. Projects that impact endangered fish, such as the Gila topminnow, will require a Section 7 or Section 10 permit per the ESA. The CEP is available to assist with mitigating these impacts by maintaining a minimum flow in the river to support the Gila topminnow population. Additional potential uses for the effluent pool are being pursued. More information can be found in the 2014 Conservation Effluent Pool Task Force Report[52].

Central Arizona Project Water

Construction of the CAP aqueduct began in 1973 and was completed 20 years later south of Tucson. The CAP aqueduct is 336 miles long and transports Colorado River water from Lake Havasu to cities, towns, and farms in central and southern Arizona, including Tucson. Some of the CAP water is stored in and released from Lake Pleasant, which is impounded by the New Waddell Dam on the Agua Fria River northwest of Phoenix. CAP water allocations in Pima County are shown in Table 7.

Table 7. Central Arizona Project Subcontracts in the Tucson AMA (CAP 2017)

A. Non-Indian Municipal and Industrial Subcontracts

Entity	Annual Entitlement (acre-feet)
Tucson Water	144,191
Metropolitan Domestic Water Improvement District	13,460

[51] https://www.tucsonaz.gov/water/SCRHP

[52] https://webcms.pima.gov/UserFiles/Servers/Server_6/File/Government/Administration/CHHmemosFor%20Web/August%202014/august%207,%202014%20-%20Conservation%20Effluent%20Pool%20Taskforce.pdf

Entity	Annual Entitlement (acre-feet)
Town of Oro Valley	10,305
Spanish Trail Water Co.	3,037
Community Water Company of Green Valley	2,858
Flowing Wells Irrigation District	2,854
Town of Marana	2,336
Green Valley Domestic Water Improvement District	1,900
Vail Water Co.	1,857
TOTAL	182,798

B. CAP Indian Contracts

Entity	Annual Entitlement (acre-feet)
San Xavier (Tohono O'odham Nation)	50,000
Schuk Toak (Tohono O'odham Nation)	16,000
Pascua Yaqui	500
TOTAL	66,500

This link provides access to the Current Status of CAP Subcontracts[53].

The Tohono O'odham Nation San Xavier District was originally allocated 27,000 acre-feet and received an additional 23,000 acre-feet of non-Indian agricultural priority water relinquished pursuant to the Arizona Water Settlement Agreement. See the Southern Arizona Water Rights Settlement Amendments Act of 2004 §§ 304(a)(1) and 306(a)(1). The Schuk Toak District was originally allocated 10,800 acre-feet and received an additional 5,200 acre-feet of non-Indian agricultural priority water relinquished pursuant to the Arizona Water Settlement Agreement[54]. See Id. § 304(a)(2) and 306(a)(2).

CAP water recharge is discussed in the Recharge section.

Reclaimed Water

Reclaimed water is effluent generated from a WRF that has been treated to a reclaimed water quality standard established by ADEQ. See ADEQ Standards for WRF[55] for more information.

Reclaimed water can be used directly for irrigation or other non-potable uses. It offsets the use of groundwater that would otherwise be used to irrigate landscaping, golf courses, parks, school yards and road medians. Reclaimed water in our region is also recharged to the aquifer, typically by constructed recharge basins or natural stream channels.

City of Tucson Reclaimed Water

The City of Tucson is the largest user and provider of reclaimed water for irrigation uses in Pima County. The City of Tucson also provides reclaimed water to other water providers in the metropolitan area. In 2017, the Pima County Regional Wastewater Reclamation Department (PCRWRD) WRFs generated 19,966 acre-feet of reclaimed water for the City of Tucson

[53] https://www.cap-az.com/departments/water-operations/allocations
[54] https://www.congress.gov/108/plaws/publ451/PLAW-108publ451.pdf
[55] http://legacy.azdeq.gov/environ/water/standards/

Reclaimed Water System (PCRWRD 2018). Information regarding the use of reclaimed water by the City of Tucson and other entities can be accessed through the City of Tucson Technical Library at City of Tucson Reclaimed Water[56].

The City utilizes most of its effluent from the Agua Nueva WRF at Tucson Water's Sweetwater Recharge Facilities (SRF), which include a Reclaimed Water Treatment Plant (RWTP), several constructed recharge basins and the Sweetwater Wetlands. Effluent is directed to the RWTP for chloramination prior to being discharged to the Reclaimed Water System for delivery to customers. In the winter when demand is low, the effluent is directed to the recharge basins, where it infiltrates through the subsurface and helps replenish the aquifer. In the summer when demand is high, the recharged effluent is pumped out and delivered to the RWTP before being discharged to the Reclaimed Water System for delivery to customers. The SRF is permitted to recharge up to 13,000 acre-feet per year of effluent.

One of the most well-known features at the SRF is the Sweetwater Wetlands. Effluent is directed to the wetlands area, where it supports wildlife vegetation and habitat. The Sweetwater Wetlands is operated like a park, where visitors can observe birds and other wildlife and learn about the site's archaeological history, ecology, and water resources. More information may be obtained from the Tucson Water website[57].

Tucson Water has completed one additional effluent recharge project and is constructing a second. The source water for both projects is reclaimed water delivered from the City's RWTP through the Reclaimed Water System to the project sites.

The Santa Cruz River Heritage Project is permitted to recharge up to 3,150 acre-feet per year. It began operating in June 2019 and discharges effluent into the Santa Cruz River near downtown. The aim is to restore surface water flows in a low-flow channel, support the establishment of wildlife habitat and promote economic development and restoration of a cultural heritage site.

The Southeast Houghton Area Recharge Project (SHARP) is permitted to recharge up to 4,000 acre-feet per year. It is expected to be completed in 2020 and will recharge reclaimed water into constructed recharge basins near Houghton and Drexel Roads. It will include recreational and educational components, and like the Sweetwater Wetlands, will be operated like a park.

Tucson Water also participates in two managed effluent recharge projects along the Santa Cruz River. The Santa Cruz River Managed Underground Storage Facility and the Lower Santa Cruz River Managed Recharge Project are in-channel recharge projects located downstream of the Agua Nueva and Tres Rios WRFs, respectively. See additional details in the Recharge section below.

Pima County Reclaimed Water

Section IV of the 2017 Effluent Generation and Utilization Report prepared by PCRWRD provides information specific to reclaimed water use. More information can be accessed at Pima County Reclaimed Water[58].

[56] https://www.tucsonaz.gov/water/technical-library
[57] https://www.tucsonaz.gov/water/about-sweetwater-wetlands-and-access and sweetwater guide
[58] https://webcms.pima.gov/UserFiles/Servers/Server_6/File/Government/Administration/CHHmemosFor%20Web/2018/June/2017%20Effluent%20Generation%20and%20Utilization%20Report.pdf

The following links provide reclaimed water information for other utilities in Pima County.

Metropolitan Domestic Water Improvement District Reclaimed Water[59]

Oro Valley Water Utility Reclaimed Water[60]

Marana Water Utility Reclaimed Water[61]

Recycled Water

Under A.A.C. Title 18, Chapter 9, Article 7, since 2018 the State of Arizona has allowed the production of recycled water for potable uses. Advanced reclaimed water treatment facilities may be constructed to treat, purify, and recycle Class A+ or Class B+ reclaimed water to produce potable water that is suitable for distribution for human consumption. Recycled water is treated to meet designated water quality specifications for potable use. More information is available on the ADEQ Recycled Water Rulemaking[62] webpage.

In 2016, Pima County won the Water Innovation Challenge[63] with a proposal to build a mobile potable reuse treatment facility to travel around the state and change public perception about the use of recycled water. The prize funded Pima County's award-winning Pure Water Brew Challenge[64].

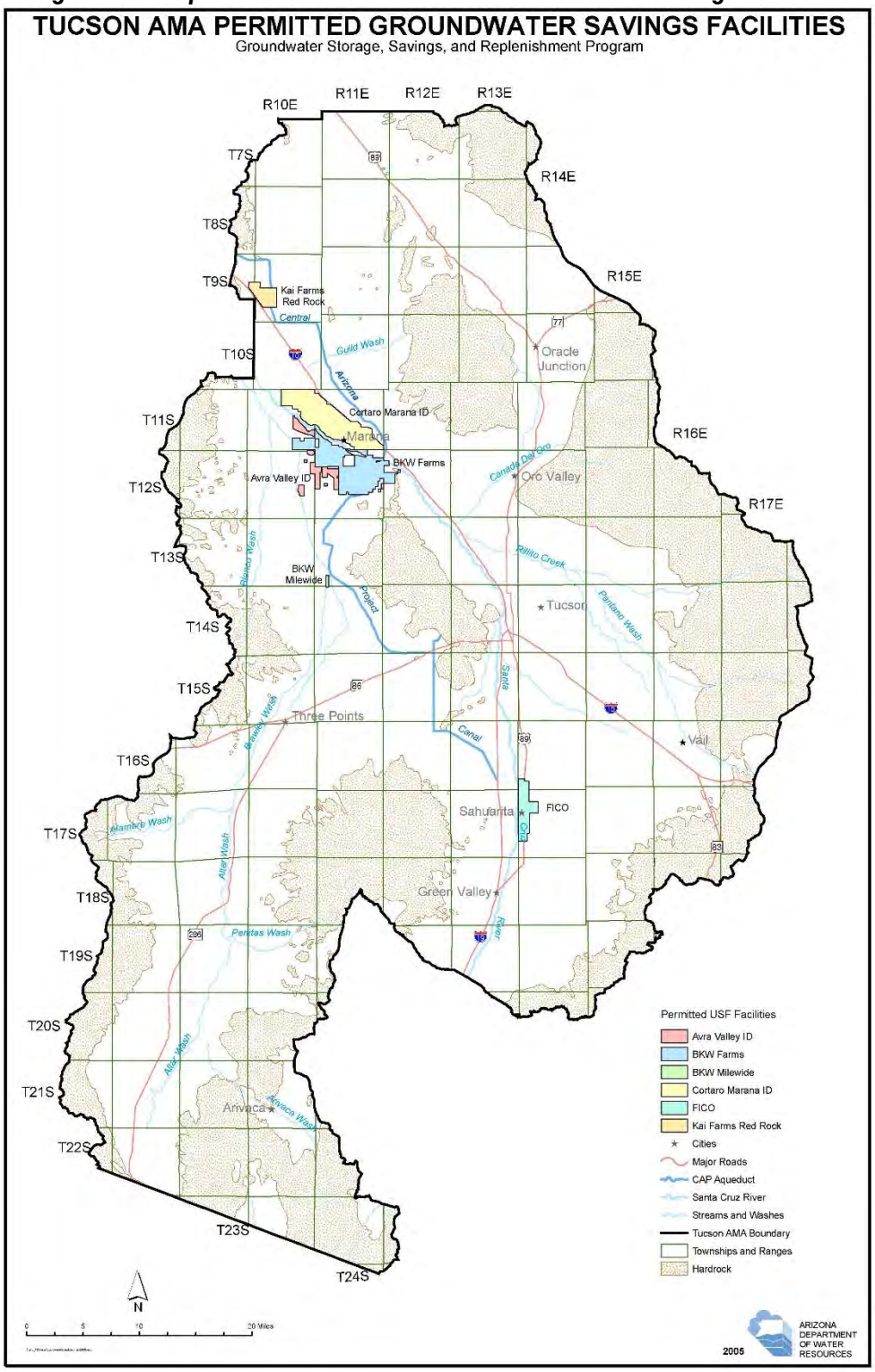
Recharge

The CAP water in Pima County is delivered to recharge basins or farms. In the recharge basins, the CAP water is either recharged and recovered annually or recharged for long term storage for future use. Some farms use the CAP water to offset groundwater pumping. The CAP delivery locations in Pima County are shown in Figure 12 and Figure 13.
https://www.congress.gov/108/plaws/publ451/PLAW-108publ451.pdf

Most CAP subcontractors in the Tucson AMA store or use their CAP allocations in Underground Storage Facilities (USFs) or Groundwater Savings Facilities (GSFs) permitted by ADWR. Effluent is considered another renewable water supply that is used for aquifer recharge.

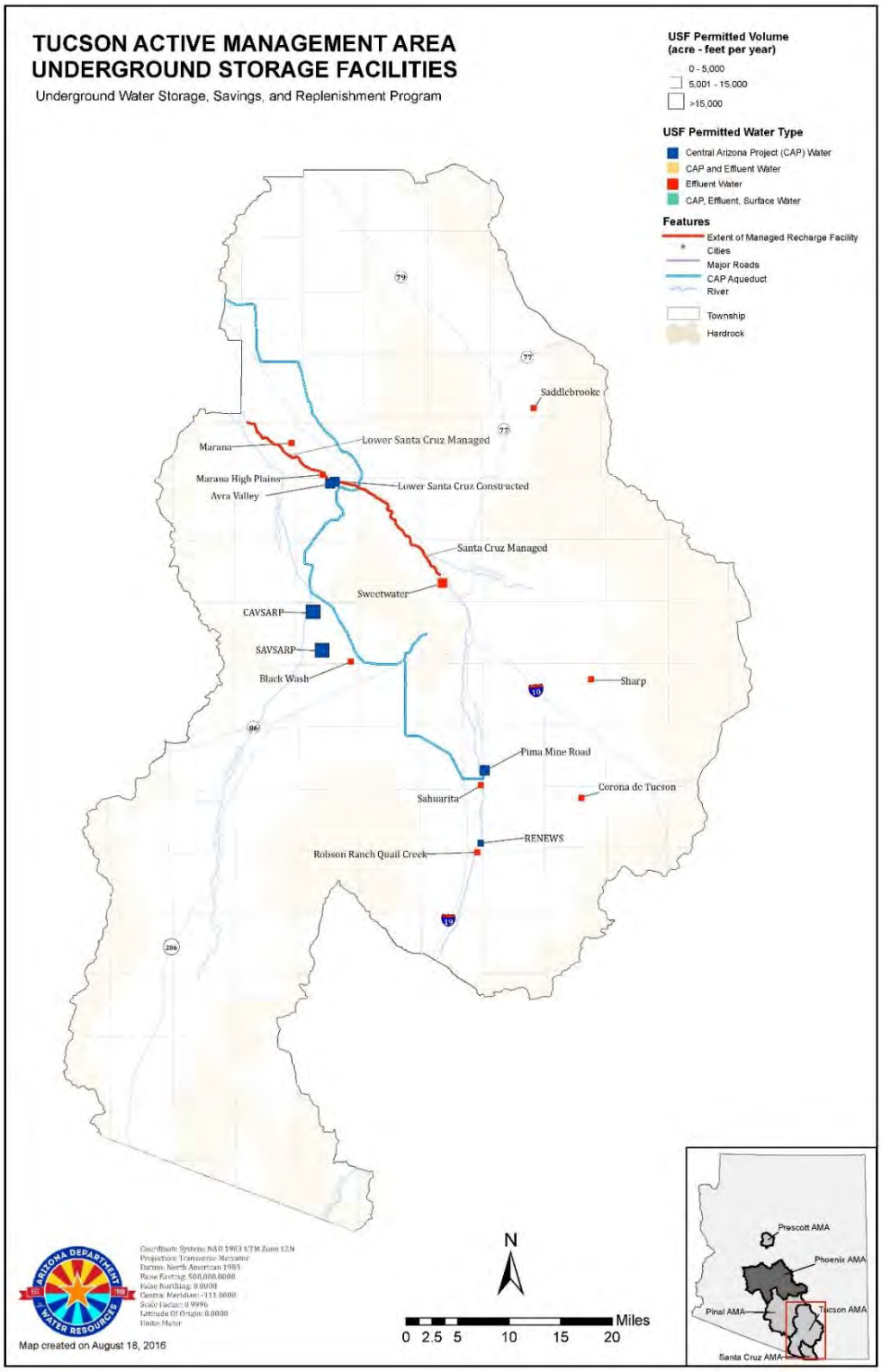
[59] https://metrowater.com/index.php?pg=32
[60] https://www.orovalleyaz.gov/town/departments/water-utility/potable-and-reclaim-water
[61] http://www.maranaaz.gov/water-reclamation/
[62] https://azdeq.gov/recycled-water-rulemaking
[63] http://webcms.pima.gov/cms/One.aspx?portalId=169&pageId=311478
[64] http://www.azpurewaterbrew.org/

Figure 12. Map of Tucson AMA Permitted Groundwater Savings Facilities



This image is a preview. For a full resolution map, visit:
http://infoshare.azwater.gov/docushare/dsweb/Get/Document-10279/Tucson_GSF_21705.pdf

Figure 13. Map of Tucson AMA Underground Storage Facilities



This image is a preview. For a full resolution map, visit:
https://new.azwater.gov/sites/default/files/media/Tuscon_AMA_USFs_2016_0.pdf

USFs are constructed recharge basins or managed facilities using natural streambeds where a renewable water supply is allowed to percolate into the aquifer for the accumulation of annual or long-term storage credits. Credits can be recovered (pumped) under a Recovery Well permit and the water recovered retains the legal definition of the original source water recharged (e.g., CAP water, effluent). GSFs are agreements between agricultural irrigation grandfathered right holders and CAP subcontractors to use CAP water for irrigation in lieu of pumping groundwater. GSFs can also be established using effluent.

Permitted recharge facilities located in the Tucson AMA are developed for the accumulation of water credits that can be stored and/or recovered to meet the state's Assured Water Supply (AWS) program requirements. For example, Tucson Water recovers a blend of CAP water and groundwater from its Avra Valley recharge facilities and delivers that water to customers for potable use.

Effluent recharge credits within the PAG region have trended upwards due to increased infiltration and dramatically reduced flow out of the Tucson AMA, which is likely due to improved water quality from upgraded treatment plants and concurrent clearing of organic matter that was plugging sediment in the channel bottom. Additionally, new rules in 2019 allowing increased recharge credit for managed in-channel projects will allow greater accrual of credits in the region. See additional details on reclaimed recharge projects in the Reclaimed Water section above.

Table 8 provides links to current recharge information within the Tucson AMA, including facility names, locations, operators, permittees, permit number and permitted volume. More information on the USFs and GSFs in the Tucson AMA can be found on the ADWR website[65]. Maps of existing USFs and GSFs in the Tucson AMA are shown in Figure 12 and Figure 13. Table 9 provides a list of the current recharge facilities in the Tucson AMA.

