

Arizona Department of Water Resources

"Protecting and enhancing Arizona's water supplies for current and future generations."



COMMUNITY WATER SYSTEMS SYSTEM WATER PLAN FORM

Introduction CWS Information Water Supply ... Drought Prepar... Water Conserv... Certify and Su...

PART 1 - Water Supply Plan

See Pages 7-10 in the [Water Plan Guidance](#) document for assistance.

The **Water Supply Plan** must evaluate the water supply needs in the service area and propose a strategy to meet identified needs. Therefore, the **Water Supply Plan** will provide a good foundation for developing the **Drought Preparedness Plan** (Part 2) and the **Water Conservation Plan** (Part 3).

Does your system have a Designation of Assured or Adequate Water Supply?

Yes No

If yes, you may skip this section (A.R.S. § 45-342) and continue with Part 2 - Drought Preparedness Plan.

If you're unsure, check this [List of Designated Providers](#) of water providers with a Designation of Assured or Adequate Water Supply or visit the ADWR website at <https://new.azwater.gov/aaws> to view the current list.

Please select how you will report water measurements in this form. Use either gallons or acre-feet, but not both.

Gallons Acre-Feet

Note: To convert acre-feet to gallons, multiply by 325,851. To convert gallons to acre-feet, divide by 325,851.

A. Service Area Lands

1. City/town where system is located:

Patagonia

2. County where system is located:

Santa Cruz

3. Township/range/section where your system is located (if known):

Township Range Section

4. Approximate square miles of service area:

1.3

5. Average residential lot size:

- Less than 10,000 sq ft
- 10,000 sq ft - 1 acre (43,560 sq ft)
- 1 - 5 acres
- 5.1 -10 acres
- More than 10 acres

6. Describe the area you serve. The map or description must describe or show the **boundaries of your service area, transmission and distribution lines. If you are a large system (serve more than 1,850 people), you must submit a service area map** unless you have already submitted map pursuant to A.R.S. § 45-498. (The map may also show streets, town limits, landmarks, etc.) For systems providing a map, please email your submission to ecws@azwater.gov and provide the community water system ID.

Patagonia Water Dept serves the Citizens of Patagonia within the 1.3 square mile Town Limits.

7. Type of area served (consider majority of area served). Please check all that apply:

- Residential Single Family
- Mixed Uses (Residential and Non-residential)
- Commercial
- Mobile Home Park
- Institutional (military base, school, or correctional facility)
- Homeowner's Association or Co-operative
- Other (If other, please describe below.)

8. Typical or predominant landscaping type in residential areas:

- Low water use landscaping
- Turf
- Not landscaped/not irrigated (dirt or natural desert)
- No outdoor water use (e.g. mobile homes with no yards)
- Other (If other, describe below.)

B. Interconnections

(Note: If you are located within an Active Management Area (AMA), interconnect agreements may be reviewed by the director of the ADWR pursuant to substantive policy statement GW37 as authorized by A.R.S. §45-492(C).)

1. Do you have an interconnection with another water system?

- Yes
- No

2. If yes, list the names and description of the interconnection system(s) :

[Add New Record](#)[Edit](#)[Help](#)[Logout](#)

Interconnection System

Description

[Delete](#)

No records to display.

[Add New Record](#)[Edit](#)

C. Sources of Supply

1. Please check all sources of water supply used to meet demand in your system:

 Groundwater Non-CAP Colorado River Water CAP CAP (Stored) Reclaimed Water Other (please describe):

2. If you checked groundwater above, do you measure water levels in your wells?

 Yes No

3. For each well, provide the well registration number and the most recent water level measurement and date measured (if available). (Note: Do not include water levels at well sites that are sources of supply for hard rock mining or metallurgical processing.)

