



2025 Industrial Groundwater Conservation Plan Status Report

Your completed Groundwater Conservation Plan Status Report is due: June 30, 2025. Please submit your completed report to: Edwards Aquifer Authority, Attn: Groundwater Conservation Department, 900 E. Quincy, San Antonio, TX 78215.

GENERAL INFORMATION

Permit Holder Name: _____

POU No.: _____

CONTACT INFORMATION

Contact Person: _____

Contact Address (City, State, Zip): _____

Contact Phone Number: _____ Contact Fax Number: _____

Contact Email Address: _____@_____

Brief Description of Water Use: (*i.e., golf course, nursery, athletic field, etc.*): _____

Total Number of Connections in Service Area (Edwards Aquifer and Non-Edwards water): _____

Total Number of Edwards Aquifer Connections: _____

CERTIFICATION

I hereby certify that the information given herewith is true and accurate to the best of my knowledge and belief.

Signature of Contact Representative: _____ Date: _____

Industrial Best Management Practices

Your completion of the above Industrial BMPs must be consistent with the following chart.

Mandatory BMPs TO Be Implemented	
All Industrial Users	Ind-1 System Water Audits, Leak Detection and Repair
All Industrial Users	Ind-2 Waste Water Prohibition

Optional BMPs	
More than Five Connections (If Applicable)	Ind-3 Sub-Metering
If Applicable	Ind-4 Landscape Conservation Programs
If Applicable	Ind-5 Golf Course Conservation
If Applicable	Ind-6 Athletics Field Conservation
If Applicable	Ind-7 Nursery Conservation
If Applicable	Ind-8 Cooling Tower Conservation
If Applicable	Ind-9 Conservation Programs for Industrial Users

USING NON-AQUIFER ALTERNATIVE WATER

If you have recently obtained the use of an alternative water source to replace or supplement the use of Edwards Aquifer groundwater from your well, please indicate the source, amount and date you obtained the alternative source of water.

POU Number: _____

Ind-1 SYSTEM WATER AUDITS, LEAK DETECTION AND REPAIR

Required to be implemented by all industrial users.

System Water Audit

Under this BMP, industrial permit holders must conduct annual pre-screening system audits to determine if full-scale system audits are necessary. If a permit holder fails to account for a minimum of 85% of a system's water use, the permit holder must conduct a full-scale distribution system water audit. Unaccounted water losses must be no more than 15% of total water in the system.

1. Have you completed your annual pre-screening system water audit? **(Circle One)** Yes No

If so, please indicate the date of completion. _____

2. What was your total metered supply into the system (Total Edwards Aquifer water produced from well)?

2022 _____ acre-feet

2023 _____ acre-feet

2024 _____ acre-feet

3. Please provide your total sub-metered or verified end use amounts below (*facilities, irrigation systems, water using equipment, mobile homes, RV connections, etc.*).

2022 _____ acre-feet

2023 _____ acre-feet

2024 _____ acre-feet

4. What percentage of your water use was accounted for?

Formula: $\text{Accounted water} = \text{sub-metered or verifiable use (see \#3 above)} / \text{Total metered supply into system (see \# 2 above)} \times 100.$

2022 _____ %

2023 _____ %

2024 _____ %

If metered end-use plus other verifiable use represents less than 85% of total supply into the system, a full-scale system water audit is necessary.

5. Have you conducted a full-scale distribution system water audit? **(Circle One)** Yes No

If you have conducted a full-scale water audit, please submit any documentation of your findings and the date the audit was completed.

6. If you have not yet conducted a full-scale system water audit and your pre-screened water audit represents less than 85% of total supply into the system, what are your plans to complete your audit?

Leak Detection and Repair Program: Perform distribution system leak detection when warranted, and repair identified leaks.

7. Are you currently maintaining a leak detection and repair program? **(Circle one)** Yes No
8. If so, please give a brief description of your leak detection and repair program if not already provided. In addition, please describe any major repairs you have made to your system that was identified by your leak detection and repair program.

9. For any water loss you may have had, please explain what measures are being taken to prevent water loss in the future:

POU Number: _____

Ind-2 WATER WASTE PROHIBITION

Required to be implemented by all industrial users.

Water Waste Prohibition measures are actions intended to prohibit specific wasteful activities.