Table 8. Recharge Information for the Tucson AMA

Data Source	Web Link
ADWR Recharge Program	https://new.azwater.gov/recharge
Assured and Adequate Water Supply Program	https://new.azwater.gov/aaws
ADWR Permitted Recharge Facilities	https://new.azwater.gov/recharge/permitted-facilities
ADWR Permitted Active USFs	http://www.azwater.gov/querycenter/query.aspx?qrysessionid=4BF6C620A82B9838E0534C00000A47B1
ADWR USF Projects and Locations	https://new.azwater.gov/sites/default/files/media/Tuscon_AMA_USFs_2016_0.pdf
ADWR Permitted Active GSFs	http://www.azwater.gov/querycenter/query.aspx?qrysessionid=4C8820B502DD32F9E0534C00000A01DC
City of Tucson Recharge	https://www.tucsonaz.gov/water/recharged-water https://www.tucsonaz.gov/water/cavsarp https://www.tucsonaz.gov/water/savsarp
CAP Recharge	http://www.cap-az.com/departments/recharge-program http://www.cap-az.com/departments/recharge-program/pima-mine-road http://www.cap-az.com/departments/recharge-program/lower-santa-cruz

[65] https://new.azwater.gov/recharge

Table 8. Recharge Information for the Tucson AMA

Data Source	Web Link
Town of Marana Recharge	http://www.maranaaz.gov/news/water/recharge17
Pima County Recharge	http://webcms.pima.gov/UserFiles/Servers/Server_6/File/Government/Wastewater%20Reclamation/Publibations/Effluent_gen_2016.pdf
Metro Water Recharge	http://www.metrowater.com/index.php?pg=32

Table 9. List of Recharge Facilities in Pima County

USF/GSF	Facility Name
GSF	ASARCO Facility
GSF	Cortaro Marana Irrigation District
GSF	BKW Farms
GSF	Kai Farms Red Rock
GSF	BKW Milewide
GSF	Fico Sahuarita Farm
USF	Southern Avra Valley Storage and Recovery Project (SAVSARP)
USF	PCRWRD Corona de Tucson Recharge Facility
USF	Project Renews
USF	Black Wash
USF	Marana WRF Recharge Project
USF	Tucson Water SHARP
USF	Sweetwater Recharge Facilities
USF	Santa Cruz Managed
USF	Lower Santa Cruz Replenishment Project
USF	Marana High Plains Effluent Recharge Project
USF	Avra Valley Recharge Project Full Scale
USF	Pima Mine Road Full Scale
USF	Central Avra Valley Storage and Recovery Project (CAVSARP)
USF	Robson Ranch Quail Creek
USF	Lower Santa Cruz River Managed
USF	Town of Sahuarita
USF	Santa Cruz River Heritage Project

Effluent Rights

Effluent water rights (entitlements) are typically associated with the entity that owns a WRF. This is the case for public WRFs located in the Marana and Sahuarita DMAs. In most cases, private WRFs have the legal right to the effluent produced at their facility. Effluent entitlements in the Pima County DMA were established from an effluent water rights agreement between Pima County, the Secretary of the Interior and the City of Tucson based on an IGA that is described in Section V of the 2017 PCRWRD Effluent Generation and Utilization Report[66].

[66] http://webcms.pima.gov/UserFiles/Servers/Server_6/File/Government/Wastewater%20Reclamation/Publibations/Effluent_gen_2017.pdf

In 1982, SAWRSA was passed to settle water rights claims by the Tohono O'odham Nation affected by groundwater pumping in the Tucson area. Under SAWRSA, 66,000 acre-feet of water were to be delivered to the Tohono O'odham Nation each year, with 37,000 acre-feet provided through Indian Priority CAP water and 28,200 acre-feet of effluent provided by the City of Tucson. Subsequent settlements in 2004 and 2006 confirmed funding for operation, maintenance and delivery of the water and allowed allocation of the water to move forward. Today, SAWRSA effluent allocations are given priority over other entitlements. The effluent is received by the Bureau of Reclamation on behalf of the Tohono O'odham Nation and is recharged in the Santa Cruz River.

Entities with effluent entitlements utilize their effluent though direct reuse, off channel recharge, constructed USFs or GSFs, in-channel recharge (i.e. managed recharge), and the recovery of these credits (Table 10). The City of Tucson has an agreement with metro water providers whereby the water providers receive their share effluent based on the proportion of water they contribute to the County's sewer system. Several entities partner in a managed effluent recharge project in the Santa Cruz River from the Tres Rios WRF outfall (north of Ina Road) to Trico Road. In accordance with an IGA, effluent credits associated with the Lower Santa Cruz River Managed Recharge Project are assigned to the various partners as part of the annual ADWR reporting process.

Table 10. Entities Generating and/or Utilizing Effluent in Pima County (PCRWRD 2018)

Metropolitan	Non-Metropolitan	Other Facilities
Secretary of the Interior*	Arivaca Junction WRF	Marana WRF
Conservation Effluent Pool	Avra Valley WRF	Milagro
Pima County	Corona de Tucson WRF	Marana - Rillito Vista
City of Tucson	Green Valley WRF	Marana High School
Town of Marana	Mt. Lemmon WRF	Robson Ranch Quail Creek
Town of Oro Valley	Pima County Fairgrounds WRF	Saddlebrooke/Saddlebrooke Ranch
Metro Water		Sahuarita WRF
Flowing Wells		U of A Tech Park
Spanish Trail		

* *SAWRSA entitlement*

Surface Water

Currently there is limited perennial surface water in Pima County (Table 11). The vast majority of the watercourses in Pima County are ephemeral, where flows consist solely of stormwater runoff events. In contrast, the number of perennial and intermittent watercourses is relatively small, but the surface water sources are very important habitat for terrestrial and aquatic species.

Table 11. Perennial Streams in Pima County

Reach Name	HUC 8 Watershed	Reach Name	HUC 8 Watershed
Apache Spring	Rillito	Montosa Canyon	Rillito
Arivaca Creek	Brawley Wash	Nogales Spring	Rillito
Bingham Cienega	Lower San Pedro	Posta Quemada	Rillito
Buehman Canyon (3 reaches)	Lower San Pedro	Quitobaquito Spring	Rio Sonoyta
Bullock Canyon	Lower San Pedro	Romero Canyon	Upper Santa Cruz
Cañada del Oro	Upper Santa Cruz	Ruelas Canyon	Upper Santa Cruz

Table 11. Perennial Streams in Pima County

Reach Name	HUC 8 Watershed
Cienega Creek (9 reaches)	Rillito
Cinco Canyon	Rillito
Davidson Canyon	Rillito
Edgar Canyon	Lower San Pedro
Empire Gulch (2 reaches)	Rillito
Espiritu Canyon (2 reaches)	Lower San Pedro
Honey Bee Canyon	Upper Santa Cruz
Lemmon Creek	Rillito
Little Nogales Spring	Rillito
Mattie Canyon	Rillito

Reach Name	HUC 8 Watershed
Sabino Creek (3 reaches)	Rillito
San Pedro River (2 reaches)	Lower San Pedro
Santa Cruz River	Upper Santa Cruz
Scholefield Spring	Rillito
Simpson Spring	Rillito
Tanque Verde (upper)	Rillito
Wakefield Canyon (3 reaches)	Rillito
Wild Burro Canyon (4 reaches)	Lower Santa Cruz
Wild Cow Spring	Rillito
Youtcy Canyon (2 reaches)	Lower San Pedro

The identified perennial and intermittent streams of Pima County are in a variety of locations and environments, and most are located in eastern Pima County as indicated in Figure 14. PAG has assisted in the mapping of intermittent and perennial streams in eastern Pima County. These datasets, along with spatial data for washes, springs and riparian areas, are available on Pima Maps - SDCP[67]. Although PAG and Pima County have not mapped ephemeral washes in western Pima County, additional flow lines including ephemeral washes are available in the USGS National Hydrography Dataset[68].

Thirty-eight streams with perennial or intermittent reaches had flows that originated in the Santa Catalina, Rincon, or Santa Rita Mountains (PAG 2000a). Forty-six perennial stream reaches and 97 intermittent stream reaches (Table 12) from a total of 86 different streams have been identified in Pima County. There is only one known perennial stream in western Pima County, Quitobaquito Spring within the Organ Pipe National Monument and within the Rio Sonoyta watershed. There are no known intermittent streams in western Pima County. An example of an intermittent watercourse in eastern Pima County is shown in Figure 15.

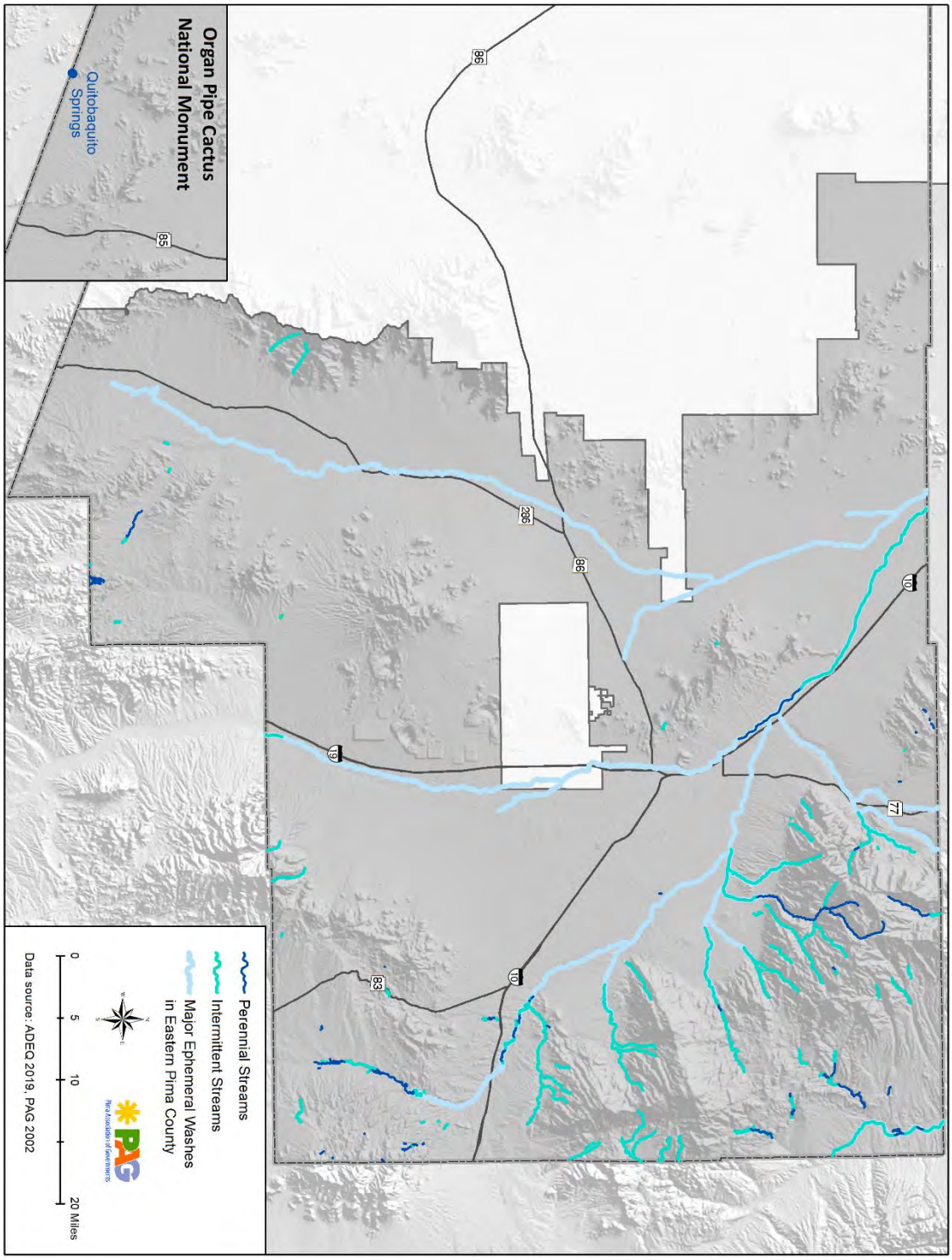
Table 12. Intermittent Streams in Pima County

Reach Name	Reach Name	Reach Name	Reach Name
Agua Caliente Wash	Cañada Agua Canyon	Kings Canyon	San Luis Wash
Agua Verde Creek	Cañada del Oro	La Milagrosa Canyon	San Pedro River (3 reaches)
Alder Canyon	Cargodera Canyon	Madera Canyon	Santa Cruz River (2 reaches)
Arivaca Creek (2 reaches)	Chiminea Canyon	Madrona Canyon	Shaw Canyon
Ash Creek	Chimney Canyon	Mattie Canyon	Smitty Spring
Atchley Canyon	Cienega Creek (8 reaches)	Miller Creek	Soldier Canyon
Barrel Canyon	Davidson Canyon (3 reaches)	Molino Canyon	Sutherland Wash
Batamote Wash	Deer Creek	Mud Spring Canyon	Sycamore Canyon
Bear Canyon (2 reaches)	Distillery Canyon	Oro Blanco Wash	Tanque Verde Creek (5 reaches)
Bear Creek	East Fork Sabino Canyon	Paige Creek (2 reaches)	Thomas Canyon
Bear Grass Tank	Enchanted Hills Wash	Palisade Canyon Creek	Turkey Creek
Bolt Canyon	Espiritu Canyon	Peck Basin	Unnamed Springs (x3)
Bootlegger Spring	Finger Rock Canyon	Pima Canyon	Unnamed tributary of Ash Creek
Box Canyon (Rincon)	Fish Canyon	Rincon Creek	Ventana Canyon (3 reaches)

[67] https://pimamaps.pima.gov/geoapps/sdcp
[68] https://viewer.nationalmap.gov/basic/?basemap=b1&category=nhd&title=NHD%20View

Reach Name	Reach Name	Reach Name	Reach Name
Brown Canyon	Florida Canyon	Romero Canyon (2 reaches)	Wakefield Canyon (2 reaches)
Buehman Canyon (2 reaches)	Gardner Canyon	Rose Canyon Creek	West Fork Sabino Creek
Bullock Canyon (3 reaches)	Geesaman Wash	Sabino Canyon	Youtcy Canyon (2 reaches)

Figure 14. Map of Surface Watercourses in Pima County*



**Major washes (10,000 cubic feet per second or greater) that are not overlaid by perennial or intermittent streams are considered ephemeral reaches. There is only one known perennial stream in western Pima County – Quitobaquito Spring (see inset). There are no known intermittent streams in western Pima County, and neither PAG nor Pima County have mapped major washes for that area.*

Figure 15. Photo of an Intermittent Stream in Eastern Pima County



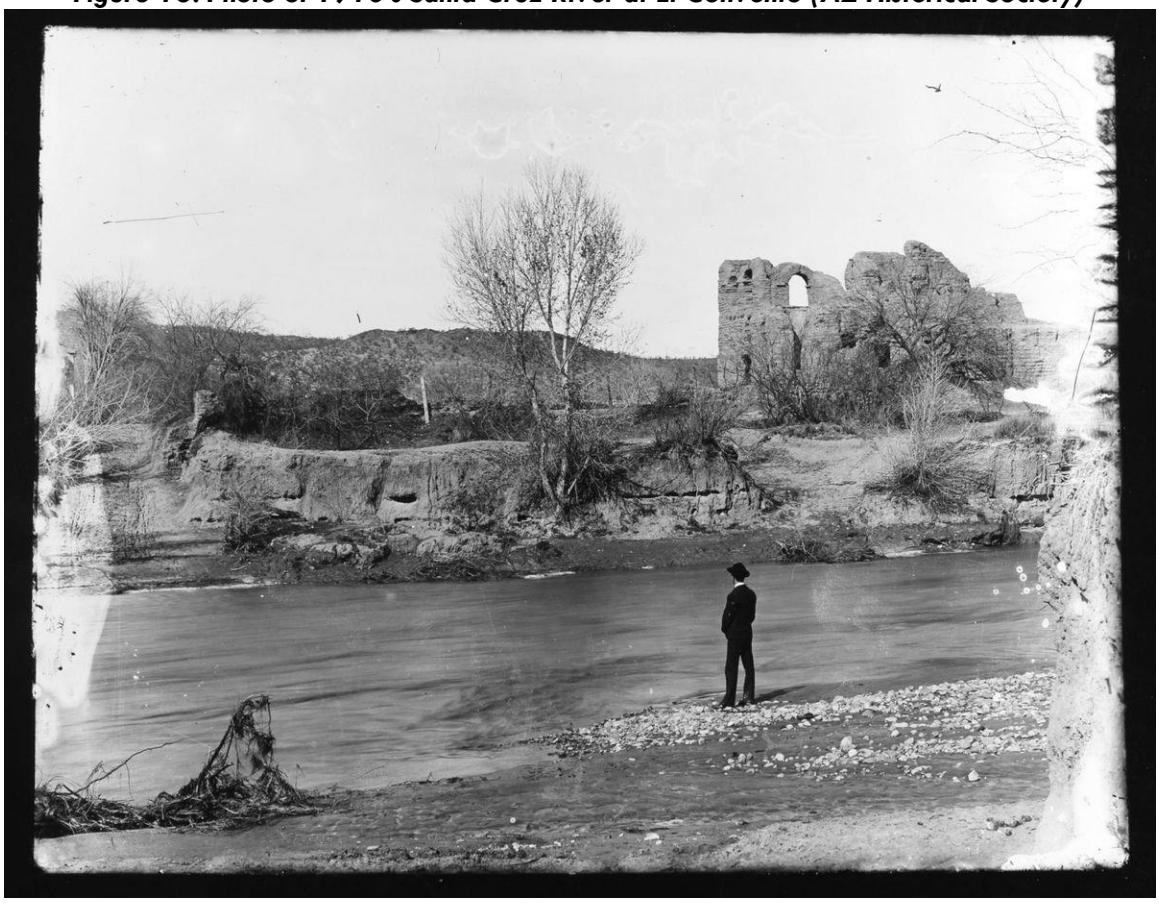
Three of the perennial stream reaches, Davidson Canyon, Cienega Creek (from I-10 to the USGS gauge station at Pantano Wash), and Buehman Canyon (from headwaters, 9.8 miles downstream), are classified as OAWs by ADEQ, which means that they are exceptional state resource waters and subject to stricter water quality regulations. All three OAWs are located in eastern Pima County. OAWs were previously known as "Unique Waters." See the Adopted Policies and Procedures for a map of OAWs. OAWs also may be viewed on ADEQ eMaps[69]. Downstream of the OAW reach of Cienega Creek, water is currently diverted for golf course turf irrigation pursuant to an active surface water right.

The primary surface water drainage in eastern Pima County is the Santa Cruz River. The river, which is approximately 60 miles long within Pima County, flows north through the Upper Santa Cruz Valley Subbasin and then northwest into the Avra Valley Subbasin. The river is mostly ephemeral in Pima County (ADWR 1999), except for where effluent-dominated reaches downstream from WRFs currently flow year-round, bringing back perennial waters to this river. Irrigation canals dating from 1,000 BC to 1873 demonstrate that Tucson had permanent

[69] http://gisweb.azdeq.gov/arcgis/emaps/

settlements in the valley founded on the historic perennial flows and making it one of the oldest settlements in America. An example of one such settlement is shown in Figure 16.