[Add New Record](#)[Edit](#)

ADWR Well Registry Number 55-

Depth To Water

Date Measured

[Delete](#)

605595

27

7/13/2022 12:00:00 AM

605596

27

7/13/2022 12:00:00 AM

[Add New Record](#)[Edit](#)

D. Water Sold and Purchased

1. Did you sell water to another water system during the past five years?

 Yes No

If yes, list the quantities and systems. Please use the same units (gallons or acre-feet) that you selected previously.

[Add New Record](#)[Edit](#)

System

Quantity

[Delete](#)

No records to display.

[Add New Record](#)[Edit](#)

2. Did you purchase water from another water system during the past five years?

 Yes No

If yes list the systems and quantities.

[Add New Record](#)[Edit](#)

System

Quantity

Delete

No records to display.

[Add New Record](#)[Edit](#)**E. System Production/Demand**

1. How much water did you use from the sources below? If your system is not metered, please estimate. Please use the same units (gallons or acre-feet) that you selected previously.

Will the quantities entered below be mostly metered or mostly estimated?

Mostly Metered Mostly Estimated

Table 1 Click "edit" to begin.

[Edit](#)

Year	Month	Groundwater	Colorado River	CAP	CAP (Recovered)	Other Surface Water	Reclaimed Water	Total
YEAR: 2017								
2017	Jan	2648100						2648100
2017	Feb	2171500						2171500
2017	Mar	2953000						2953000
2017	Apr	3469200						3469200
2017	May	3801700						3801700
2017	Jun	4409100						4409100
2017	Jul	3103000						3103000
2017	Aug	2668100						2668100
2017	Sep	3482300						3482300
2017	Oct	3580400						3580400
2017	Nov	3027000						3027000
2017	Dec	2626700						2626700
								37940100.00
YEAR: 2018								
2018	Jan	2740200						2740200
2018	Feb	2356400						2356400
2018	Mar	2986000						2986000
2018	Apr	3492500						3492500
2018	May	4362200						4362200
2018	Jun	4626000						4626000
2018	Jul	3152200						3152200
								181833300.00

[Edit](#)

[Edit](#)

Year	Month	Groundwater	Colorado River	CAP	CAP (Recovered)	Other Surface Water	Reclaimed Water	Total
2018	Aug	2704000						2704000
2018	Sep	3014700						3014700
2018	Oct	2292700						2292700
2018	Nov	2387300						2387300
2018	Dec	2382200						2382200
								36496400.00

YEAR: 2019

2019	Jan	2224400						2224400
2019	Feb	1929200						1929200
2019	Mar	2581300						2581300
2019	Apr	3277300						3277300
2019	May	3844900						3844900
2019	Jun	4000200						4000200
2019	Jul	3356200						3356200
2019	Aug	2719800						2719800
2019	Sep	2432800						2432800
2019	Oct	2886300						2886300
2019	Nov	2136700						2136700
2019	Dec	2090100						2090100
								33479200.00

YEAR: 2020

2020	Jan	2217500						2217500
2020	Feb	2260900						2260900
2020	Mar	2120500						2120500
2020	Apr	2786500						2786500
2020	May	3518400						3518400
2020	Jun	3709500						3709500
2020	Jul	3707700						3707700
2020	Aug	3244800						3244800
2020	Sep	3292600						3292600
2020	Oct	3593000						3593000
2020	Nov	2949600						2949600
2020	Dec	2774200						2774200
								36175200.00

YEAR: 2021

								181833300.00
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[Edit](#)

[Edit](#)

Year	Month	Groundwater	Colorado River	CAP	CAP (Recovered)	Other Surface Water	Reclaimed Water	Total
2021	Jan	2605900						2605900
2021	Feb	2369900						2369900
2021	Mar	3216200						3216200
2021	Apr	3865400						3865400
2021	May	4259700						4259700
2021	Jun	4771400						4771400
2021	Jul	2832900						2832900
2021	Aug	2733200						2733200
2021	Sep	2856900						2856900
2021	Oct	3079900						3079900
2021	Nov	2684600						2684600
2021	Dec	2466400						2466400
								37742400.00
								181833300.00

[Edit](#)

2. Determine the past five years of seasonal peak/maximum demand in order to calculate future projection demands in Section F below. For systems that use meters to measure groundwater withdrawal and diversions, provide data for the average daily demand, peak day demand, and maximum monthly demand for the past five years. If you do not meter, estimate the peak, daily average and maximum monthly demands.