1. Have you adopted any policies or taken measures to prohibit wasteful activities by your customers and staff including but not limited to the following? **(Circle All That Apply)**

- | | | |
|---|-----|----|
| a. Prohibition of landscape irrigation. | Yes | No |
| b. Runoff from property. | Yes | No |

(Note: Water utilities shall establish a monitoring and enforcement program of residential and nonresidential landscape irrigation in accordance with the prohibition of residential or non-residential landscape irrigation during period of peak water loss due to evapotranspiration, typically between the hours following 10:00 a.m. until 8:00 p.m.) pursuant to EDWARDS AQUIFER AUTHORITY Rules §715.122. This section applies irrespective of whether a customer is within the city limits of the extraterritorial jurisdiction of a municipal water utility.

2. If you have circled "No" to any of the above please give a brief explanation as to the reason why.

3. If you have not already done so, please submit a copy of any adopted policy or measure to prohibit wasteful water activities to the Edwards Aquifer Authority.

POU Number: _____

Ind-3 SUB-METERING

Optional

Sub-metering is an effective method of tracking water usage when water is used in multiple and distinctly different processes. Under this BMP, permit holders with more than five connections must perform a feasibility study to determine the benefits of installing sub-meters on facilities or equipment which comprise 20% or more of the permit holder's total water use, and have a distinctly different end-use. The permit holder must also conduct a study to determine the feasibility of installing dedicated landscape sub-meters.

1. Have you conducted a feasibility study to determine the benefits of installing sub-meters on facilities or equipment that comprises at least 20% of the applicant's total water use? If so, please describe the results of your feasibility study below.

2. Have you conducted a feasibility study to determine the benefits of installing dedicated landscape sub-meters? If so, please describe the results of the study below.

3. Please provide a description of your sub-metering program and any sub-meters you have installed on facilities, equipment or irrigation systems used to assist you in accounting for your water use and or water loss.

POU Number: _____

Ind-4 LANDSCAPE CONSERVATION PROGRAMS

Optional to implement if your well is used for landscape irrigation.

Landscape conservation programs are an effective method of accounting for and reducing outdoor water usage. This BMP is intended for permit holders who use permitted water to irrigate landscape area or for any outdoor irrigation. Implementation of this BMP involves performing the following practices: *Landscape Water-Use Survey, ETo Based Irrigation, Irrigation System Maintenance, and Landscape Design.*

1. Have you already conducted a landscape water-use survey? **(Circle One)** Yes No

If yes, please describe the results of your landscaping water-use survey below. Please provide a copy of same.

Please complete and return to the EAA the Landscape and Irrigation Water-Use Survey which is attached.

2. Have you developed reference evapotranspiration (ETo)-based irrigation schedules that are equal to no more than 80% of evapotranspiration? If so, what was your estimated ETo-based irrigation schedule and annual water savings?

3. If your landscape use has exceeded 20% of total use, have you installed a dedicated landscape meter? If so, describe the results obtained in using a dedicated landscape irrigation meter.

POU Number: _____

Ind-5 GOLF COURSE CONSERVATION

Optional to be implemented if your well is used for golf course irrigation.

Golf course conservation is an effective method of reducing regional groundwater demands. Under this BMP, the permit holder must conduct a landscape survey to determine reference evapotranspiration (ET_o)-based irrigation schedules. A watering regimen is to be developed that uses only the amount of groundwater necessary to maintain the viability of the course and maintain the course in a safe condition and the groundwater must only be applied to areas that are essential to the use of the course. Utilization of a computer-controlled irrigation system (CCIS), or similar technology is required. If non-Edwards aquifer water is available, the permit holder must convert to use of such non-Edwards aquifer water as soon as is practicable.

1. Have you performed a landscape survey to determine ETO-based irrigation schedules? **(Circle One)** Yes No

If so, please describe below the results of your study to include annual water savings and provide such documentation to the Authority.

Please complete and return to the EAA the Landscape and Irrigation Water-Use Survey which is attached.

2. Have you established a watering regimen that uses only the amount of groundwater necessary to maintain the viability of the turf and maintain it in a safe condition? **(Circle One)** Yes No

If so, please describe below your watering regimen.

3. Have you installed a computer controlled irrigation system (CCIS)? **(Circle One)** Yes No

4. If you have recently installed a new computer controlled irrigation system (CCIS), please describe below the operation of the CCIS using ETO-based irrigation schedules. Your CCIS system should include, at a minimum, the following components: computer controller (digital operating system), software, interface modules, satellite field controller, soil sensors, and weather stations.

5. Is non-Edwards Aquifer water currently available in your area to substitute for your Edwards Aquifer groundwater?

(Circle One) Yes No

6. What are your plans to obtain alternative water supplies? Please describe your plans and include the potential date of conversion. If you have already committed to doing so and these plans include the use of treated effluent, please provide a copy of the letter of commitment from the appropriate agency and a copy of the Texas Commission on Environmental Quality (TCEQ) permit authorizing the use of treated effluent in your area.