Figure 16. Photo of 1910's Santa Cruz River at El Convento (AZ Historical Society)



The Convento, built in 1770 and abandoned by the late 1800s, was a fortified mission complex used to protect the west side of the flowing Santa Cruz River. The Convento was completely gone by the 1950s, covered by a landfill.

Major tributaries of the Santa Cruz River in the Upper Santa Cruz Valley Subbasin include the Cañada del Oro, which drains the northern part of the Upper Santa Cruz Valley Subbasin, and Rillito Creek and its tributaries, which drain the area north and east of Tucson. Tributaries of Rillito Creek include Pantano Wash and Tanque Verde Creek. Pantano Wash receives flow from Rincon Creek and Cienega Creek. Tanque Verde Creek receives flow from Sabino Creek. In the Avra Valley Subbasin, Altar Wash originates in the southern part of the valley and flows north to become Brawley Wash. Brawley Wash flows to the north and northwest through Avra Valley to its confluence with the Santa Cruz River southwest of Red Rock.

The San Pedro River is a tributary of the Gila River and drains 4,485 square miles of Arizona and Mexico. The San Pedro River enters the northeastern corner of Pima County in what is considered the Lower San Pedro Basin. The river is fed by flow from the northeast side of the Santa Catalina Mountains and by two significant drainages from the Galiuro Mountains. Most of the stream reaches on the San Pedro are intermittent, but in the area around Bingham Cienega there is perennial flow (Royayne and Maddock III 1996).

Tributaries of the Lower Gila River flow south to north to drain the western third of Pima County. These include Alamo Wash, Cherioni Wash, Chico Shunie Arroyo, Cuerda de Lena, Daniels Arroyo, Darby Arroyo, Gibson Arroyo, Growler Wash, Gunsight Wash, Kuakatch Wash, Rio Cornez, San Cristobal Wash, Sikort Chuapo Wash and Tenmile Wash.

The San Simon Wash watershed drains the Tohono O'odham Nation and runs northeast to southwest.

Stormwater Runoff

Overland flow from precipitation events is an important source of recharge for the aquifers in Pima County. Groundwater conditions can be greatly affected by occasionally large overland flow events in the Santa Cruz River and its tributaries. Surface water flows recharge the shallow groundwater system as water infiltrates through stream channel sediments to the underlying aquifer. According to the Tucson AMA Fourth Management Plan[70], stream channel recharge in the Tucson AMA, including effluent discharge, varied from approximately 48,000 to 171,000 acre-feet per year between 2000 and 2013 (an average of 96,000 acre-feet per year). Between 2000 and 2013, an average of 52,240 acre-feet per year of effluent was discharged into the Santa Cruz River.

In addition to aquifer recharge, stormwater supports riparian vegetation along washes and can support aquatic habitats in retention basins.

[70] http://infoshare.azwater.gov/docushare/dsweb/Get/Document-10038/TAMA_4MP_Complete.pdf

Chapter 4: Public Participation Records – 2020 Update

This chapter describes the process used to inform and involve interested parties and the public in the development of the 2020 update to PAG's Section 208 Areawide Water Quality Management Plan (208 Plan), followed by documentation of activities, in compliance with all applicable federal, state and PAG requirements.

Policies and procedures for public participation and stakeholder involvement in 208 planning, including EPA-required advisory groups and public hearings for Amendments, are found in the Policies and Procedures section of the PAG 208 Plan.

Requirements and Process

Relevant federal requirements concerning public participation are described in 40 CFR § 25, and in state statutes, ADEQ's Continuing Planning Process[71], A.A.C. §§ R18-1-401 and R18-1-402, and PAG's Public Involvement Policy[72].

In accordance with the above stated federal and state regulations, the following public participation elements were followed:

- Hold Public Hearings on all plan revisions
- Maintain at least one set of appropriate documents in a location accessible to the public
- Develop, maintain, and utilize a notification list of persons or organizations interested in, or significantly affected by, the 208 planning process
- Publish public notices 45 days before public hearings
- Make relevant documents available at least 30 days before hearings
- Keep records of public hearings
- Develop a responsiveness summary for each public hearing
- Summarize technical documents for public and media uses
- Public meetings and consultations are recommended to be conducted early in the 208-planning process so that public views can be incorporated into 208 Plan development

As required, the procedures and policies in PAG's 2006 208 Plan were followed for the 2020 Plan update. The triggers for 208 Plan updates and the procedures were found in section 10.18 of the 2006 208 Plan and PAG's public participation requirements were listed in section 10.8. This includes some additional detail to specify how the PAG committee and work plan structure align with the state and federal requirements as follows:

[71] https://legacy.azdeq.gov/function/forms/download/list/Continuing_Planning_Process_4_93.PDF
[72] https://www.pagregion.com/documents/PIP2018.pdf

- Five-year updates or sooner if prompted by significant changes or Amendments
- Using a thorough review and approval process to include a public hearing
- Prominently posting information on PAG's website
- Notification of interested parties and potentially affected property owners
- Action by EPAC and WPS prior to submittal to PAG Regional Council

We relied on the 2006 Plan, section 10.14 (Procedures for Consistency Reports) for guidance regarding the information to include in public notices. Applicable practices named in 10.14 included that the notice must:

- Identify the project location
- Include a description of the project
- Discuss possible impacts to residents
- Explain where to obtain more information
- Explain where and when a decision will be made
- Explain how to provide input

Documentation of Activities

In accordance with the above listed requirements, PAG had undertaken the following activities to support the development of the 208 Plan. This section serves as PAG's responsiveness report for public participation in the 2020 PAG 208 Plan update and includes a record of relevant documents concerning public meetings, consultation, and comments that assisted with the development of the 208 Plan.

These records can be found in the following pages. *(We will update this section as we complete and record these tasks)*

Contents:

A. Records of Advisory Group Compliance
B. Summary of Developmental Input
C. Record of WPS/EPAC Meeting to Forward Plan to Public Hearing
D. Records of Public Hearing and Comment Period
E. Records of Recommendation for Plan Approval by PAG Management Committee
F. Records of Plan Adoption by PAG Regional Council
G. Summary of Submission to and Approval by ADEQ
H. Summary of Submission to and Approval by EPA

A. Records of Advisory Group Compliance

208 Advisory Group Requirement Documentation

To document compliance with regulatory requirements, lists of 208 advisory group membership and interested parties are included in this section. In addition, a table detailing how the required advisory group categories are fulfilled is included.

Regulations: Advisory Group requirements are described in 25.7 of 40 CFR in the EPA's CWA. ADEQ requirements are described on page 22 of the October 1984 State Water Quality Management Plan. The EPA and ADEQ require PAG to maintain ongoing meetings to facilitate 208 planning and to help build consensus. It is also required to post the updated membership, respond to their information requests, and transmit their recommendations.

EPAC/WPS Meeting Management

Meets at a frequency that ensures ongoing coordination (minimum of once per year). PAG merged meetings between WPS and EPAC to improve efficiency. Membership gaps are filled and posted annually. Lists of WPS/EPAC members and interested parties who were invited to attend meetings and review the draft 208 Plan are shown in Table 13 and Table 14.

Posted WPS Meetings[73]

Posted EPAC Meetings[74]

PAG Committee Fact Sheets[75]

Table 13. List of EPAC and WPS Members

First name	Last name	Organization
Amanda	Smith	Sonoran Institute
Andy	Bemis	City of Tucson DOT
Asia	Philbin	Town of Marana
Bayer	Vella	Town of Oro Valley
Beth	Abramavitz	Town of Sahuarita
Beth	Gorman	Pima County DEQ
Catherine	Schladweiler	Tucson Electric Power
Christina	McVie	Tucson Audubon
Christopher	Scott Ortiz y Pino	University of Arizona
Claire	Zugmeyer	Sonoran Institute
Corin	Marron	Carollo Engineers
Dave	Pfordt	Town of Sahuarita
David	Barnes	Freeport McMoRan

[73] http://www.pagregion.com/Default.aspx?tabid=322#208PlanUpdate2019
[74] http://www.pagnet.org/Dtabid/196/default.aspx
[75] http://www.pagregion.com/Committees/tabid/59/Default.aspx

Table 13. List of EPAC and WPS Members

First name	Last name	Organization
David	Caskey	Freeport McMoRan
David	Godlewski	Southern Arizona Home Builders Association (SAHBA)
Dee	Korich	Tucson Water
Eder	Delgadillo	Tucson Int'l Airport
Edna	Mendoza	ADEQ
Edward	Galda	University of Arizona
Eric	Roudebush	Tucson Int'l Airport
Frank	Bonillas	City of Tucson
Georgia	Pennington	University of Arizona
Grace	Evans	Citizen
Greg	Hitt	Pima County RWRD
Hannah	Oden	Town of Oro Valley
Heidi	Kocsis	Arizona State Land Department
Heidi	Lasham	Town of Sahuarita
Howard	Myers	Southern Arizona Home Builders Association (SAHBA)
Ian	Geitner	Pascua Yaqui Tribe
Jaimie	Galayda	Tucson Water
Jeff	Yockey	Tucson Electric Power
Jennifer	Christleman	Town of Marana
Jim	Dubois	Pima County RWRD
John	Hillman	Davis-Monthan Air Force Base
Julie	Robinson	Pima County OSC
Kim	Franklin	Arizona-Sonora Desert Museum
Kris	LaFleur	City of Tucson
Krishna	Viswanathan	U.S. EPA
Leah	Proffitt	Davis-Monthan Air Force Base
Lori	Cason	Arizona Water Co.
Manish	Patel	Arizona State Land Department
Marie	Light	Pima County DEQ
Mark	Novak	University of Arizona
Melissa	Mauzy	City of Tucson
Melodee	Loyer	City of Tucson, Tucson Water
Mick	Jensen	City of South Tucson
Mike	Smejkal	Tucson Int'l Airport
Mike	Todnem	Town of Oro Valley
Mirela	Hromatka	Pima County RWRD
Nicole	Gillett	Tucson Audubon
Orlanthia	Henderson	Town of Sahuarita

Table 13. List of EPAC and WPS Members

First name	Last name	Organization
Patti	Caldwell	Tucson Audubon
Paula	Bluemer	Town of Marana
Richard	Byrd	City of Tucson
Robert	Medler	Tucson Metro Chamber
Roxanne	Linsley	ADEQ
Sarah	Reitmeyer	Pima County DEQ
Scott	Bennett	Town of Oro Valley
Stephen	Dean	Town of Marana
Sue	Morman	Pima County
Tom	Klempel	ASARCO

Table 14. List of Interested Parties

First name	Last name	Organization
Adriana	Marinez	Tucson Electric Power
Adam	Springer	National Park Service
Adriana	Zuniga	University of Arizona
Akitsu	Kimoto	Stantec
Al	Wylie	Pima County
Alan	Urban	Central Arizona Governments
Alan	Forrest	HDR Engineering
Aleix	Serrat-Capdevila	University of Arizona
Alex	Yiannakakis	AMEC Earth & Environmental
Alex	Dely	Raytheon
Alison	Jones	AZ Hydrological Society, Clear Creek Associates
Amy	McCoy	AMP Insights
Amy	Markstein	Bureau of Land Management
Ana	Martin	Pima County
Andrew	Greenhill	Tucson Water
Angie	Brown	University of Arizona
Ann	Steiner	City of Tucson
Ann	Youberg	Arizona Geological Society
Ann	Moynihan	Pima County RFCD
Annamarie	Schaecher	Cienega Watershed Partnership
Anne	Warner	Comcast
Arturo	Gabaldon	Community Water Co. of Green Valley
Ashley	Hullinger	University of Arizona
Austin	Carey	Town of Oro Valley

Table 14. List of Interested Parties

First name	Last name	Organization
Axhel	Munoz	Pima County
Bailey	Kennett	AZ Land & Water Trust
Beth	Scully	Tucson Water
Betsy	Bolding	Citizen
Bill	Ball	Citizen
Bill	Coughlin	EPS Group Inc.
Bill	O'Brien	Next Gen Engineering
Bill	Savary	Tucson Herpetological Society
Bob	Hedden	Green Valley Domestic Water Imp. District
Brad	Tatham	Flatwater Group
Brad	Lancaster	Rainwater Harvesting for Drylands & Beyond
Brandon	House	U.S. Bureau of Reclamation
Brian	Varney	Town of Marana
Brian	Billy	University of Arizona
Brian	Wong	BKW Farms
Brian	Jones	Pima County
Brian	Powell	Pima County
Brian	Richter	The Nature Conservancy
Bryce	Cooke	Freeport McMoRan
Cameron	Becker	AZ Land & Water Trust
Candice	Rupprecht	Tucson Water
Carianne	Funicelli Campbell	Sky Island Alliance
Carla	Bitter	UA/Lunar & Planetary Laboratory
Carmen	Ryan	Town of Oro Valley
Carolyn	Campbell	Coalition for Sonoran Desert Protection
Cat	Crawford	U.S. Fish & Wildlife Service
Catalina	Ross	Sierra Club
Catherine	Evilsizor	Arizona Dept of Education
Catlow	Shipek	Watershed Management Group
Chad	Lapora	City of Tucson
Channah	Rock	UA Agricultural Extension
Charles	E. Ester III	Salt River Project, power and water
Charlotte	Cook	Cienega Watershed Partnership
Chris	In-Albon	Empire High School
Chris	Cawein	Pima County
Chris	Kirkpatrick	UA/AZ Coop. Fish & Wildlife Research Unit
Chris	Castro	UA/Hydrology & Atmospheric Science
Chris	Magirl	USGS

Table 14. List of Interested Parties

First name	Last name	Organization
Chris (Kip)	Volpe	Vail Water Company
Christie	O'Day	Arizona Hydrological Society
Christopher	Avery	City Attorney's Office, City of Tucson
Christopher	Cokinos	University of Arizona
Chuck	Komadina	Tucson Electric Power
Chuck	Graf	ADEQ
Chuck	Freitas	Tucson Regional Water Coalition (TRWC)
Claire	Kaufman	City of Tucson
Claire	Zucker	WRRC, University of Arizona
Clark	Bryner	Tucson Electric Power
Colby	Bowser	Pima County
Craig	Cannizzaro	Westland Resources Inc.
Crystal	Thompson	Central Arizona Project
Damian	Gosch	UA Senior Hydrology
Dan	Quintanar	City of Tucson
Dan	Guido	Montgomery & Associates
Daniel	Moore	Bureau of Land Management
Daniel	Morgan	Citizen
Darla	Sidles	National Park Service
Dave	Murray	Bureau of Land Management
Dave	Crockett	Flowing Wells Irrigation District
David	Bateman	Cortaro Water Users' Association
David	Hall	Frog Conservation Project
David	Scalero	Pima County RFCD
Debbie	Gevirtzman	Environmental Education Exchange
Dennis	Caldwell	Caldwell Design
Diane	Luber	Pima County
Dick	Thompson	City of Tucson
Don	Carter	Pima County NRPR
Don	Mounce	Rancho Sahuarita
Dona Sue	Laschiava	Citizen
Doug	Siegel	Pima County NRPR
Doug	Duncan	U.S. Fish & Wildlife Service
Dr. Shane	Snyder	UA/Snyder Research Group
Ed	Curley	Citizen, retired
Edwina	Vogan	ADEQ
Einave	Hennenson	Arizona Dept. of Water Resources
Elizabeth	Boettcher	ADEQ
Elyon	Shamir	Hydrologic Research Center

Table 14. List of Interested Parties

First name	Last name	Organization
Elzbieta	Wisniewski	University of Arizona
Eric	Shepp	Pima County RFCD
Eric	Magrane	Geographer
Eric	Wieduwilt	Pima County
Eric	Holler	Retired, Bureau of Reclamation, Community Water Coalition
Erik	Anderson	University of Arizona
Erin	Boyle	National Oceanic & Atmospheric Admin.
Erin	Louise Gray	UA Dept. of Hydrology & Atmospheric Sciences
Ernesto	Velarde	City of Tucson
Evan	Canfield	Pima County
Eve	Halper	Bureau of Reclamation
Fermin	Samorano	Augusta Resource
Frank	Cassidy	Town of Marana
Fred	Felix	City of Tucson
Gail	Cordy	U.S. Geological Survey
Gary	Woodard	Montgomery and Associates
Gita	Bodner	The Nature Conservancy
Glen	Peterson	Pima County
Glenn	Schrader	University of Arizona
Grant	McCormick	University of Arizona
Greg	Hess	Clear Creek Associates
Greg	Saxe	Pima County RFCD
Hans	Huth	ADEQ
Herb	Kai	Kai Farms
Hoshin	Gupta	UA Hydrology & Atmospheric Sciences
Howard	Ward	Terrasystems Southwest
Hsin-I	Chang	UA Hydrology & Atmospheric Sciences
Ian	Murray	Pima County
Ian	Thomlinson	Vera Earl Ranch
Ian	Pepper	WET/University of Arizona
Irene	Ogata	Tucson Water
Iris	Rodden	Pima County NRPR
James	MacAdam	Tucson Water
Jamsheed	Mehta	Town of Marana
Janice	Hughes	Pima County
Janick	Artiola	UA/Dept. of Soil, Water & Env. Science
Janine	Spencer-Glasson	Retired
Jean	McClain	University of Arizona
Jeanmarie	Haney	The Nature Conservancy, Retired
Jeff	Odefey	American Rivers

Table 14. List of Interested Parties

First name	Last name	Organization
Jeff	Simms	Bureau of Land Management
Jeff	Trembly	Mogollon Environmental Services LLC
Jeff	Gicklhorn	Pima County OSC
Jeff	Prevatt	Pima County RWRD
Jennifer	Mangialardi	Town of Marana
Jennifer	Lynch	Pima County DEQ
Jennifer	Becker	Pima County RFCD
Jennifer	McIntosh	UA/Dept. of Hydrology & Water Resources
Jessica	Rodriguez	City of Tucson
Jim	Hatton	AECOM
Jim	Heffelfinger	Arizona Game and Fish Department
Jim	Leenhout	U.S. Geological Survey
Jim	Washburn	UA/Institute of the Environment
Joanne	Hershenhorn	Tucson Water
Joaquin	Murrieta-Saldivar	Watershed Management Group
Joe	Olsen	Metro Water
Joe	Cook	Research Scientist/UA
Joel	Diamond	AZ Game and Fish Department
Joel	Gastelum	City of South Tucson
Johanna	Hernandez	City of Tucson
Johanna	O'Dell	Pima County, Environmental Health and Safety
John	Maisch	DM AFB
John	Mawhinney	Arizona Water Banking Authority
John	Mckinney	FICO
John	Neunuebel	PZE Services, Sahuarita
John	Kmiec	Town of Marana Water Department
Jonathan	Lutz	Tucson Audubon
Jonathan	Horst	Tucson Audubon
Josefina	Cardenas	Barrio Kroeger Lane Neighborhood
Josh	Schachter	Josh Schachter Photography
Julia	Fonseca	Pima County OSC
Julie	Stromberg	Arizona State University
Juliet	Mckenna	Montgomery & Associates
K.	Brandt	University of Arizona
Karen	Simms	Pima County NRPR
Karen	Howe	Tohono O'odham Nation
Karn	Boyce	Town of Oro Valley
Kathryn	Hahne	University of Arizona
Kathy	Chavez	Pima County OSC
Kathy	Jacobs	University of Arizona, Climate Adaptation Center