(Note: Please use the same units (gallons or acre-feet) that you selected previously)

Table 2 Click "edit" to begin.

[Edit](#)

Year	Average Daily Demand Quantity	Peak Daily Demand Date	Peak Daily Demand Quantity	Max Demand Quantity
2017	103945	6/23/2017 12:00:00 AM	314100	287100
2018	99990	6/29/2018 12:00:00 AM	323700	311700
2019	91724	6/13/2019 12:00:00 AM	289400	226200
2020	99110	6/4/2020 12:00:00 AM	211600	166900
2021	103404	6/12/2021 12:00:00 AM	319700	375800

[Edit](#)

3. In the past five years, were there any instances where you were not able to meet peak demand?

Check either the first choice or any of the remaining choices that apply.

Peak demand was always met

Well pump failed

- Well casing collapsed
- Well went dry
- Storage tank failed
- Surface water shortage
- Distribution line break/failure
- Interconnect down
- Treatment facility problem/failure
- Other (please describe):

4. Do you have storage facilities?

Yes No

If yes, what is your storage capacity?

400,000

5. Do you treat your potable water?

Yes No

If yes, describe treatment facilities/methods.

Chlorine

F. Analysis of Projected Water Demand

Current Population Served? 804

Fill in the table below with your projected system population and projected demand. You may contact ADWR for assistance with projecting population and demand.

(Note: Please use the same units (gallons or acre-feet) that you selected previously)

Table 3 Click "edit to begin"

Edit		
Year	Projected Population	Projected average daily demand on system
2027	860	310000
2032	910	331000
2042	980	355200

Edit

* For assistance with projecting population refer to the population projection tool provided in the RESOURCES section of the Community Water System website at <https://new.azwater.gov/cws/cws-resources> ** Refer to past use as determined in Table 2

1. Do you anticipate problems meeting these future demands?

Yes No

2. Do you expect any type of change in your area that could increase the demand on your water supply? Check either the first choice or any of the remaining choices that apply.

No change expected
 Development
 Population increase
 Industry
 Agriculture
 Other (please describe):

3. Many resources for water planning are available on the ADWR website with links provided below. If you feel you need further assistance with water planning check any of the areas below

No assistance required at this time
 [Conservation resources](#)
 [Projecting future demand](#)
 [Drought planning](#)
 [Well information](#)
 [Groundwater models and aquifer information](#)
 [Streamflow and reservoir levels](#)
 Other (If other, describe below)

4. Are you planning to make any changes to help you meet demand over the next 20 years? Check either the first choice or any of the remaining choices that apply.

No changes planned
 Additional and/or improved conservation program
 Increased storage
 Additional wells
 Deepen well
 Other (If other, describe below)

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- Regional drought conditions
- Range and forage conditions
- Aquifer levels
- Well levels
- Streamflow levels
- Reservoir levels
- Streamflow levels
- Population and/or agriculture growth
- Other

C. Drought Plan of Action

1. Drought/Shortage Stages:

Decide how many drought/shortage stages you will have for your water system. While ADWR suggests three or four stages, beginning with "Stage 0 – normal conditions", this tool is designed to be flexible. Define each stage using the indicators (those you checked above in section B) and level of severity (triggers) you choose that are relevant to your water supply and individual system.

Decide what management measures will be appropriate for your system for each drought/shortage stage. Fill in the measures you have chosen for each drought/shortage stage in the Management Measures column of the table. *You may choose measures from the help sheets, choose your own measures, or a combination of the two.*

(Note: If you have curtailment tariff in place, it may submitted in place of the drought plan if it includes all the information in the pages below.)