POU Number: _____

Ind-6 ATHLETIC FIELD CONSERVATION

Optional to be implemented if your well is used for athletic field irrigation.

Athletic field conservation is an effective method of reducing regional groundwater demand through the implementation of a watering regimen that uses only the amount of groundwater necessary to maintain the viability of the turf and maintain the turf in a safe condition. Groundwater must only be applied to areas that are essential to the use of the field and a landscape water-use survey must be completed and development reference evapotranspiration (ET_o)-based irrigation schedules equal to no more than 80% of reference evapotranspiration is required. When cost-effective, groundwater conservation through utilization of a computer-controlled irrigation system (CCIS), or similar technology should be applied.

1. Have you established a watering regimen that uses only the amount of groundwater necessary to maintain the viability of the turf and maintain it in a safe condition? **(Circle One)** Yes No

If so, please describe below your watering regimen and describe the location and dimensions of the athletic field and the type of turf.

2. Have you performed a landscape survey to determine ET_o-based irrigation schedules? **(Circle One)** Yes No

If so, please describe below the results of your study to include annual water savings and provide us with such documentation.

Please complete and return to the EAA the Landscape and Irrigation Water-Use Survey which is attached.

3. If you have recently installed a new Computer Controlled Irrigation System (CCIS), please describe below the operation of the CCIS using ET_o-based irrigation schedules. Your CCIS system should include, at a minimum, the following components: computer controller (digital operating system), software, interface modules, satellite field controller, soil sensors, and weather stations.

POU Number: _____

Ind-7 NURSERY CONSERVATION

Optional to be implemented if your well is used to irrigate nursery stock.

Nursery conservation is an effective method of reducing regional groundwater demands and this BMP requires the implementation of a watering regimen that uses only the amount of groundwater necessary to replace evapotranspiration and to maintain the viability of plants.

1. Have you developed the use of multiple watering zones for your different variety of plants? **(Circle One)** Yes No
2. Please describe the status of any new irrigation techniques and irrigation systems you are now using such as low-pressure sprinklers and/or micro irrigation systems.

3. Describe below how you maintain use of your current irrigation techniques. This may include increasing the moisture holding capacity of soils or using soil amendments such as wetting agents, polymers/gels, peat moss or compost. Reduction of evaporative losses may also be achieved by utilizing mulch on plants in large containers.

4. If you have implemented a water recovery and reuse system, please describe below how the program is used to capture and reuse runoff water.

POU Number: _____

Ind-8 COOLING TOWER CONSERVATION

Optional to be implemented if your well is used for a cooling tower.

Cooling towers can be among the largest water using systems in industrial processes. The greatest opportunity to conserve water in cooling towers applications can be realized by controlling the amount of bleed-off and make-up water required by the system through the utilization of processes or equipment that minimize the amount of required make-up water, while still meeting the operating parameters of the cooling system.

1. Program description:

2. Please provide the capacity and number of your cooling towers.

500-200 tons

201-500 tons

501-800 tons

801-1000 tons

1001 + tons

Total Number of Towers: _____

3. Have you conducted an efficiency water audit on your cooling tower(s)? **(Circle One)** Yes No

4. Please check all conservation measures you have implemented for your cooling towers:

- _____ Using shielding to minimize evaporative loss.
- _____ Utilizing safe chemical additives to control scaling and extend useable "life" of water in cooling tower.
- _____ Running system with increased cycles of concentration.
- _____ Installed conductivity or pH monitoring systems to control bleed-off.
- _____ Installed meters to monitor amount of bleed off and make up water.
- _____ If feasible, installed an automatic shut-off system to power-down cooling tower when not in use.
- _____ Collecting water from other on site uses that is suitable for make-up water or can be treated for such use.
- _____ Harvesting rainwater as available to use as make-up water.
- _____ Reusing bleed-off water for other processes on site.

5. If you have not already provide this information, please complete the following:

Description of the process your cooling towers are used for:

6. System Requirements:

Temperature _____

Volume _____

Duration of Flows (hrs/day): _____

Number of Gallons of Bleed Off: _____

Number of Gallons of make-up water used daily: _____

Number of Cycles of Concentration: _____

Description of conductivity or pH sensors used to control bleed off:

Description of chemical compounds and amounts used to amend water quality for cooling tower use:

POU Number: _____

Ind-9 CONSERVATION PROGRAMS FOR INDUSTRIAL APPLICANTS

Optional to be implemented by all industrial users if BMP-4 through BMP-8 do not apply.