Table 14. List of Interested Parties

First name	Last name	Organization
Katie	Bolger	City of Tucson, Ward 2
Katie	Banister	University of Arizona, WRRC
Ken	Seasholes	CAP
Ken	Taylor	Community Water Co. of Green Valley
Ken	Marcus	UA/Tech Park
Kerry	Schwartz	Arizona Project WET
Kevin	Bright	Arizona Game and Fish Department
Kevin	Lansey	UA/Hydrology & Atmospheric Sciences
Kieran	Sikdar	HELM Consultants
Kristine	Uhlman	Writer, Previously NEMO
Kyle	Miller	Pima County
Lainie	Levick	SW Watershed Research Center
Larry	Kempton	Green Valley/Sahuarita Chamber of Comm.
Larry	Hawke	PDEQ
Larry	Fisher	UA/School of Nat. Resources and the Env.
Laura	Norman	U.S. Geological Service
Lauren	Hohl	Colossal Cave Mountain Park
Laurie	Hixson	Westland Resources
Leif	Abrell	University of Arizona
Leslie	Ethen	City of Tucson
Lilian	von Rago	Pima County RWRD
Lin	Lawson	ADEQ
Lindsay	Bearup	U.S. Bureau of Reclamation
Lindy	Brigham	Buffelgrass Volunteer
Locana	deSouza	Arizona Game and Fish Department
Lori	Cason	ADWR
Lori	Ehman	City of Tucson
Lori	Jones Woods	Recon Environmental, Inc.
LoriAnne	Barnett	USA-NPN's National Coordinating Office (NCO)
Lorraine	Simon	Pima County
Louis	Misztal	Sky Island Alliance
Luke	Cole	Sonoran Institute
Lynne	Birkinbine	Planning and Dev. Svcs, City of Tucson
Margaret	Snyder	Tucson Water
Margo	Garcia	Citizen
Marisa	Rice	Pima County RFCD
Marit	Alanen	U.S. Fish & Wildlife Service
Mark	Murphy	Hassayampa Associates, L.L.C.
Mark	Day	private citizen
Mark	Seamans	Rancho Sahuarita

Table 14. List of Interested Parties

First name	Last name	Organization
Mark	Taylor	Westland Resources Inc.
Martha	Whitaker	UA/Dept. of Hydrology & Water Resources
Marti	Lindsey	UA/College of Pharmacy, SWEHSC
Mary	McCool	Community Watershed Alliance of the Middle San Pedro Valley
Mary	Bauer	Southern Arizona Water Users Association
Matt	Rice	Colo.River Basin Prog., American Rivers
Matt	Bailey	FICO
Matt	Weber	U.S. Environmental Protection Agency
Matthew	Grabau	U.S. Fish & Wildlife Service
Maya	Teyechea	City of Tucson
Melissa	Reuter	ADOT
Melissa	Hayes	ADEQ
Melvin	Glotfelty	Clear Creek Associates
Michael	Catanzaro	City of Tucson
Michael	Guymon	Tucson Metro Chamber
Michael	Alter	Clear Creek Associates
Mindy	Cox	Pima County RFCD
Mitch	Basefsky	CAP
Molly	Collins	City of Tucson
Muniram	Budhu	University of Arizona
Natalie	Wilson	USGS
Nathan	Lehman	U.S. Bureau of Reclamation
Netsin	Steklis	UA/Biomedical Sciences+ Wild Minds Org.
Niccole	Radhe	Nature Writer, Zoo Outreach
Nicole	Weber	UA/Dept. of Hydrology & Water Resources
Pablo	Garcia-Chevesich	UA/Dept. of Hydrology & Water Resources
Pat	Tapia	City of Tucson
Pat and Kim	Jacobs	Citizens
Patricia	Grimm	Green Valley Pecan Co.
Patricia	Gilbert	Pima County RFCD
Patti	Spindler	ADEQ
Paul	Bennett	Pima County
Paul	Marsh	ASU-School of Life Sciences
Paul	Brown	Bureau of Land Management
Peter	Abraham	Oro Valley Water Utility
Phil	Rosen	UA/School of Nat. Resources and the Env.
Prabhu	Dayal	EUEC
Priscilla	Storm	Diamond Ventures
Rachel	Loubeau	Pima County
Rachel	Tucci	University of Arizona

Table 14. List of Interested Parties

First name	Last name	Organization
Ralph	Ware	U.S. Dept. of Agriculture
Randy	Heiss	SEAGO/Southeastern AZ Council of Govts
Remy	Sawyer	City of Tucson
Richard	Callahan	Citizen
Richard	Grimaldi	Pima County DEQ
Richard	Salaz	Citizen
Rita	Mercer	WWM, Pima County
Rob & Jeanne	Horsemann	Sulphur Springs Valley Elect. Cooperative
Robert	Mier	Citizen
Robert	Carruth	U.S. Geological Survey
Robert	Leidy	Westlands Section, EPA Region IX
Rosalind	Bark	University of Arizona
S. E.	Hunt	Citizen
Sara	Konrad	Water Infrastructure Finance Authority
Sarah	Merrigan	University of Arizona
Scott	Stonum	National Park Service
Scott	Wilbor	Arizona Land and Water Trust
Selso	Villegas	Tohono O'odham Nation
Sharma	Hammond Torres	Arizona Land and Water Trust
Sharon	Megdal	UA/WRRC
Shawn	Cote	SAHBA
Sheila	Bowen	Metro Water
Shela	McFarlin	Cienega Watershed Partnership
Sherri	Compton	U.S. Fish & Wildlife Service
Sherry	Ruther	Pima County
Sherry	Barrett	U.S. Fish & Wildlife Service
Si	Schorr	Lewis Roca, retired
Skye	Siegel	Pima County
Stu	Bengson	Arizona Mining Association
Subhrendu	Gangopadhyay	U.S. Bureau of Reclamation
Susan	Montgomery	Montgomery & Interpreter, PLC
Susan	Sferra	U.S. Fish & Wildlife Service
Susanna	Eden	UA/WRRC
Susy	Morales	Recon Environmental
Suzanne	Shields	Pima County
Suzanne	Ehret	Arizona Game and Fish Department
Tahnee	Robertson	Southwest Decision Resources
Ted	Maxwell	Southern Arizona Leadership Council (SALC)
Thomas	Meixner	University of Arizona
Timothy	Thomure	City of Tucson

Table 14. List of Interested Parties

First name	Last name	Organization
Tres	English	Sustainable Tucson
Trevor	Hare	Watershed Management Group
Ursula	Nelson	Pima County
Val	Little	University of Arizona, Water CASA
Vicki	Bennie	Pima County
Wally	Wilson	Metro Water
Warren	Tenney	AZ Municipal Water Users Assoc.
Wendy	Burk	Nature Writer
Yao	Jan	University of Arizona
Z.	Freeland	Citizen
Zing	Fang	Tucson Electric Power
		Cienega High School
		Cienega Watershed Partnership
		Citizen
		City of Tucson Ward 6
		Gunung Sapi Putih

Advisory Group Composition

Advisory Group composition requirements are met through the combination of several PAG committees. WPS is a technical level advisory group and functions as an ongoing working group. EPAC covers broader issues and policies. The agencies below represent the EPA-required advisor types. PAG fulfilled relevant federal requirements concerning advisory group composition described in 40 CFR § 25.7, as displayed on Table 15.

Table 15. PAG WPS/EPAC Membership Composition

EPA 208 Requirement	Committee Involved	Applicable Interest Area/ Disciplines	Agency Attending	Type of Participation
Public officials	Regional Council	Jurisdictions	All jurisdictions covered: Native Nation/Tribe Chairmen, Mayor and Board of Supervisor levels covered	Member
	EPAC ex-officio	State Agencies	ADWR	Member
			State Lands	Member
			ADEQ – 208 contact	Invited by email
		Federal Agencies	EPA (represents Air)	Member
			Bureau of Reclamation (also has economic interests due to effluent rights)	Invited by email
Residents of the geographic area of activity; Private citizens	EPAC	Jurisdictions	Positions in place for each jurisdiction plus Davis-Monthan Air Force Base	Members, challenge filling vacancies
	WPS	Relevant DPAs, as needed	CAG (as needed, per MOU)	Invited by email, Decisions are contigent of each 208 Plan applicable
Balance of interests in the affected area	EPAC currently has reps in jurisdiction positions	Contamination	Environmental and General Services	Member
		Riparian/ Land Management/ Natural Resources	Sonoran Institute or Arizona Sonora Desert Museum	Member
		Solid Wastes	Environmental Services	Member
	WPS members covered	Wastewater	DMAs are currently covered as priority representatives for jurisdictional positions, one position for Pima County Regional Wastewater Advisory Committee member	Members
	WPS and EPAC	Stormwater	MS4 contacts	Invited by email
		Flooding	RFCD (has safety interests in river effluent management)	Invited by email
		Septic	PDEQ	Invited by email
Public interest groups with no economic interests	EPAC	Education	UA	Member
	WPS	Public	Community Water Coalition	Invited by email
Representatives with economic interests	EPAC	Environment	Tucson Audubon	Member
		Construction	SAHBA	Member
		Industry	Mining	Member
		Energy	TEP	Member
		Local Business	Chamber	Member
	WPS	Agriculture	Kai Farms, BKW, or FICO	Invited by email
		Water Providers (Private and Public, Reclaimed systems)	Southern Arizona Water Users Association, Tucson Water	Invited by email

B. Summary of Developmental Input

In 2017, Regional Council initiated the 208 Plan update. WestLand Resources provided data, research and a consultant perspective on Consistency Reviews. PAG's WPS, EPAC, Management Committee, PAG Regional Council and the statewide Water Quality Management Working Group were updated on the development of the 208 Plan at their regular public meetings. The local DMAs were consulted to review and confirm data throughout the development process. Other DPAs and ADEQ were also consulted throughout the process. Presentations were provided to EPAC and WPS to cover water quality updates in the region that contributed to the 208 Plan update. The first draft of the 2020 208 Plan was distributed to WPS, EPAC and interested

parties with a six-week feedback period. Contacts who could assist with key data gap were provided with questions. A study session was held mid-way through the feedback period to review the first draft.

Meeting Schedule

Regional Council and Management Committee

- 03-23-2017: Initiation of the 208 Plan update and consultant contract approved
- 05-08-19: A verbal summary and first Draft Plan was provided to Management Committee
- 05-23-19: Memo with progress update and a link to the first Draft Plan was provided to Regional Council
- 12-05-19: Presentation to Regional Council to provide a process update and reading opportunity

WPS

- 05-22-2017: Presented an initiation of the 208 Plan update and posted Questions/Answers
- Invited WPS to all EPAC meetings

EPAC

- 10-06-2017: Presented a 208 Progress Update
- 12-07-2018: Water quality issues added to Top Environmental Issues List for 2019
- 03-01-2019: Invited presentations about Brownfields, groundwater quality, and Santa Cruz River Heritage Project progress

WPS/EPAC Joint Meetings

- 06-01-2018: Presented the 208 Portal Inventory, *E. coli* research, Green Stormwater Infrastructure Plan and non-point source outreach to address Impaired Waters. Invited presentations about pharmaceuticals as emerging contaminants and recycled water regulatory updates
- 02-22-19 to 04-10-19: WPS, EPAC and Interested Parties formal feedback period
- 03-28-19: Draft Plan Review Study Session
- 10-18-19: Presented draft 208 Plan for approval to move forward to Public Hearing

Statewide WQMWG

- 08-2017: Presented PAG's streamlined and modernized approach and provided DPA interview questions
- 06-2018: Presented the 208 Facility Portal and the stormwater planning components funded by the ADEQ 604(b) grant

- 03-2019: Presented the results of DPA lessons, major changes reviewed

Summary of WPS, EPAC and Interested Party Feedback

The following is a summary of the feedback and changes made to the February 2019 draft Plan which are reflected in the 2020 208 Plan.

The draft 208 Plan update was provided to the Watershed Planning Subcommittee (WPS) and Environmental Planning Advisory Committee (EPAC) mailing lists on Feb 22, 2019, along with an invitation to the review session on March 28, 2019, and a deadline of April 10, 2019 to provide feedback. The mailing lists are comprised of WPS and EPAC membership, which includes the Designated Management Agency (DMA) contacts and contacts from each PAG member jurisdiction, as well as interested parties who have requested to be involved in the discussions. In addition, experts and agencies were contacted who could assist in filling key data-gaps. DMAs were contacted to verify public wastewater reclamation facility data in 2018. On May 8, 2019 a verbal summary and link to the first draft Plan was provided to Management Committee. On May 23, 2019, a memo with progress update and a link to the first draft Plan was provided to Regional Council. Private facilities were contacted to verify data in August 2019. Results are shown in Table 16.

The reviewers could comment on any page and were also asked to provide feedback on the following:

- The streamlined procedures for a facility to achieve 208 consistency.
- The completeness of the updates to the water quality conditions inventory;
- Corresponding accomplishments in managing water quality issues across the region;
- Alignment of the Strategic Action Plan with the goals of local programs in the region that may benefit from related water quality funding.

Together, the EPAC and WPS meeting notification mailing lists consist of over 350 recipients. Approximately 70 comments were received from 24 advisors representing 17 entities, 12 of which are EPAC or WPS members. All DMAs were supportive. In general, positive responses were that the Plan was well-written and organized, contained meaningful goals supported by local initiatives, had valuable streamlining to the process but maintains local involvement, showed good data provision, and reviewers expressed support for the action items. Feedback is summarized in Table 17. All feedback was utilized to modified to the best of our ability within the scope of work. Additionally, the 208 Plan was reorganized for a more intuitive flow and to ensure that all content that may need future administrative updates is contained in the appendices.

Table 16. Private Facility Contacts and Results of Request for Feedback

Facility	DMA Area	Contact	Results
Ajo Improvement Company WWTF	Pima County	Roy Archer	No response
Arizona-Sonora Desert Museum WWTP	Pima County	Troy Wilcox	No response
Gilbert Ray Campground	Pima County	Mark Brosseau, Park Manager Karen Simms, NR Division Manager Chris Cawein, NRPR Director	Provided updated facility data
Lukeville	Pima County	No contact found	Not applicable
Management & Training Corp. (MTC) Marana Treatment Facility	Marana	Used online contact form	No response
Marana High School	Marana	Chris Hill, Contract Operator Russ Frederico, Marana USD Executive Director of Operational Support	No response
Milagro Subdivision	Pima County	Used online contact form	No response
Miraval Resort Tucson, LLC	Pima County	Contract Operator, Bob Hanus Western Environmental Technologies, Inc.	No response
Organ Pipe Cactus National Monument	Pima County	Bob Bryant, Chief of Facilities)	Provided updated facility text and confirmation
University of Arizona Science and Technology Park	Pima County	Emailed the info line. No known contact.	No response
U.S. Forest Service – Palisades Ranger Station	Pima County	Used online contact form and emailed the info line	No response
ASARCO	JPA	T. Aldrich and info line	No response
Oracle Ridge Mine	Pima County	M. S. Vogle with U.S. Forest Service	No response
Wildcat Canyon at Saguaro Ranch	Pima County/ Marana	No known contact	Not applicable

Table 17. Responses to EPAC, WPS and Interested Party Feedback, February 2019

2020 Document	2020 Plan Chapter	Content Changes since Feb. 2019
Adopted Policies and Procedures	Various policy and procedures sections	Internal reorganization of chapters within this document; Strategic Action Plan moved out. No new policies were added since 2006. Rather than make the public hearing optional for new facilities, as was proposed for the process for public facilities in the Feb. draft Plan, that procedure was added back in, as it was in the 2006 Plan. This ensures a point of local coordination and neighborhood involvement through notification to residents, businesses and property owners within a ½ mile. Since these costs were not covered in our fee proposal, the costs and effort will be covered by the applicant. Clarification was provided regarding how the ADEQ works with DPA appeal processes. Local policies on reuse and ownership of effluent were referenced to inform the PAG 208 Consistency Review process. Relevancy of mining permits was clarified. Conditions in which only a data update is required for facilities was clarified. Methods for assessing Title VI compliance was clarified. The process for establishing new JPAs and joint-DMA facilities was clarified.
Appendix A: Water Quality Management	Chapter 1: Strategic Action Plan	During reorganization of chapters, Strategic Action Plan section moved here. Explained the PAG process for selecting goals. Goals were developed as a result of public participation and carried over from past 208 Plans or other DPA Plan templates. Under the Goals, optional actions were added for integrated planning, water in river habitat, upland restoration, and green infrastructure planning, in alignment with 208/604(b) funding sources or with the 208 Plan's past guiding principles and policies. Climate variability was added as an issue. Drywell investigations as well as cultural heritage perspective and sensitivities were added to actions. Septic goals were updated based on local progress. The Impacts of the 208 Plan section was updated to reflect research on community values for the clean, flowing river. Corrected PDEQ purview over onsite wastewater facilities under 3,000 gallons per day.
	Chapter 2: Water Quality and Management Efforts	During reorganization of chapters, Water Quality and Past 208 Management Actions moved here. Water quality conditions, accomplishment metrics, topical projects, and terminology updates were provided for each of these topics: solid wastes, the Water Quality Assurance Revolving Fund Registry, perched aquifers, the Central Arizona Project, Dispose-a-Med, climate projections, Grecycle, CEP process, biosolids, treated effluent classes for local facilities, Mount Lemmon septic issues, Sweetwater Wetlands management, toxic release summaries, SHARP, legacy microorganisms in water systems, trichloroethylene (TCE), perchloroethylene, 1,4 – dioxane, PFAs and other emerging contaminants or unregulated compounds, creek monitoring, reclaimed and recovery programs, non-point source pollution (including low impact development) and PAG resolutions. It was clarified that cultural resources are a part of an integrated planning process. A summary of APP and AZPDES permits was added.
		During reorganization of chapters, solid Waste Management and Toxics Releases moved here.
	Chapter 3: Wastewater Facilities Planning	During reorganization of chapters, all content remained except for Solid Waste Management and Toxics Releases. Map disclaimers were modified to ensure that locations of sewer service areas do not imply sewer service is available due to costs or other impediments

Table 17. Responses to EPAC, WPS and Interested Party Feedback, February 2019

2020 Document	2020 Plan Chapter	Content Changes since Feb. 2019
	Chapter 4: Facility Inventory Report	Facilities now sorted by DMA. Non-municipal and private wastewater facilities were contacted to review the facilities inventory and updates were provided for Adonis, ASARCO and Organ Pipe. Map formatting, symbology and legends were improved. DMAs verified that no new potential public facilities are anticipated at this time. Amendments were cited for each applicable facility.
	Chapter 5: Application Resources	Placeholder for future resources.
Appendix B: PAG 208 Planning Background	Chapter 1: Record of Changes - 2019 Update	List of Changes was updated to reflect feedback since February. A table was added to aid cross-reference between the 2006 Plan chapters and the 2019 draft Plan chapters. A simplified flow diagram of 208 processes as added.
	Chapter 2: History, Regulations and Authorities	Confirmation was provided for regulation updates.
	Chapter 3: Setting of Planning Area	During reorganization of chapters, Water Quality and Past 208 Management Actions moved out. Updated summary of endangered species to local dataset. Added climate variability to the background section.
	Chapter 4: Public Participation Records - 2019 Update	Records of public participation to date, were added.
Appendix C: Glossary and References	Chapter 1: Glossary of Terms and Acronyms	A new Consistency Status category added to the Glossary to ease understanding.
	Chapter 2: References	Updated to reflect any new data sources.