Definitions:

Indicators: Variables that describe the specific drought conditions that will cause stress to the system's water supply (as in B. above: such as ground water levels, reservoir levels, U.S. Drought Monitor)

Triggers: The specific values of the indicators that initiate each stage of drought

Management Measures: The realistic plan of action which the system's management plans to undertake when drought impacts the system's water supply at each stage. These should be specific measures to **reduce water demands** based on the available supply.

Table 4 Drought Stage/Water Shortage Stage	Management Measures (consider measures for the system and for the customers) (See Part 3 for measures you wish to implement during Stage 0 – normal conditions)
Stage 0	Normal conditions at the wells above 40 feet. No restrictions good water system practices including leak repair and prevention.
Stage 1	Abnormally dry conditions. Wells at 40 feet or below or monthly drop exceeding 4 feet. Public notice, encourage voluntary conservation.
Stage 2	Moderate drought conditions. Wells at 45 feet or 2 monthly drops exceeding 4 feet. Conservation outreach, offer specific advice, cap bulk water sales at 4,000 gallons per month.
Stage 3	Severe drought conditions. Wells at 50 feet or below and no recovery of well levels. Outdoor water use restricted, bulk water use for residential use only. Institute increased water rates as established by Town Council.
Stage 4	Extreme drought conditions. All bulk water sales restricted for residential use only and a maximum of 50 gallons per day. No outdoor water use and no irrigation.
Additional Stage(s) and Measure(s)	

2. Based on your current description of drought/shortage, what is the highest/worst stage you have declared in the past five years?

- Stage 0
- Stage 1
- Stage 2
- Stage 3
- Stage 4
- Higher Stage - Describe

3. Based on your current description of drought/shortage stages, what stage of drought are you currently implementing? Please check only one answer.

- Stage 0
- Stage 1
- Stage 2
- Stage 3
- Stage 4
- Higher Stage

4. At which drought/shortage stage, if any, do your drought management measures begin to be mandatory? Please check only one answer.

- No measures are ever mandatory
- Stage 0 - no drought/normal conditions
- Stage 1 - start of drought
- Stage 2
- Stage 3
- Stage 4
- Higher Stage

D. Implementation of Drought Stages

1. Who has the authority to initiate and/or change a drought stage for your system?

Town Council/Town Manager

2. If you chose to make any of your management measures mandatory for your customers, how will you enforce them?

Town Council Resolution

E. Communication with Customers

1. Do you utilize any of the following for educating your customers about drought conditions and the need for water conservation? Check all that apply.

Already implementing

Plan to implement

Information with water bill

Free publications

6

16

Media (social media, radio, TV)	<input type="radio"/>	<input type="radio"/>
Website	<input checked="" type="radio"/>	<input type="radio"/>
Public Presentations	<input type="radio"/>	<input checked="" type="radio"/>
Workshops	<input type="radio"/>	<input type="radio"/>
Newsletters/e-newsletters	<input type="radio"/>	<input type="radio"/>
Text alerts	<input type="radio"/>	<input checked="" type="radio"/>
Other (please describe):	<input type="text"/>	

[Clear Selections](#)

2. How will customers be notified of a drought stage declaration and implementation of associated management measures? (Note: different stages of drought may need different notification methods. If the system has reached the point of a water shortage, rapid notification will be necessary.) Check all that apply.

- Deliver notice door to door
- Mail notice to service address
- Post signs at well sites
- Post signs at entrance to major subdivisions
- Information with water bill
- Community meetings
- Media (social media, radio, TV)
- Website
- Public presentations
- Newsletters/eneWSletters
- Text alerts
- Other (please describe):

F. Development of Emergency Supplies

1. How will you get water to your customers in an emergency water shortage situation? **Note:** It is the community water system's responsibility to have an emergency source of water and an emergency plan in place. Please attach any documentation that will further describe your plan of action.
Check all that apply.