Advisors who provided data and developmental feedback:

- Amanda Smith, Sonoran Institute
- Bob Bryant, Chief of facilities, Organ Pipe Cactus National Monument
- Claire Zucker, University of Arizona, Water Resources Research Center
- David Barnes, Freeport McMoRan
- David Scalero, Principal Hydrologist, Pima County Regional Flood Control District
- Edwina Vogan, 208 Program Coordinator, ADEQ
- Evan Canfield, Pima County Regional Flood Control District
- Frank Eric Holler, Community Water Coalition
- Greg Hitt, Pima County Regional Wastewater Reclamation Department
- Heidi Lasham, Town of Sahuarita
- James DuBois, Permit & Regulatory Compliance Officer, Pima County Pima County Regional Wastewater Reclamation Department
- Jamie Ekholm, Environmental Manager, Asarco LLC
- Joanne Hershenhorn, Hydrologist, Tucson Water (compiled feedback from multiple program areas at Tucson Water)
- Julia Fonseca, Environmental Planning Manager, Pima County Office of Sustainability and Conservation
- Julie Robinson, PhD, Pima County Office of Sustainability
- Lauren Hixon, Westland Resources
- Marie Light, PDEQ
- Mark Brosseau, Pima County Parks and Natural Resources, Park Manager for Tucson Mountain Park
- Mirela Hromatka, Pima County Pima County Regional Wastewater Reclamation Department
- Nicole Gillett, Tucson Audubon Society
- Richard Grimaldi, Deputy Director, Pima County Department of Environmental Quality
- Sarah Reitmeyer, Pima County Department of Environmental Quality
- Scott Schladweiler, Interim Director, Town of Marana, Marana Water Department
- Stephen Dean, Marana Water Department, Water Reclamation Division

C: Record of WPS/EPAC Meeting to forward the 208 Plan to Public Hearing

Records of the October 18, 2019 meeting of EPAC and WPS to forward the 208 Plan to Public Hearing are shown in Figure 17, Figure 18 and Figure 19.

Figure 17. Agenda for the October 18, 2019 Joint Meeting of EPAC and WPS

Joint Environmental Planning Advisory Committee (EPAC) and Watershed Planning Sub-Committee (WPS) Meeting

9:30 a.m., October 18, 2019

Pima Association of Governments
1 E. Broadway Blvd., Suite 401, Tucson
Santa Rita Conference Room North

Agenda

1. **Call to Order and Introductions**
2. **In-kind Form**
3. **Approval of June 7, 2019, EPAC Meeting Summary**

   Action: Approval of Meeting Summary.
4. **PAG Staff Updates**

   PAG staff will provide updates on program activities, EPAC subcommittees, task forces or other PAG committees.

   Discussion: This is an information item.
5. **208 Plan Update Approval**

   As the designated regional planning agency for water quality, PAG is responsible for the development of the Areawide Water Quality Plan (208 Plan) and its updates. Mead Mier, PAG Sustainability Coordinator, will provide a review of the 208 Plan Update, key changes and next steps in the Plan document review process.

   Action: Recommendation of the draft final 208 Plan Update for release to the public and to initiate the public review and comment period.
6. **EPAC Top Environmental Issues List for 2020**

   Lee Comrie, PAG Sustainability Coordinator, will review EPAC's previous Top Environmental Issues List for 2019, and progress made on addressing these topics. She will provide initial suggestions for updates and outline the process for finalizing the list for 2020. Action on this item is anticipated at the December EPAC meeting.

   Discussion: This is an information item.

Pima Association of Governments 1 East Broadway Blvd., Suite 401, Tucson, AZ 85701 (520) 792-1093 *[tel]* www.PAGregion.com

Figure 17. Agenda for the October 18, 2019 Joint Meeting of EPAC and WPS (cont'd)

7. Regional Efforts to Address Solid Waste Diversion

Recent changes in international recycling policies have prompted changes to recycling programs nationally and locally. Carlos De La Torre, Director of Environmental and General Services, City of Tucson, will give an update on the state of recycling issues facing the Tucson region and regional coordination efforts to address this issue. In addition, Scott Porter, Environmental Quality Manager, Pima County Department of Environmental Quality, will brief the committee on the current status of wildcat dumping.

Discussion: This is an information item.

8. Adjournment

EPAC Packets containing material related to the Meeting are available for public review the day before and the day of the Meeting during office hours at: 1 E. Broadway Blvd., Suite 401, Tucson, AZ 85701 ***(520) 792-1093.***

The Meeting Room is accessible to persons with handicaps. In compliance with the Americans with Disabilities Act (ADA), those requiring special assistance, such as large-type face print, sign language or other reasonable accommodations, may request those through the administrative offices at: 1 E. Broadway Blvd., Suite 401, Tucson, AZ 85701 or by calling (520) 792-1093 at least 24 hours before the meeting. Si necesita ayuda con traducción, llame por favor al 792-1093 y comuníquese con Nathan Barrett.

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Figure 18. Meeting Summary for the October 18, 2019 Joint Meeting of EPAC and WPS

Joint Environmental Planning Advisory Committee (EPAC) / Watershed Planning Subcommittee (WPS) Meeting

Meeting Summary Friday, October 18, 2019

ATTENDEES

Members

Kris Lafleur, Tucson Water
Dee Korich, Tucson Water
Frank Bonillas, City of Tucson
Claire Kaufman, City of Tucson, Ward 6
Sarah Reitmeyer, PDEQ
Mirela Hromatka, Pima County RWRD
Heidi Lasham, Town of Sahuarita
Roxanne Linsley, ADEQ
Lori Cason, ADWR (**by phone**)
Janine Spencer-Glasson, Pima County
Paula Bluemer, Town of Marana
Grace Evans, League of Women Voters
Leah Proffitt, Davis Monthan AFB
Jay Hillman, Davis Monthan AFB
David Barnes, Freeport McMoRan
Howard Myers, SAHBA
Mark Novak, University of Arizona

Other Attendees

Brittany Keim, Waste Management
Lisa Rotello, City of Tucson
Mark Murphy, CWAC
Kendra Hall, City of Tucson
Christina Polsgrove, City of Tucson
Pat Tapia, City of Tucson
P. Scott Porter, PDEQ
Evan Canfield, PC RFCD

Staff

Lee Comrie
Mead Mier
Melanie Alvarez
Dustin Fitzpatrick
Jeanette DeRenne
David Atler

1. Call to Order and Introductions

The meeting was called to order by Sarah Reitmeyer, acting EPAC Chair, at 9:38 a.m. The new citizen representative for Pima County, Janine Spencer, was introduced, as well as new PAG staff members Jeanette DeRenne, Planning Manager, and Dustin Fitzpatrick, Air Quality Coordinator.

2. In-kind Form

Members were asked to sign the in-kind form.

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Figure 18. Meeting Summary for the October 18, 2019 Joint Meeting of EPAC and WPS (cont'd)

3. Meeting Summary of June 7, 2019

A motion was made by Mark Novak to approve the Meeting Summary of June 7, 2019, seconded by Mirela Hromatka and it was unanimously approved.

4. PAG Staff Updates

PAG staff provided updates on program activities. Dustin Fitzpatrick noted that while the ozone standard was violated in 2018, no ozone violations have been recorded during the current ozone season. ADEQ is holding stakeholder meetings for implementation of the Regional Haze State Implementation Plan. Melanie Alvarez announced that the annual stormwater report was sent to Stormwater Management Working Group members and a resources guide is underway. Also, the annual riparian health assessment report would soon be sent out for review.

Member updates included the University of Arizona partnering with Tucson Electric Power in its efforts to become the first research university with 100% clean power.

5. 208 Plan Update Approval

As the designated regional planning agency for water quality, PAG is responsible for the development of the Areawide Water Quality Plan (208 Plan) and its updates. Mead Mier, PAG Sustainability Coordinator, provided a review of the 208 Plan update purpose and process, key changes made to the 2006 adopted 208 Plan, a summary of feedback received and incorporated from WPS, EPAC members and interested parties, and the next steps in the Plan document review process.

Action: A motion was made by David Barnes and seconded by Mark Novak to approve the Draft Final 208 Plan Update for release to the public and to initiate the public review and comment period, and it was unanimously approved by WPS and EPAC members.

The presentation is available HERE.

6. EPAC Top Environmental Issues List for 2020

Lee Comrie, PAG Sustainability Coordinator, reviewed EPAC's previous Top Environmental Issues List for 2019, and progress made on addressing these topics. She outlined the process for finalizing the list for 2020. She announced that a draft would be circulated for feedback at the end of October. Action on this item is anticipated at the December EPAC meeting.

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Figure 18. Meeting Summary for the October 18, 2019 Joint Meeting of EPAC and WPS (cont'd)

7. Regional Efforts to Address Solid Waste Diversion

Recent changes in international recycling policies and the economy have prompted changes to recycling programs nationally and locally. Pat Tapia, Deputy Director of Environmental and General Services, City of Tucson, gave an update on the state of recycling internationally and the issues facing the Tucson region. While the landfill diversion rate has increased significantly since the Blue Barrel Program began in 2002, contamination of the recycling stream has increased. In order to offset the increasing costs of recycling, the City of Tucson has moved to less frequent collection of recyclables. Also, the city is working to improve public messaging and is considering options to reduce contamination. He reviewed the economic aspects of solid waste diversion, and the efforts needed to make it work, including reducing, reusing or recycling waste. He highlighted the need for regional coordination efforts and messaging to address this issue. The committees expressed interest in hearing updates and in collaborating to assist with regional messaging to aid recycling companies and municipal public services.

In addition, Scott Porter, Environmental Quality Manager, Pima County Department of Environmental Quality, briefed the committee on the current status of illegal dumping. He reviewed the negative impacts of illegal dumping, the complaints process, penalties and enforcement. He highlighted the positive efforts being made to educate, remediate and deter illegal dumping, thus avoiding violations. The committees expressed interest in hearing further research about trends and effective solutions.

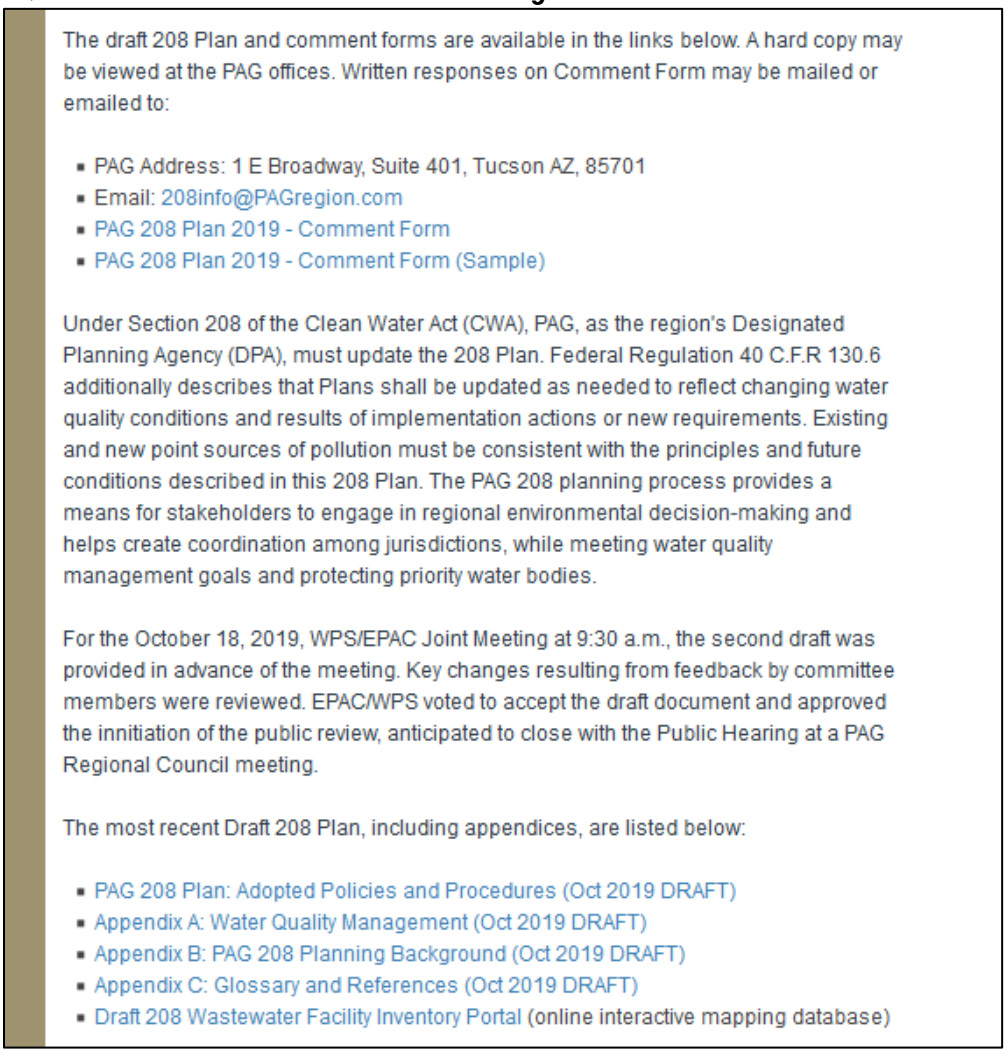
The presentation by the City of Tucson is available HERE.
The presentation by Pima County is available HERE.

8. Adjournment

The meeting was adjourned at 11:10 a.m.

Pima Association of Governments 1 E. Broadway, Suite 401, Tucson, AZ 85701 (520) 792-1093 *[tel]* www.PAGregion.org *[web]*

Figure 19. October 2018 Screenshot of the Posting of the Draft 208 Plan to the WPS Webpage



The draft 208 Plan and comment forms are available in the links below. A hard copy may be viewed at the PAG offices. Written responses on Comment Form may be mailed or emailed to:

- PAG Address: 1 E Broadway, Suite 401, Tucson AZ, 85701
- Email: 208info@PAGregion.com
- PAG 208 Plan 2019 - Comment Form
- PAG 208 Plan 2019 - Comment Form (Sample)

Under Section 208 of the Clean Water Act (CWA), PAG, as the region's Designated Planning Agency (DPA), must update the 208 Plan. Federal Regulation 40 C.F.R 130.6 additionally describes that Plans shall be updated as needed to reflect changing water quality conditions and results of implementation actions or new requirements. Existing and new point sources of pollution must be consistent with the principles and future conditions described in this 208 Plan. The PAG 208 planning process provides a means for stakeholders to engage in regional environmental decision-making and helps create coordination among jurisdictions, while meeting water quality management goals and protecting priority water bodies.

For the October 18, 2019, WPS/EPAC Joint Meeting at 9:30 a.m., the second draft was provided in advance of the meeting. Key changes resulting from feedback by committee members were reviewed. EPAC/WPS voted to accept the draft document and approved the innitiation of the public review, anticipated to close with the Public Hearing at a PAG Regional Council meeting.

The most recent Draft 208 Plan, including appendices, are listed below:

- PAG 208 Plan: Adopted Policies and Procedures (Oct 2019 DRAFT)
- Appendix A: Water Quality Management (Oct 2019 DRAFT)
- Appendix B: PAG 208 Planning Background (Oct 2019 DRAFT)
- Appendix C: Glossary and References (Oct 2019 DRAFT)
- Draft 208 Wastewater Facility Inventory Portal (online interactive mapping database)

Presentation[76]

D: Records of Public Hearing and Comment Period

(to be added)

In Alignment with 40 CFR, Chapter 1, Part 25.5:

The email list used to notify the public of the public hearing on the 208 Plan update includes media, PAG Committees, local and regional elected officials; civic, business, education and environmental organizations; neighborhoods; and underserved communities. An example email notice is shown in Figure 20.

[76] http://www.pagregion.com/documents/committees/epac/2019/EPAC-2019-10-18-Presentation-PAG-Areawide-Water-Quality-Management-Plan.pdf

Figure 20. Screenshot of Notice Sent to PAG Email List

From: Pima Association of Governments
Sent: Tuesday, January 28, 2020 11:03 AM
To: [redacted]
Subject: FINAL REMINDER - Public feedback wanted on PAG's Areawide Water Quality Management Plan

Areawide
WATER QUALITY
Management Plan



COMMENT

Pima Association of Governments (PAG) is updating its Areawide Water Quality Management Plan (Section 208) and will hold a Public Hearing at noon on Jan. 30, 2020, at the PAG Regional Council meeting.

The 208 Plan documents is available for review and comment at www.PAGregion.com/208plan and at PAG, 1 E. Broadway Blvd., Suite 401, Tucson, AZ 85701 starting Dec. 30. Comments will be accepted through the public hearing on Jan. 30, 2020.

Written comments may be mailed to the address above or submitted via email to 208info@PAGregion.com using the comment form found on the web link provided above. Mailed comments should be postmarked no later than Jan. 28, 2020.

Under federal regulation 40 CFR 130.6, PAG - as the region's Designated Planning Agency (DPA) - must update the 208 Plan to reflect changing conditions and projections. The 208 Plan addresses water pollution sources, such as solid waste, stormwater and domestic wastewater, by inventorying sources of pollution, water quality conditions, management efforts and goals. New or changing facilities must follow adopted PAG 208 processes to become consistent with the 208 Plan. These processes apply primarily to wastewater reclamation facilities. The draft plan was developed over a period of two years with substantial feedback by PAG's member jurisdictions and committee members.

Figure 20. Screenshot of Notice Sent to PAG Email List *(cont'd)*

The PAG Regional Council may take action at the conclusion of the hearing on Jan. 30, 2020, to approve and forward the updated plan to the Arizona Department of Environmental Quality (ADEQ) and the U.S. Environmental Protection Agency (EPA).