- We do not have a backup supply
- Utilize interconnection, list provider:
- Haul water, from:
- Use backup well
- Provide bottled water (temporary response: less than 2 days)
- Drill new well
- Provide nonpotable water stations for nonpotable uses
- Other

2. Should alternative/backup water supplies become necessary, do you have arrangements in place to obtain them?

- Yes
- No

3. Have you had to use any of the following methods to augment your supply in the last five years? Check either the first choice or any of the remaining choice that apply.

- No augmentation needed

- Use interconnection
- Haul water
- Use backup well
- Provide bottled water
- Drill new well
- Other

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COMMUNITY WATER SYSTEMS SYSTEM WATER PLAN FORM

Introduction

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PART 3 - Conservation Plan

The **Water Conservation Plan** must be designed to increase the Community Water System's efficiency, reduce waste, and encourage consumer conservation efforts. A good **Water Conservation Plan** can be the key to reducing a water system's vulnerability to drought and water shortages. A well-designed plan should include a balance of both demand- and supply-side measures. Supply-side programs, such as leak detection and repair, increase the water supply, while demand-side programs, such as higher seasonal rates, tend to reduce the demand for water. A long-term conservation program can result in significant cost savings to the water system; it can extend the life of existing infrastructure and delay the costs associated with building new facilities or retrofitting old facilities to handle larger capacities.

Is your system located in an Active Management Area and regulated under one of the programs for large municipal water providers? (In AMAs, a large provider serves more than 250 acre-feet water per year.)

Yes No

If yes, you do not have to complete this section (A.R.S. § 45-342). Please continue with Part 4 – Certify and Submit.

There are number of resources to assist a water provider with conservation planning at ADWR's Conservation Planning Information site <https://new.azwater.gov/conservation/water-planners-providers> and at [Guidelines for Preparing Water Conservation Plans](#)

Below are examples of measures that can reduce water use, improve water efficiency, and/or enhance drought preparedness.

Please click edit to begin and check all that apply.

[Edit](#)

Management Measure	Implementation Status
1. GENERAL MEASURES	
Edit	
2. CONSERVATION MEASURES	
Edit	
3. DROUGHT PREPAREDNESS	
Edit	

[Edit](#)

Management Measure	Implementation Status
Wells are metered.	Already implementing
Service connections are metered.	Already implementing
Water rate structures encourage efficient water use (e.g. higher rates for higher use).	Already implementing
Reclaimed water used for landscape watering.	
2. MEASURES TO LIMIT LOST AND UNACCOUNTED FOR WATER	
Leak detection and repair.	Already implementing
Meter testing, repair and replacement.	Already implementing
Storage tank evaporation control.	Already implementing
Infrastructure and/or storage facility improvements.	
Elimination of illegal connections.	Already implementing
Other	
3. MEASURES TO RAISE PUBLIC AWARENESS	
Free conservation handouts or materials for customers.	
Conservation tips with water bills or on website.	Already implementing
Request that customers reduce water use by a certain % or in other ways.	
Participation in special events and/or community programs.	
Other	
4. MEASURES TO ASSIST CUSTOMERS OR PROVIDE OUTREACH	
Residential audit program.	
Advice on how to check home for leaks and make repairs.	
Residential interior retrofit program.	
Non-residential interior retrofit program.	
Non-residential water budgeting program.	
Residential or non-residential low water-use landscape information and/or consultations.	
High water-use notification.	Already implementing
High water-use inquiry resolution.	Already implementing
Water waste investigations and assistance.	
Other	
5. MEASURES TO EDUCATE AND/OR TRAIN CUSTOMERS	

[Edit](#)