The Meeting Room is accessible to persons with disabilities. In compliance with the Americans with Disabilities Act (ADA), those requiring special assistance, such as large print, sign language or other reasonable accommodations, may request those through the administrative offices at: 1 E. Broadway Blvd., Suite 401, Tucson, Arizona 85701 or by calling (520) 792-1093, at least twenty-four hours before the meeting. Si necesita ayuda con traducción, llame por favor al 792-1093 y comuníquese con Nathan Barrett.

COMMENT

Pima Association of Governments

Pima Association of Governments, the region's metropolitan planning organization and council of governments, works collaboratively in leadership and planning to enhance our livability by improving regional mobility, economic vitality and sustainability.

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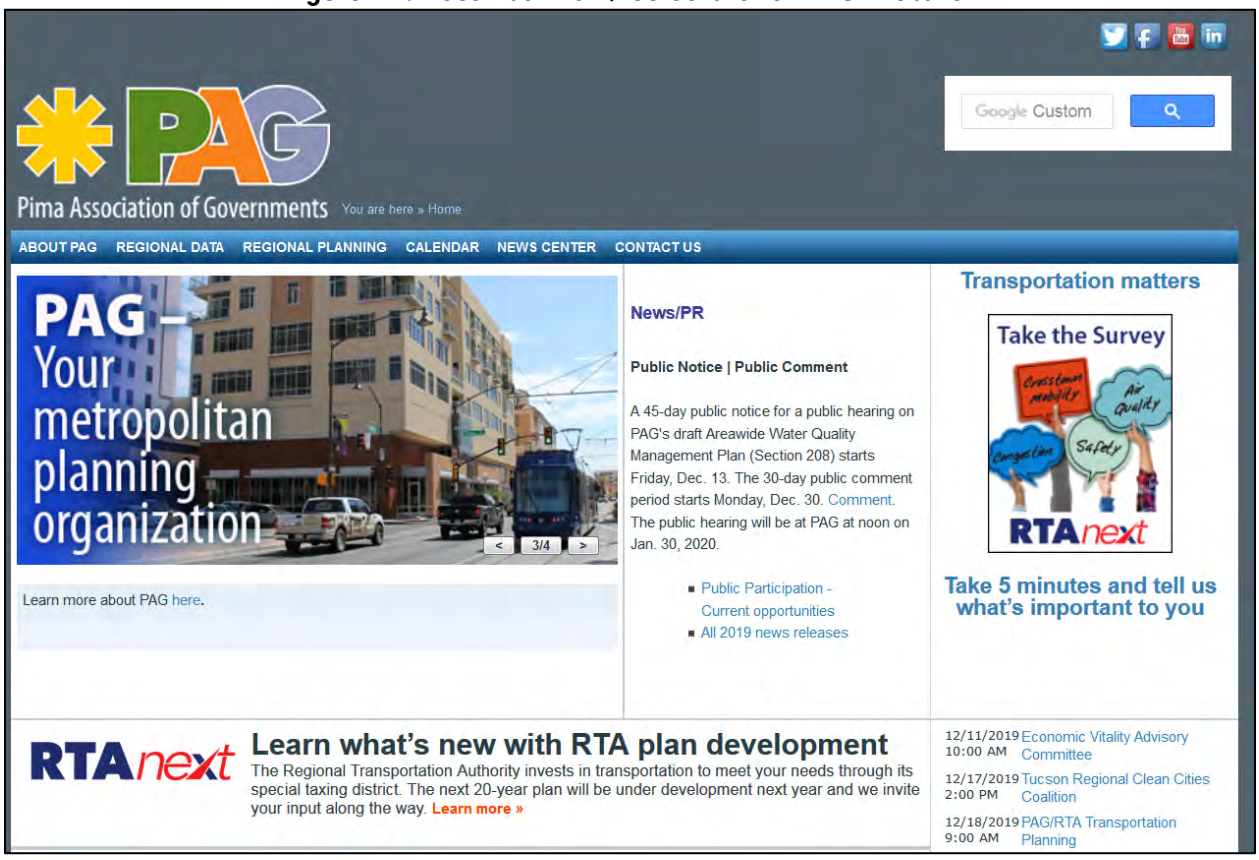
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The documents were available for review, as required, at least 30 days before public hearing, posted on December 13, 2019. The locations included the WPS webpage (http://www.pagregion.com/Default.aspx?tabid=322) and a physical copy at the front of the PAG offices at 1 E Broadway, Suite 401, Tucson AZ, 85701.

The public notice was featured prominently on the PAG Website homepage (Figure 21) with details on the WPS Page (http://www.pagregion.com/Default.aspx?tabid=322#208PlanUpdate2019).

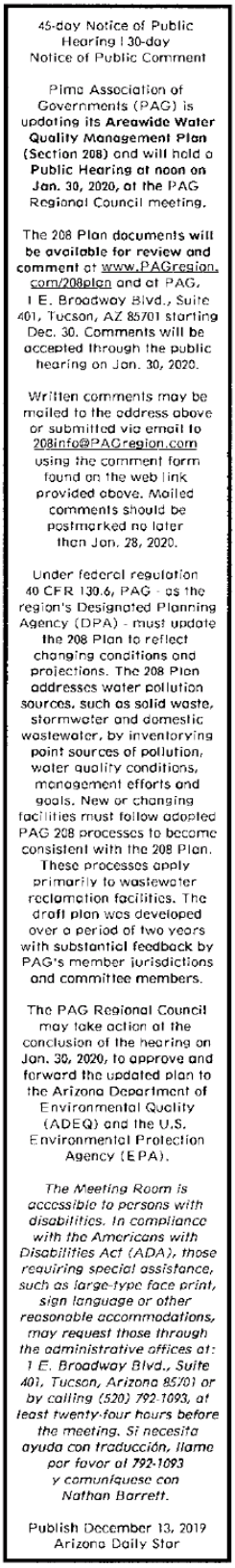
Figure 21. December 2019 Screenshot of PAG Website



http://www.pagregion.com

The public notice for the public hearing was printed on December 13, 2019 in the Arizona Daily Star (Figure 22 and Figure 23).

Figure 22. Copy of the Public Notice of the Public Hearing



45-day Notice of Public Hearing | 30-day Notice of Public Comment

Pima Association of Governments (PAG) is updating its **Areawide Water Quality Management Plan (Section 208)** and will hold a **Public Hearing at noon on Jan. 30, 2020, at the** PAG Regional Council meeting.

The 208 Plan documents will be available for review and comment at www.PAGregion.com/208plan and at PAG, 1 E. Broadway Blvd., Suite 401, Tucson, AZ 85701 starting Dec. 30. Comments will be accepted through the public hearing on Jan. 30, 2020.

Written comments may be mailed to the address above or submitted via email to 208info@PAGregion.com using the comment form found on the web link provided above. Mailed comments should be postmarked no later than Jan. 28, 2020.

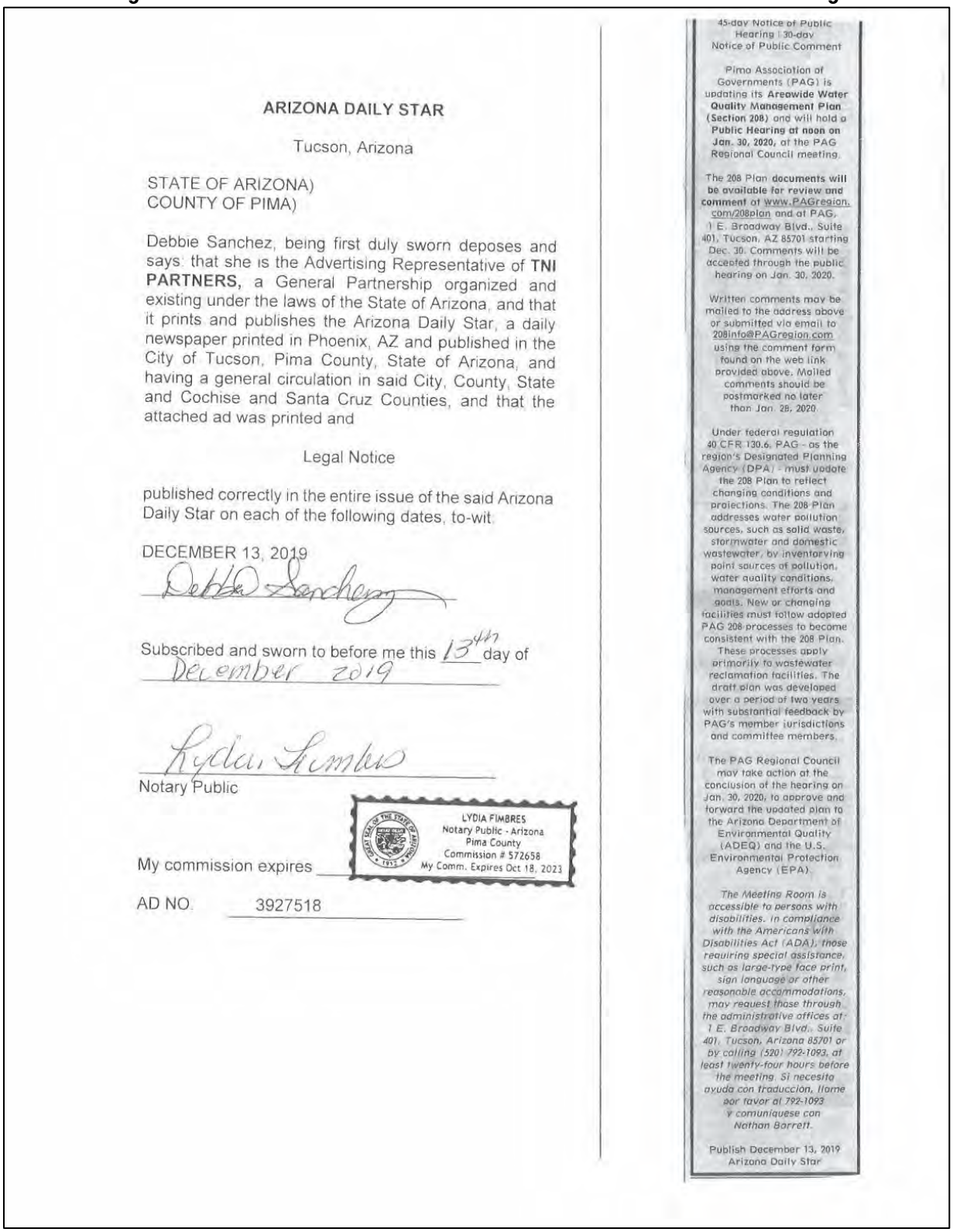
Under federal regulation 40 CFR 130.6, PAG - as the region's Designated Planning Agency (DPA) - must update the 208 Plan to reflect changing conditions and projections. The 208 Plan addresses water pollution sources, such as solid waste, stormwater and domestic wastewater, by inventorying point sources of pollution, water quality conditions, management efforts and goals. New or changing facilities must follow adopted PAG 208 processes to become consistent with the 208 Plan. These processes apply primarily to wastewater reclamation facilities. The draft plan was developed over a period of two years with substantial feedback by PAG's member jurisdictions and committee members.

The PAG Regional Council may take action at the conclusion of the hearing on Jan. 30, 2020, to approve and forward the updated plan to the Arizona Department of Environmental Quality (ADEQ) and the U.S. Environmental Protection Agency (EPA).

The Meeting Room is accessible to persons with disabilities. In compliance with the Americans with Disabilities Act (ADA), those requiring special assistance, such as large-type face print, sign language or other reasonable accommodations, may request those through the administrative offices at: 1 E. Broadway Blvd., Suite 401, Tucson, Arizona 85701 or by calling (520) 792-1093, at least twenty-four hours before the meeting. Si necesita ayuda con traducción, llame por favor al 792-1093 y comuníquese con Nathan Barrett.

Publish December 13, 2019
Arizona Daily Star

Figure 23. Official Affidavit of Publication for Public Notice of Public Hearing



ARIZONA DAILY STAR

Tucson, Arizona

STATE OF ARIZONA)
COUNTY OF PIMA)

Debbie Sanchez, being first duly sworn deposes and says: that she is the Advertising Representative of **TNI PARTNERS,** a General Partnership organized and existing under the laws of the State of Arizona, and that it prints and publishes the Arizona Daily Star, a daily newspaper printed in Phoenix, AZ and published in the City of Tucson, Pima County, State of Arizona, and having a general circulation in said City, County, State and Cochise and Santa Cruz Counties, and that the attached ad was printed and

Legal Notice

published correctly in the entire issue of the said Arizona Daily Star on each of the following dates, to-wit:

DECEMBER 13, 2019

Debbie Sanchez

Subscribed and sworn to before me this 13th day of December 2019

Lydia Fimbres

Notary Public

LYDIA FIMBRES
Notary Public - Arizona
Pima County
Commission # 572658
My Comm. Expires Oct 18, 2023

My commission expires

AD NO. 3927518

45-day Notice of Public Hearing | 30-day Notice of Public Comment

Pima Association of Governments (PAG) is updating its **Areawide Water Quality Management Plan (Section 208)** and will hold a **Public Hearing at noon on Jan. 30, 2020,** at the PAG Regional Council meeting.

The 208 Plan **documents will be available for review and comment** at www.PAGregion.com/208plan and at PAG, 1 E. Broadway Blvd., Suite 401, Tucson, AZ 85701 starting Dec. 30. Comments will be accepted through the public hearing on Jan. 30, 2020.

Written comments may be mailed to the address above or submitted via email to 208info@PAGregion.com using the comment form found on the web link provided above. Mailed comments should be postmarked no later than Jan. 28, 2020.

Under federal regulation 40 CFR 130.6, PAG - as the region's Designated Planning Agency (DPA) - must update the 208 Plan to reflect changing conditions and projections. The 208 Plan addresses water pollution sources, such as solid waste, stormwater and domestic wastewater, by inventorying point sources of pollution, water quality conditions, management efforts and goals. New or changing facilities must follow adopted PAG 208 processes to become consistent with the 208 Plan. These processes apply primarily to wastewater reclamation facilities. The draft plan was developed over a period of two years with substantial feedback by PAG's member jurisdictions and committee members.

The PAG Regional Council may take action at the conclusion of the hearing on Jan. 30, 2020, to approve and forward the updated plan to the Arizona Department of Environmental Quality (ADEQ) and the U.S. Environmental Protection Agency (EPA).

The Meeting Room is accessible to persons with disabilities. In compliance with the Americans with Disabilities Act (ADA), those requiring special assistance, such as large-type face print, sign language or other reasonable accommodations, may request those through the administrative offices at 1 E. Broadway Blvd., Suite 401, Tucson, Arizona 85701 or by calling (520) 792-1093, at least twenty-four hours before the meeting. Si necesita ayuda con traduccion, llame por favor al 792-1093 y comuniquese con Nathan Barrett.

Publish December 13, 2019
Arizona Daily Star

Public Hearing Summary

Public comments received during the public comment period and PAG's responses are detailed in Table 18.

Table 18. Public Comments and PAG Responses ("Responsiveness Summary")

Name, Title, Membership	Document Name and Page No.	Public Comments	PAG Response
Joanne Hershenhorn, City of Tucson, Tucson Water	Appendix A: Water Quality Management, page 15	Suggested wording, Federal Superfund/CERCLA Sites, under Management Strategies, third paragraph, second sentence: Treatment is anticipated to continue until ~~at least 2025 (EPA 2019b)~~ sufficient remediation has been accomplished per EPA.	Thank you for the review. We will correct this statement.
Joanne Hershenhorn, City of Tucson, Tucson Water	Appendix B: PAG 208 Planning Background, page 55	New comment, suggested wording, City of Tucson Reclaimed Water: After the last paragraph in the section, add new paragraph: Tucson Water also participates in two managed effluent recharge projects along the Santa Cruz River. The Santa Cruz River Managed Underground Storage Facility and the Lower Santa Cruz River Managed Recharge Project are in-channel recharge projects located downstream of the Agua Nueva and Tres Rios WRFs, respectively.	We will add this information. Thank you for this additional data.
C. J. Cole, American Museum of Natural History	General	I just looked through the PAG 208 Plan Update DRAFT, looking for plans to reduce or eliminate PFAS in reclaimed water. Perhaps I missed it, but I found no discussion of this. I also followed the link to the City of Tucson reclaimed water quality issues, and also found no listing. I'm certain I don't need to tell you about how toxic PFAS are, how they are becoming increasingly widespread throughout the environment, how resistant they are to breakdown (and thus prone to accumulation), and how governmental agencies at the state	PFAS information is in the Emerging Contaminants section including results of sampling effluent (Appendix A). While local proactive actions are mentioned regarding drinking water treatment, you are correct that it does not mention efforts for reductions in reclaimed water. While Health Advisories are available for PFAS in drinking water and the PAG 208 Plan commends local efforts going beyond drinking water regulations, similar federal guidelines and PAG goals are not

Table 18. Public Comments and PAG Responses ("Responsiveness Summary")

Name, Title, Membership	Document Name and Page No.	Public Comments	PAG Response
		level and above are avoiding dealing properly with the health issues. So, it appears that local agencies may need to step forward if the public is to be protected. Is anybody planning to reduce PFAS in general to no more than 10 or maybe even 1 ppt in reclaimed water? It seems that of such toxic contaminants warrant discussion about protecting the health of the public, rather than having agencies fall back on saying that since PFAS are not regulated by the EPA, we are compliant if we ignore them.	available for wastewater. An action will be added to the Strategic Action Plan to encourage treatment of industrial wastes and emerging contaminants to meet health advisory guidelines, when available, for effluent discharges and reclaimed water.
Catlow Shipek, Watershed Management Group	General	One comment I would like to provide for the 208 Plan: Based on ideas that have come out of conversations with Pima County Wastewater and in the Basin Study perhaps the plan should also consider using distributed wastewater treatment systems to balance recharge and groundwater demands in critical shallow groundwater supported riparian areas across the greater Tucson Basin. Currently, with a centralized wastewater treatment system we are de-watering critical basin areas by not providing for return flows to help replenish the aquifer. Thanks for your consideration and the opportunity to comment.	This action will be added to the Strategic Action Plan as it addresses top issues and complements current goals. It was not within the scope of this update to change policies, but this can be discussed potentially during a future update or Amendment process.
Edwina Vogan, Arizona Department of Environmental Quality	Adopted Policies and Procedures, page 16	PG 16 – Please clarify if it PAG's intention to have the consistency	Yes, we will clarify.

Table 18. Public Comments and PAG Responses ("Responsiveness Summary")

Name, Title, Membership	Document Name and Page No.	Public Comments	PAG Response
		review come to PAG first. That would be fine with WQD at ADEQ.	
	Adopted Policies and Procedures, page 17	The PAG Consistency Letter is a result of the process of the consistency review form and procedure - PAG's determination of conformance?	Yes, we will clarify.
Edwina Vogan, Arizona Department of Environmental Quality	Appendix B, page 84, Table 17	**In Figure 3 - PAG 208 Plan Decision Diagram for Permit Applicants -** One of the diamonds - "Is the application for a facility w/design capacity greater than 0.024 MG - the step where the applicant will apply for Pima County APP Type 4 General Permit? Since	The text descriptions of Type 4 Permits clarifies that Pima County will coordinate with the applicable DMAs. PAG will assist where necessary.
	Adopted Policies and Procedures, Figure 3	Pima County is a DMA - when they receive and review the application, does Pima County look for other facilities to coordinate on hook-up, or dry sewer if possible?	We will remove this sentence from the septic definition since it is accurately stated in the description of the Type 4 Permits.
	Appendix C, Glossary	Related, **P.5 in Appendix C - Definition of septic system**. Last sentence of that definition – "*Septic systems 0.024 or less do not require application to Pima County for APP Type 4 General Permit (no PAG process required).*" Yes, the applicants must submit to Pima County for the Type 4 General Permit up to 24,000 gpd. 24,000 gpd APPs and above are submitted to DEQ.	
Edwina Vogan, Arizona Department of Environmental Quality	Adopted Policies and Procedures, page 3	**On page 3 under Required Elements in an Areawide WQMP** - the third paragraph - PAG cannot designate a DMA. EPA designates; approves the DMA. PAG	Thank you. We will clarify.

Table 18. Public Comments and PAG Responses ("Responsiveness Summary")

Name, Title, Membership	Document Name and Page No.	Public Comments	PAG Response
	Appendix B, page 7	participates in the process of approval for a DMA in conjunction with ADEQ and EPA Region IX. Page 7 - 5th bullet - Does the Consistency Factor apply only to public facilities.	Yes, we will clarify.
Edwina Vogan, Arizona Department of Environmental Quality	Adopted Policies and Procedures, page 46-48	I really like the section on Public Participation - I think 208 could always improve on this aspect even with the constraints of staff, funding and time. **Question in general as it relates to pages 46 & 47**. Is PAG wanting to see all industrial permits go through a 208 approval, or just domestic wastewater facilities? **P.47** - Facilities constructed despite lack of conformance w/208 Plan: 1st bullet - are "existing" facilities the reference point here - although existing is not part of the sentence? **P.48 -** I think the APP citation could be inserted there (Facilities requiring APPs)	Thank you. We followed the EPA guidelines closely. We did not change our Industrial policy. PAG reviews domestic facilities on industrial sites as well as industrial stormwater discharges, which are not in compliance with the ADEQ's MSGP or that are not addressed by AZPDES municipal stormwater permits. Construction of new and expansion of existing non-conforming facilities are each inconsistent with the PAG 208 Plan. We will add the reference. Thank you for the diligent review.

Table 18. Public Comments and PAG Responses ("Responsiveness Summary")

Name, Title, Membership	Document Name and Page No.	Public Comments	PAG Response
		also on **page 48** - 1st paragraph after the bullet points – "ADEQ will not issue an APP unless the facility is consistent with the appropriate 208 Plan" - a citation or regulatory reference would be good here as well.	
Greg Hitt, PC RWRD, DMA contact	Appendix A	I've attached Pima County's comments (shown in red) on the proposed additions. In Action 5 we wanted to clarify the distinction between sewage discharged by the community into the sewer system, and treated wastewater effluent that is used for recharge and reclaimed water. In Action 6, by singling out PFAS and 1,4 Dioxane, we are inferring that these are the main contaminates of concern. We'd prefer to have the flexibility to monitor any emerging concerns, and remove the focus on current areas of study. Goal 1 (page 5): Action 5: "Continue to monitor contaminants and emerging concerns in sewage, wastewater effluent, ~~discharge~~ and biosolids and strive to follow health advisories and voluntary effluent guidelines when available, feasible and cost-effective to keep regional reclaimed water safe for reuse, including wildlife, body contact and recharge."	We will make these updates during the next administrative update, so that the PAG 208 Plan stays more up to date with terminology and the latest emerging contaminants.

Table 18. Public Comments and PAG Responses ("Responsiveness Summary")

Name, Title, Membership	Document Name and Page No.	Public Comments	PAG Response
		Goal 1. Action 6. "Continue public services to monitor contaminants and emerging concerns in private wells, ~~such as PFAS and 1,4 Dioxane,~~ including advice for home treatment to reduce exposure."	
Community Water Coalition of Southern Arizona, transmitted via Jonathan Goldman representing the Board of Directors	PAG 208 Plan - 2020 Appendix A: Water Quality Management, Draft 12/13/19	The issues identified and the goals set forth in the draft are important, and they are consistent with the prior plan, but they do not fully address **the need for regional coordination** that no other governmental agency in southern Arizona is currently performing and that the Pima Association of Governments (PAG) has a unique opportunity to become a leader in doing so. Relying solely on the permitting processes for waste treatment and disposition; and water treatment, recharge and distribution misses several key areas of planning that our communities and the environment in southern Arizona, tribal nations and northern Sonora sorely need. The presence of emerging contaminants in water coupled with the effects of climate change justifies a broader and more proactive regional planning process. "One Water" is just such an over-arching concept, but the lack of **coordination between the PAG, tribal nations, adjacent DPAs with connected watersheds and groundwater aquifers** (including the SouthEasternArizona Governments Organization https://www.seago.org/wqmp whose current 208 Plan only peripherally addresses emerging	Thank you for the confidence in PAG to assist with the regional need you have described. The PAG 208 Plan's Strategic Action Plan identifies the Watershed Planning Subcommittee a venue for coordination of regional actions. We will begin discussions to develop more specifically related goals in the PAG 208 Plan. Changes may be incorporated during an administrative update, anticipated to take place annually. This will provide the time and opportunity for PAG and partners to discuss the appropriate ways to achieve this goal.

Table 18. Public Comments and PAG Responses ("Responsiveness Summary")

Name, Title, Membership	Document Name and Page No.	Public Comments	PAG Response
		contaminants), as well as the International Boundary and Water Commission (IBWC) and both the **Arizona State Land Department and the federal Department of the Interior** is not likely to result in uniformly good public water policy for our communities and environment into the future. As an example, the **IBWC's 2016 Binational Study of the Transboundary San Pedro Aquifer** (Callegary, J.B., Minjárez Sosa, I., Tapia Villaseñor, E.M., dos Santos, P., Monreal Saavedra, R., Grijalva Noriega, F.J., Huth, A.K., Gray, F., Scott, C.A., Megdal, S.B., Oroz Ramos, L.A., Rangel Medina, M., Leenhouts, J.M., 2016,: International Boundary and Water Commission) (https://www.ibwc.gov/Files/San_Pedro_Binational_Report_En_01122017.pdf) specifically **recommended: "(m)onitoring of groundwater quality on a binational level using uniform standards and methods is important** for several scientific and practical reasons. The historical data and studies of this type improve understanding and explain mixing and trends in water from different sources such as sources of baseflow in the San Pedro River (Gungle et al., In Review). A **more extensive database** would be especially useful in areas such as the San Pedro Basin, where changes in land uses or human activities, for example mining, can alter the quality of water in the	

Table 18. Public Comments and PAG Responses ("Responsiveness Summary")

Name, Title, Membership	Document Name and Page No.	Public Comments	PAG Response
		region. Studies using stable isotopes in conjunction with other water quality parameters would be very useful for achieving a better understanding of aquifer recharge, groundwater flow directions, the mixture of water from different sources, and long term water availability." (p. 135); and "(c)urrently binational data standards do not exist for the review and storage of all the different data types noted in this report. Lack of standards is also the case within each country for certain data types. The development of binational data standards related to the review and storage of data would help with ease of data searching, integration, and comparison." (p. 137). Similar standardization and groundwater and surface water monitoring across the entirety of the San Pedro and Santa Cruz watersheds, including the Altar and Avra Valley subwatersheds and the portions of both watersheds in Mexico would provide a much more powerful means of accomplishing our collective objectives in managing water resources into the future. I recommend that the **PAG adopt the goal of taking a leadership position** in furthering these One Water objectives well beyond the jurisdictional limits of Pima County.	

E: Records of Recommendation for Plan Approval by PAG Management Committee

Records of the recommendation made by PAG Management Committee on January 15, 2020 to approve the draft 208 Plan are shown in Figure 24, Figure 25 and Figure 26.

Figure 24. Agenda for the January 15, 2020 PAG Management Committee Meeting

PAG Management Committee Meeting

8:30 a.m., Wednesday, Jan. 15, 2020

Pima Association of Governments
1 E. Broadway Blvd., Suite 401, Tucson
Santa Rita Conference Room

AGENDA*

1. **Call to Order**

2. **Approval of Consent Agenda**

   Staff is available to report on any of these items upon request.

   a. **Sept. 11, 2019, Meeting Summary**

      Action: Approval of the Meeting Summary.

   b. **Transportation Improvement Program (TIP) Amendment #1 to the FY 2020-24 TIP**

      Recommended Action: The Management Committee will be asked to recommend approval of TIP Amendment #1, Item A to the FY 2020-24 TIP.

   c. **PAG Public Transit Human Services Coordinated Transportation Plan Update**

      Recommended Action: The Management Committee will be asked to recommend approval of the updated Public Transit Human Services Coordinated Transportation Plan, including 5310 grant funding recommendations.

   d. **Approval of 2020 PAG Areawide Water Quality Management Plan (208 Plan)**

      Recommended Action: The Management Committee will be asked to recommend approval of the proposed 2020 PAG Areawide Water Quality Management Plan (208 Plan).

Pima Association of Governments 1 E. Broadway Blvd., Suite 401, Tucson, AZ 85701 (520) 792-1093 *[tel]* (520) 620-6981 *[fax]* www.PAGregion.com *[web]*

Figure 24. Agenda for the January 15, 2020 PAG Management Committee Meeting *(cont'd)*

e. Adoption of ADOT's Statewide Transportation Safety Projections 2020

Recommended Action: The Management Committee will be asked to recommend adoption of ADOT's transportation safety projections.

f. FY 2020-21 Social Services Block Grant Service Category Funding Recommendations

Recommended Action: The Management Committee will be asked to review and approve the FY 2020-21 funding recommendations to Arizona's Department of Economic Security (DES) for inclusion in the State of Arizona Social Services Block Grant (SSBG) Plan.

g. Highway User Revenue Fund (HURF) Report

h. Environmental Planning Advisory Committee (EPAC) Top Environmental Issues List 2020

3. Presentation on the 2045 Regional Mobility and Accessibility Plan (RMAP) Update

PAG staff will provide an overview on the 2045 Regional Mobility and Accessibility Plan (RMAP) Update.

4. Presentation on the Long-Range Regional Transit Plan (LRRTP)

PAG staff will provide an overview of the plan development. The LRRTP is scheduled for approval by the Regional Council in January 2020.

Recommended Action: The Management Committee will be asked to recommend approval of the Long-Range Regional Transit Plan (LRRTP).

5. Adjournment

***Action May be Taken on Any Item**

The Meeting Room is accessible to persons with handicaps. In compliance with the Americans with Disabilities Act (ADA), those requiring special assistance, such as large-type face print, sign language or other reasonable accommodations, may request those through the administrative offices at: 1 E. Broadway Blvd., Suite 401, Tucson, Arizona 85701 or by calling (520) 792-1093, at least twenty-four hours before the meeting. Si necesita ayuda con traducción, llame por favor al 792-1093 y comuníquese con Nathan Barrett.

Page 2 of 2

Figure 25. Memo for the January 15, 2020 PAG Management Committee Meeting

SUBJECT: Approval of the 2020 PAG Areawide Water Quality Management Plan (208 Plan)

Meeting	Meeting Date	Agenda Category	Agenda Item #
Management Committee	Jan. 15, 2020	Consent Action	2d

REQUESTED ACTION/SUGGESTED MOTION

The Management Committee will be asked to recommend approval of the proposed 2020 PAG Areawide Water Quality Management Plan (208 Plan).

ASSOCIATED OWP WORK ELEMENT/GOAL

OWP Work Element 11 – Regional Integrated Watershed Planning
Goal 1: Fulfill Mandatory Designated Watershed Planning Responsibilities

SUMMARY

Legal notice has been published for the PAG Areawide Water Quality Management Plan (208 Plan) public hearing. The document has been made available for the public on the PAG website as of Dec. 13, 2019. The Management Committee is being asked to recommend approval of the 208 Plan. The public comment review ends with a hearing held at the PAG Regional Council meeting on Jan. 30, 2020.

Background and Regulations

As the Designated Planning Agency (DPA) for water quality in Pima County since 1974, PAG coordinates watershed planning for the prevention of water pollution in accordance with Section 208 of the Clean Water Act. The purpose is to protect important water bodies for human and environmental health. Federal regulation 40 C.F.R. § 130.6 states that pollutant discharges must be consistent with the conditions described in Areawide Water Quality Management Plans (208 Plans).

The 208 Plan must be updated to reflect current water quality conditions, including those from wastewater, solid waste and stormwater, to protect surface and groundwater quality. Updates are required to maintain a minimum 20-year planning horizon and to document progress on past recommendations. In addition, PAG and ADEQ set a goal for this update to streamline the 208 Plan document and procedures. The 208 planning processes provide a means for stakeholders to engage in regional environmental decision making and help facilitate coordination among jurisdictions. The process is intended to assure EPA and ADEQ that regional coordination and agreements are in place prior to ADEQ approval of Arizona Pollutant Discharge Elimination System permits and Aquifer Protection Permits.

Timeline and Participation Process

- In 2017, the Regional Council initiated the update to the PAG 208 Plan.

Packet Material Prepared: January 8, 2020

***Figure 25. Memo for the January 15, 2020 PAG Management Committee Meeting** (cont'd)*

- WestLand Resources provided data, research and a consultant perspective on Consistency Reviews. Other DPAs within Arizona and ADEQ have been consulted throughout the process.
- Designated Management Agencies (DMAs) – Town of Marana, Pima County and Town of Sahuarita – responsible for assuring treatment of wastes, have been involved at each stage of development. The governing bodies of each DMA have signed maps of their current DMA boundaries.
- The Watershed Planning Subcommittee (WPS) and Environmental Planning Advisory Committee (EPAC) have been provided several presentations about state regulatory updates and local programs to address water conditions that have informed the plan update. The first draft of the plan was released in Feb. 2019 for formal feedback.
- Dec. 13, 2019, 45-day legal notice of the public hearing
- Dec. 31, 2019, Document is available for public review 30 days before the meeting
- Jan. 30, 2020, Public comment review ends. Hold public hearing at the PAG Regional Council meeting, 12:00 p.m. Following the public hearing, the Regional Council will be asked to approve the proposed PAG 208 Plan.
- If approved by PAG's Regional Council, the 208 Plan will be sent to ADEQ and EPA for formal approvals.

The draft 208 Plan and comment forms are available on the WPS webpage listed below. A hard copy may be viewed at the PAG offices. Written responses on Comment Form may be mailed to the PAG offices or emailed to 208info@PAGregion.com.

PRIOR BOARD AND/OR COMMITTEE ACTION

Regional Council and Management Committee

- **03-23-2017:** Initiation of the 208 Plan update and consultant contract approved
- **05-23-2019**: Summary of proposed changes provided to Management Committee in a presentation and to Regional Council in a memo
- **12-5-2019**: Regional Council presentation and reading

WPS/EPAC Joint Meetings

- **10-18-19:** Presented Draft Plan for approval to move forward to Public Hearing

FINANCIAL CONSIDERATIONS

The proposal includes an increased fee for Amendments to the 208 Plan for new or changing private facilities from $3,500 to $8,000 to allow cost recovery. Fees have not increased since 1984. There is no proposed increase of fee for public facilities' Coordination Process for new or significant changes. Consistency Reviews for all facilities are proposed to increase from no fee to $1,000, which may be applied toward an Amendment or Coordination Process if those steps are deemed necessary.

Packet Material Prepared: January 8, 2020

***Figure 25. Memo for the January 15, 2020 PAG Management Committee Meeting** (cont'd)*

TECHNICAL, POLICY, LEGAL OR OTHER CONSIDERATIONS

Proposed Changes

Key changes in the PAG 208 Plan:

- Shorter, clarified procedures, with fewer procedure triggers, especially for regional public systems
- Proposed increases to fees for all Consistency Reviews and for private facility Amendments to allow true cost recovery, in line with the average fees collected by other DPAs. Fees have not increased since 1984
- Updated water quality data
- An action plan to address past goals; goals updated based on local progress and alignment with local issues and ADEQ priorities
- Incorporation of Amendments since 2006 and updated wastewater service information
- Allowance for administrative updates for content in Appendices
- Modernized data inventories to ease applications and consistency reviews
- Updated population and flow projections
- New appeal process
- New designation type available for private companies to have DMA-like responsibilities, called Wastewater Management Units, using models from other DPA 208 Plans
- DPA coordination across county lines clarified

Feedback Received

Since the draft was last shared with Management Committee, feedback from WPS, EPAC and interested parties was incorporated into the second draft released in September 2019, and the chapters were reorganized for better flow. Together, the EPAC and WPS meeting notification mailing lists, including members and interested parties, consist of approximately 300 recipients. Approximately 70 comments were received from 24 advisors representing 17 entities, 12 of which are EPAC or WPS members. In general, the feedback on content and structure were positive. There was support for streamlining procedures and recommendations to maintain local coordination points and public notice/hearing for public facilities. Clarification was provided for some procedures. Private facilities provided updates. Jurisdictions, organizations and agencies provided additional program summaries, water quality data, and support and recommendations for goals and alignment with ADEQ funding priorities. A more detailed summary of the committees' and interested parties' feedback and how it was utilized is available on the WPS webpage.

These aspects of the PAG 208 Plan are unchanged:

- No other policies were added or changed.
- No treatment plants were modified to a degree that would have triggered an Amendment during the update of this PAG 208 Plan.