Management Measure	Implementation Status
Adult education and/or training workshops and classes.	Not started
Youth water conservation education program.	Not started
Xeriscape demonstration garden.	Not started
Speakers Bureau	Not started
Other	
6. INCENTIVES FOR EFFICIENT WATER USE OR CONSERVATION	
Residential toilet rebate or incentive.	
Residential toilet replacement.	
Rebates or incentives for other indoor fixtures or appliances.	
Rebates or incentives for turf conversion or xeriscape installation.	
Rebates or incentives for a " smart " irrigation controller.	
Rebates or incentives for graywater or rainwater fixtures.	
Non-residential rebates, incentives, loans, etc.	
Other	
7. MEASURES TO RESTRICT WATER USE (CONDITIONS OF SERVICE OR ORDINANCE)	
Prohibiting water waste or tampering.	
Limiting turf, water-intensive landscapes or water features in new residences or developments.	
Requiring low water-use landscapes.	
Designating landscape watering days or times.	
Prohibiting high water-use activities (e.g. landscape watering) during peak demand hours.	
Requiring water-conserving fixtures or appliances that are more efficient than specified in current state plumbing codes.	
Requiring hot water recirculation devices.	
Requiring retrofits on resale.	
Requiring on-site rainwater harvesting.	
Requiring gray water plumbing.	
Requiring car wash recycling.	
Requiring a water use plan for new large commercial or industrial customers.	
Other	
8. INNOVATION OR RESEARCH PROGRAMS	
Researching a new technology or program.	
Evaluating a new technology or program.	
Implementing a new technology or program.	
Explore opportunities for utilizing reclaimed effluent water.	
Increase use of reclaimed effluent for commercial landscape.	
Other	

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PATAGONIA WATER DEPARTMENT
PO BOX 767
PATAGONIA, AZ 85624

System Name: PATAGONIA WATER DEPT.
CWS ID: 91-000592.0000
ADEQ ID: AZ0412006

August 9th, 2022

Dear Water Provider,

The Arizona Department of Water Resources (ADWR) has completed its review of the system water plan update that is due on or before January 1, 2023, and has determined that your plan meets the objectives set forth in *Arizona Revised Statutes* §45-342.

Please note that ADWR bases its compliance determination on the basic outline of the system water plan requirements provided in statute. It is the water provider's responsibility to make sure that the plan is realistic, practical, and technically sound for the water system and the community. The goal of the system water plan should be to reduce drought vulnerability through a strong water supply plan and conservation component, as well as to ensure that the system is prepared to respond to a drought emergency.

System water plans should be implemented and evaluated prior to the next submittal so that appropriate revisions and improvements can be made. Updates are due to ADWR on a five year cycle.

If you have any specific questions regarding your system water plan review, please contact the Community Water Systems program at (602) 771-8610 or by email at ecws@azwater.gov.

Sincerely,

Catherine Riedel

Catherine Riedel, Coordinator
Community Water System Program
Arizona Department of Water Resources



LIST OF MANDATORY ADEQUACY JURISDICTIONS

Arizona Counties and the cities and towns that are located within the mandatory adequacy jurisdiction county

Cochise County, Arizona. Subdivision Regulations § 408.03 Water Adequacy (adopted March 18, 2008, effective April 18, 2008). Cities and towns located in Cochise County and subject to mandatory adequacy requirements:

Benson, City of

Bisbee, City of

Douglas, City of

Huachuca City, Town of

Sierra Vista, City of

Tombstone, City of

Wilcox, City of

Yuma County, Subdivision Regulations § 4.31 Water Adequacy (adopted July 7, 2008, effective August 10, 2008). Cities and towns located in Yuma County and subject to mandatory adequacy requirements:

San Luis, City of

Somerton, City of

Wellton, Town of

Yuma, City of

Arizona Cities and Towns not located within a mandatory adequacy jurisdiction county that adopted their own mandatory adequacy jurisdiction ordinance

Town of Clarkdale, Subdivision Regulations, § 12-1-21 (Ordinance adopted September 12, 2008, effective September 30, 2008)

Town of Patagonia, The Code of the Town of Patagonia § 15 – 5 – 8 (Ordinance passed February 13, 2008, effective March 14, 2008)