Packet Material Prepared: January 8, 2020

Figure 25. Memo for the January 15, 2020 PAG Management Committee Meeting *(cont'd)*

ATTACHED ADDITIONAL BACKUP INFORMATION
The 2019 Draft PAG 208 Plan, detailed list of changes and documentation of the participation process can be found on PAG's Watershed Planning Subcommittee webpage: http://www.pagnet.org/Default.aspx?tabid=322

Staff Contact/Phone	Farhad Moghimi, 792-1093, ext. 4420 Mead Mier, 792-1093, ext. 4464 Dave Atler, 792-1093, ext. 4443

Packet Material Prepared: January 8, 2020

Figure 26. Legal Action Report January 15, 2020 PAG Management Committee Meeting

PAG Management Committee Meeting

Legal Actions of Wed., Jan. 15, 2020, Meeting

Pima Association of Governments
1 E. Broadway Blvd., Suite 401, Tucson
Santa Rita Conference Room

AGENDA

1. **Call to Order**

2. **Approval of Consent Agenda**

   A roll call vote was taken and Consent Agenda, items a – h, were approved.

   a. **Sept. 11, 2019, Meeting Summary**

      Action: The Management Committee approved the Meeting Summary of Sept. 11, 2019.

   b. **Transportation Improvement Program (TIP) Amendment #1 to the FY 2020-24 TIP**

      Recommended Action: The Management Committee recommended approval of TIP Amendment #1, Item A to the FY 2020-24 TIP.

   c. **PAG Public Transit Human Services Coordinated Transportation Plan Update**

      Recommended Action: The Management Committee recommended approval of the updated Public Transit Human Services Coordinated Transportation Plan, including 5310 grant funding recommendations.

   d. **Approval of 2020 PAG Areawide Water Quality Management Plan (208 Plan)**

      Recommended Action: The Management Committee recommended approval of the proposed 2020 PAG Areawide Water Quality Management Plan (208 Plan).

   e. **Adoption of ADOT's Statewide Transportation Safety Projections 2020**

      Recommended Action: The Management Committee recommend adoption of ADOT's transportation safety projections.

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Figure 26. Legal Action Report January 15, 2020 PAG Management Committee Meeting *(cont'd)*

f. FY 2020-21 Social Services Block Grant Service Category Funding Recommendations

Recommended Action: The Management Committee recommended approval of the FY 2020-21 funding recommendations to the Arizona Department of Economic Security (DES) for inclusion in the State of Arizona Social Services Block Grant (SSBG) Plan.

g. Highway User Revenue Fund (HURF) Report

This was an information item.

h. Environmental Planning Advisory Committee (EPAC) Top Environmental Issues List 2020

This was an information item.

3. Presentation on the 2045 Regional Mobility and Accessibility Plan (RMAP) Update

Jeanette DeRenne, PAG, provided an overview on the 2045 Regional Mobility and Accessibility Plan (RMAP) Update.

This was an information item.

4. Presentation on the Long-Range Regional Transit Plan (LRRTP)

James McGinnis, PAG, provided an overview of the plan development and recommendations. The LRRTP is scheduled for approval by the Regional Council in January 2020.

Recommended Action: The Management Committee recommended approval of the Long-Range Regional Transit Plan (LRRTP).

5. Adjournment

The meeting adjourned at 8:55 a.m.

Page 2 of 2

F: Records of Plan Adoption by PAG Regional Council

Records of 208 Plan approval by PAG Regional Council on January 30, 2020 are shown in Figure 27, Figure 28 and Figure 29.

Figure 27. Agenda for the January 30, 2020 PAG Regional Council Meeting

PAG Regional Council Meeting

At or after 12:00 p.m., Thursday, Jan. 30, 2020

Pima Association of Governments
1 E. Broadway Blvd., Suite 401, Tucson
Santa Rita Conference Room

Notice is hereby given to the public and to the Council's members, that the Regional Council of Pima Association of Governments will have a meeting at the above stated time and location. This meeting is open to the public. The following is an agenda of the matters to be considered, discussed and acted upon. The sequence of the agenda may be changed by order of the Council. Action may be taken on any item.

The Council may vote to go into Executive Session on any agenda item, pursuant to A.R.S 38-431.03 (A) (3), for discussion and consultation for legal advice with its attorney on any matter(s) as set forth on the agenda.

AGENDA

1. **Call to Order and Roll Call**

2. **Pledge of Allegiance**

3. **Election of Officers**

   Article VII, Section 1, of the bylaws of Pima Association of Governments (PAG) and Section VIII of the Articles of Incorporation state that the following officers shall be elected at the January Annual Meeting: Chair, Vice Chair and Treasurer. Therefore, it is necessary to elect these officers to serve until January 2021.

   Action: That the Regional Council of Pima Association of Governments elect Town of Marana Mayor Ed Honea as PAG's Chair, Pima County Supervisor Ramón Valadez as PAG's Vice Chair and City of Tucson Mayor Regina Romero as PAG's Treasurer until January 2021.

4. **Call to the Audience**

   Speakers are limited to a three-minute oral presentation and may submit written comments of any length for the Council's files. Call to the Audience is limited to 30 minutes. Those wishing to address the Council should complete a Citizen Information Card prior to the meeting being called to order to specify the topic to be addressed. Individual Council Members may respond to criticism made by those individuals who have addressed the Council and may ask staff to review a matter and place it on a future agenda. However, the Council will not discuss or take action on a matter raised during a Call to the Audience that is not already on the agenda.

5. **Approval of Consent Agenda**

   Staff is available to report on any of these items upon request.

   a. **Approval of the Dec. 5, 2019, Meeting Minutes**

      Action: The Regional Council will be asked to approve the Dec. 5, 2019, Meeting Minutes.

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Figure 27. Agenda for the January 30, 2020 PAG Regional Council Meeting *(cont'd)*

b. Transportation Improvement Program (TIP) Amendment #1 to the FY 2020-24 TIP

Recommended Action: The Regional Council will be asked to approve TIP Amendment #1 to the FY 2020-24 TIP.

c. PAG Public Transit Human Services Coordinated Transportation Plan Update

Recommended Action: The Regional Council will be asked to approve the updated Public Transit Human Services Coordinated Transportation Plan, including 5310 grant funding recommendations.

d. Adoption of ADOT's Statewide Transportation Safety Projections 2020

Recommended Action: The Regional Council will be asked to adopt ADOT's transportation safety projections.

e. FY 2020-21 Social Services Block Grant Service Category Funding Recommendations Update

f. Highway User Revenue Fund (HURF) Report

g. Environmental Planning Advisory Committee (EPAC) Top Environmental Issues List 2020

h. Program Highlights Report

i. Contracts and Agreements Report

6. Public Hearing on the proposed Long-Range Regional Transit Plan (LRRTP)

PAG staff will provide an overview of the plan development and requested action. Public comment will be heard on this item prior to Regional Council action.

a. Public Hearing: Members of the audience will be given the opportunity to address the Regional Council on this item.

b. Discussion/Approval: The Regional Council may wish to discuss this item prior to taking action.

Recommended Action: The Regional Council will be asked to approve the Long-Range Regional Transit Plan (LRRTP).

Page 2 of 3

Figure 27. Agenda for the January 30, 2020 PAG Regional Council Meeting *(cont'd)*

7. Public Hearing on the proposed 2020 PAG Areawide Water Quality Management Plan (208 Plan)

PAG staff will provide an update on the Areawide Water Quality Management Plan (208 Plan) and requested action. Public comment will be heard on this item prior to Regional Council action.

a. **Public Hearing:** Members of the audience will be given the opportunity to address the Regional Council on this item.

b. **Discussion/Approval:** The Regional Council may wish to discuss this item prior to taking action.

Recommended Action: The Regional Council will be asked to approve the Areawide Water Quality Management Plan (208 Plan).

8. Presentation on the Regional Mobility and Accessibility Plan (RMAP) Update

PAG staff will provide an overview on the Regional Mobility and Accessibility Plan (RMAP) Update.

9. Adjournment

Two Council Briefing Packets containing material related to the Regional Council Meeting are available for public review the day before and the day of the Meeting during office hours at: 1 E. Broadway Blvd., Suite 401, Tucson, Arizona 85701 or by calling (520) 792-1093. The Briefing Packets also are available for public review at the Meeting.

The Meeting Room is accessible to persons with disabilities. In compliance with the Americans with Disabilities Act (ADA), those requiring special assistance, such as large-type face print, sign language or other reasonable accommodations, may request those through the administrative offices at: 1 E. Broadway Blvd., Suite 401, Tucson, Arizona 85701 or call (520) 792-1093, at least twenty-four hours before the meeting.

Si necesita ayuda con traducción, llame por favor al 792-1093 y comuníquese con Nathan Barrett.

Page 3 of 3

Figure 28. Memo for the January 30, 2020 PAG Regional Council Meeting

Communication #: 3605

SUBJECT: Public Hearing on the Proposed Areawide Water Quality Management Plan (208 Plan)

Meeting	Meeting Date	Agenda Category	Agenda Item #
Regional Council	January 30, 2020	Public Hearing Discussion/Action	7

REQUESTED ACTION/SUGGESTED MOTION

Following a public hearing, the Regional Council will be asked to approve the Areawide Water Quality Management Plan (208 Plan).

ASSOCIATED OWP WORK ELEMENT/GOAL

OWP Work Element 11 – Regional Integrated Watershed Planning
Goal 1: Fulfill Mandatory Designated Watershed Planning Responsibilities

SUMMARY

Legal notice has been published for the PAG Areawide Water Quality Management Plan (208 Plan) public hearing. The document has been made available for the public on the PAG website as of Dec. 13, 2019. The Management Committee is being asked to recommend approval of the 208 Plan. The public comment review ends with a hearing held at the PAG Regional Council meeting on Jan. 30, 2020.

Background and Regulations

As the Designated Planning Agency (DPA) for water quality in Pima County since 1974, PAG coordinates watershed planning for the prevention of water pollution in accordance with Section 208 of the Clean Water Act. The purpose is to protect important water bodies for human and environmental health. Federal regulation 40 C.F.R. § 130.6 states that pollutant discharges must be consistent with the conditions described in Areawide Water Quality Management Plans (208 Plans).

The 208 Plan must be updated to reflect current water quality conditions, including those from wastewater, solid waste and stormwater, to protect surface and groundwater quality. Updates are required to maintain a minimum 20-year planning horizon and to document progress on past recommendations. In addition, PAG and ADEQ set a goal for this update to streamline the 208 Plan document and procedures. The 208 planning processes provide a means for stakeholders to engage in regional environmental decision making and help facilitate coordination among jurisdictions. The process is intended to assure EPA and ADEQ that regional coordination and agreements are in place prior to ADEQ approval of Arizona Pollutant Discharge Elimination System permits and Aquifer Protection Permits.

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Packet Material Prepared: Jan. 23, 2020

Figure 28. Memo for the January 30, 2020 PAG Regional Council Meeting *(cont'd)*

Timeline and Participation Process

- In 2017, the Regional Council initiated the update to the PAG 208 Plan.
- WestLand Resources provided data, research and a consultant perspective on Consistency Reviews. Other DPAs within Arizona and ADEQ have been consulted throughout the process.
- Designated Management Agencies (DMAs) – Town of Marana, Pima County and Town of Sahuarita – responsible for assuring treatment of wastes, have been involved at each stage of development. The governing bodies of each DMA have signed maps of their current DMA boundaries.
- The Watershed Planning Subcommittee (WPS) and Environmental Planning Advisory Committee (EPAC) have been provided several presentations about state regulatory updates and local programs to address water conditions that have informed the plan update. The first draft of the plan was released in February 2019 for formal feedback.
- Dec. 13, 2019 - 45-day legal notice of the public hearing
- Dec. 31, 2019 - Document is available for public review 30 days before the meeting
- Jan. 30, 2020, Public comment review ends. Hold public hearing at the PAG Regional Council meeting at 12:00 p.m. Following the public hearing, the Regional Council will be asked to approve the proposed PAG 208 Plan.
- If approved by PAG's Regional Council, the 208 Plan will be sent to ADEQ and EPA for formal approvals.

PRIOR BOARD AND/OR COMMITTEE ACTION

Regional Council and Management Committee

- **03-23-2017**: Initiation of the 208 Plan update and consultant contract approved
- **05-23-2019**: Summary of proposed changes provided to Management Committee in a presentation and to Regional Council in a memo
- **12-5-2019**: Regional Council presentation and reading
- **01-15-2020**: The Management Committee reviewed and recommended approval

WPS/EPAC Joint Meetings

- **10-18-19:** Presented Draft Plan for approval to move forward to Public Hearing

FINANCIAL CONSIDERATIONS

The proposal includes an increased fee for Amendments to the 208 Plan for new or changing private facilities from $3,500 to $8,000 to allow cost recovery. Fees have not increased since 1984. There is no proposed increase of fee for public facilities' Coordination Process for new or significant changes. Consistency Reviews for all

facilities are proposed to increase from no fee to $1,000, which may be applied toward an Amendment or Coordination Process if those steps are deemed necessary.

Packet Material Prepared: Jan. 23, 2020

Figure 28. Memo for the January 30, 2020 PAG Regional Council Meeting *(cont'd)*

TECHNICAL, POLICY, LEGAL OR OTHER CONSIDERATIONS

Proposed Changes

Key changes in the PAG 208 Plan:

- Shorter, clarified procedures, with fewer procedure triggers, especially for regional public systems
- Proposed increases to fees for all Consistency Reviews and for private facility Amendments to allow true cost recovery, in line with the average fees collected by other DPAs. Fees have not increased since 1984
- Updated water quality data
- An action plan to address past goals; goals updated based on local progress and alignment with local issues and ADEQ priorities
- Incorporation of Amendments since 2006 and updated wastewater service information
- Allowance for administrative updates for content in Appendices
- Modernized data inventories to ease applications and consistency reviews
- Updated population and flow projections
- New appeal process
- New designation type available for private companies to have DMA-like responsibilities, called Wastewater Management Units, using models from other DPA 208 Plans
- DPA coordination across county lines clarified

Feedback Received

Since the draft was last shared with Management Committee, feedback from WPS, EPAC and interested parties was incorporated into the second draft released in September 2019, and the chapters were reorganized for better flow. Together, the EPAC and WPS meeting notification mailing lists, including members and interested parties, consist of approximately 300 recipients. Approximately 70 comments were received from 24 advisers representing 17 entities, 12 of which are EPAC or WPS members. In general, the feedback on content and structure were positive. There was support for streamlining procedures and recommendations to maintain local coordination points and public notice/hearing for public facilities. Clarification was provided for some procedures. Private facilities provided updates. Jurisdictions, organizations and agencies provided additional program summaries, water quality data, and support and recommendations for goals and alignment with ADEQ funding priorities. A more detailed summary of the committees' and interested parties' feedback and how it was used is available on the WPS webpage.

These aspects of the PAG 208 Plan are unchanged:

- No other policies were added or changed.
- No treatment plants were modified to a degree that would have triggered an Amendment during the update of this PAG 208 Plan.

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Packet Material Prepared: Jan. 23, 2020

Figure 28. Memo for the January 30, 2020 PAG Regional Council Meeting *(cont'd)*

ATTACHED ADDITIONAL BACKUP INFORMATION
The 2019 Draft PAG 208 Plan, detailed list of changes and documentation of the participation process can be found on PAG's Watershed Planning Subcommittee webpage: http://www.pagnet.org/Default.aspx?tabid=322

Staff Contact/Phone	Farhad Moghimi, 792-1093, ext. 4420 Mead Mier, 792-1093, ext. 4464 Dave Atler, 792-1093, ext. 4443

Packet Material Prepared: Jan. 23, 2020

Figure 29. Legal Action Report for the January 30, 2020 PAG Regional Council Meeting

PAG Regional Council Meeting

Legal Action Items of 12:00 p.m., Thursday, Jan. 30, 2020

Pima Association of Governments
1 E. Broadway Blvd., Suite 401, Tucson
Santa Rita Conference Room

1. **Call to Order and Roll Call**

   The meeting was called to order at 12:00 p.m. and roll call of members was taken.

2. **Pledge of Allegiance**

   The pledge was performed by those in attendance.

3. **Election of Officers**

   Action: The Regional Council of Pima Association of Governments elected Town of Marana Mayor Ed Honea as PAG's Chair, Pima County Supervisor Ramón Valadez as PAG's Vice Chair and Town of Sahuarita Mayor Tom Murphy as PAG's Treasurer until January 2021.

4. **Call to the Audience**

   None.

5. **Approval of Consent Agenda**

   a. **Approval of the Dec. 5, 2019, Meeting Minutes**

      The Regional Council approved the Dec. 5, 2019, Meeting Minutes.

   b. **Transportation Improvement Program (TIP) Amendment #1 to the FY 2020-24 TIP**

      The Regional Council approved TIP Amendment #1 to the FY 2020-24 TIP.

      The Regional Council discussed the TIP Amendment schedule and the fact that TIP amendments are agendized at three different public meetings to accommodate public review.

   c. **PAG Public Transit Human Services Coordinated Transportation Plan Update**

      The Regional Council approved the updated Public Transit Human Services Coordinated Transportation Plan, including 5310 grant funding recommendations.

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Figure 29. Legal Action Report for the January 30, 2020 PAG Regional Council Meeting *(cont'd)*

The Regional Council discussed the Transit Working Group's role in the plan update and the 5311 funding relevance in the plan.

d. Adoption of ADOT's Statewide Transportation Safety Projections 2020

The Regional Council will be asked to adopt ADOT's transportation safety projections.

e. FY 2020-21 Social Services Block Grant Service Category Funding Recommendations Update

This was an information item.

f. Highway User Revenue Fund (HURF) Report

This was an information item.

g. Environmental Planning Advisory Committee (EPAC) Top Environmental Issues List 2020

This was an information item.

h. Program Highlights Report

This was an information item.

i. Contracts and Agreements Report

This was an information item.

6. Public Hearing on the proposed Long-Range Regional Transit Plan (LRRTP)

James McGinnis, PAG, provided an overview of the plan development and requested action. Public comment will be heard on this item prior to Regional Council action.

a. Public Hearing:

12:04 p.m.: Mayor Honea opened the Public Hearing and asked if any members of the public wished to address the Regional Council.

Speakers included:
- Camille Kershner, Tucson, AZ

12:19 p.m.: Mayor Honea closed the Public Hearing.

b. Discussion/Approval:

The Regional Council discussed if other written comments were received regarding this item.

The Regional Council approved the Long-Range Regional Transit Plan (LRRTP).

Page 2 of 3

Figure 29. Legal Action Report for the January 30, 2020 PAG Regional Council Meeting *(cont'd)*

7. Public Hearing on the proposed 2020 PAG Areawide Water Quality Management Plan (208 Plan)

Mead Mier, PAG, provided an update on the Areawide Water Quality Management Plan (208 Plan) and requested action. Public comment will be heard on this item prior to Regional Council action.

a. Public Hearing:

12:21 p.m.: Mayor Honea opened the Public Hearing and asked if any members of the public wished to address the Regional Council.

12:36 p.m.: Mayor Honea closed the Public Hearing. No comments were received.

b. Discussion/Approval:

The Regional Council discussed water quality standards and priorities.

The Regional Council approved the Areawide Water Quality Management Plan (208 Plan).

8. Presentation on the Regional Mobility and Accessibility Plan (RMAP) Update

Jeanette DeRenne provided an update on the 2045 Regional Mobility and Accessibility Plan (RMAP).

9. Adjournment

The meeting was adjourned at 12:55 p.m.

Page 3 of 3

G: Summary of Submission to and Approval by ADEQ

(to be added)

Cover Letter

Agenda

Minutes

H: Summary of Submission to and Approval by EPA

(to be added)

Submission Memo

Determination Letter