Conservation programs for industrial users are essential for reducing water usage in the industrial sector. An effective water-use survey must include an evaluation of all water-using equipment and processes and must result in a report identifying potential conservation measures and their expected payback.

1. Conduct a water use survey or implement another method to reduce your water usage. Please indicate below which method you have chosen to reduce your water usage:

Completion of an industrial water use survey: _____

Implementation of other program: _____

Please provide the EAA with the results of your own survey or you may complete and return to the EAA the Industrial Water Use Survey which is attached.

If you have chosen to implement another water reduction program instead of completing an industrial water use survey, please describe the program below. Additionally, your water reduction must be an amount equal to 10% of baseline usage which is your total verified maximum historical use.

Landscape and Irrigation Water Use Survey

(Attachment to Ind.-4, Ind.-5 and Ind.-6)

General Information:

POU Number: _____

Owner Name: _____

Contact Person: _____ Contact Phone: _____

User Type (**check one**): ☐ Residential ☐ Golf/Sports Field ☐ Industrial/Commercial/Institutional

Other: _____

Method of measurement:

(**check one**) ☐ Irrigation Meter ☐ Well Meter ☐ System Pressure

Landscape and Irrigation Water-Use Inventory Irrigation System

Type: ☐ Hose ☐ Sprinkler ☐ Drip

Location: ☐ In-Ground ☐ Aboveground No. of Valves: _____

Irrigation Controller: ☐ Manual ☐ Automatic Rain shut off valve? ☐ Yes ☐ No

Frequency of Use: Avg. no. days per week: _____ Avg. no. minutes per irrigation cycle: _____

Irrigation Time: ☐ Mornings ☐ Evening From _____ a.m./p.m. To _____ a.m./p.m.

Irrigation months

(**Circle all that apply**): Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Irrigation water use/cycle (gal): Initial Meter reading: _____ Ending Meter Reading: _____

Total Cycle water Use: _____

Irrigation water use/time (gal): Avg. Day: _____ Avg. Week: _____ Avg. Month: _____ Avg. Year: _____ gal

Irrigation water use (%): Turf: _____% Plant beds/garden: _____% Leaks: _____% Other _____%

Irrigation runoff: ☐ Yes ☐ No

If yes, describe: _____

Leaks: ☐ Yes ☐ No

If yes, describe: _____

Controller schedule reset: ☐ Weekly ☐ Monthly ☐ Seasonal ☐ Yearly ☐ Never

Controller schedule set by: ☐ Homeowner/Site Manager ☐ Maintenance Contractor

Landscape Area

Total Lot size (sq. ft.): _____ Lot area irrigated (sq.ft.): _____ Lot area irrigated (%): _____

Irrigated area that is turf (sq. ft.): _____ Irrigated area that is non-turf (sq. ft.): _____

Modified from Water Use and Conservation, Amy Vickers Associates, Inc., 2001

Landscape and Irrigation Water Use Survey (Continued)

(Attachment to Ind.-4, Ind.-5 and Ind.-6)

Turf Grass and Plants

Grass Type: _____ ☐ Cool Season ☐ Warm Season ☐ Mix: Cool (%): _____ ☐ Warm (%): _____

Irrigated non-turf area (describe): _____

Grass mow height: _____ inches Number of Watering Zones/Valves: _____

Are zones separated by plant/turf watering needs? ☐ Yes ☐ No

Soil

Soil Type: ☐ Clay ☐ Loam ☐ Sandy Loam Mix (describe): _____

Condition:Nutrient Level: ☐ Good ☐ Poor

Compaction: ☐ Light ☐ Medium ☐ Heavy Sufficient mulch around plants? ☐ Yes ☐ No

Modified from Water Use and Conservation, Amy Vickers Associates, Inc., 2001

Industrial Water Use Survey (Attachment to Ind-9)

General Information

Owner Name: _____

Contact Person: _____ Phone: _____ Fax: _____

Email address: _____

Describe type of facility, products of services: _____

Is recycled water currently used on your site? ☐ Yes ☐ No

If yes, please describe and give amount of recycled water used annually. _____

Building and Facility Water-Use Inventory

Please complete the following as it pertains to your operation. If your type of operation is not compatible with the categories below, please indicate type of use under "Miscellaneous Uses" at the end of this list.

Water Use	Number	Average Flow Rate or Water Use Per Unit (e.g., gallons per use per minute, etc)	Average No. Uses Per Unit Per Day	Annual Use
Bathrooms/Lavatories				
Drinking water fountains				
Women's				
Toilets				
Showerheads				
Sinks (faucets)				
Whirlpool				
Other				
Other				
Other				
Men's				
Toilets				
Showerheads				
Sinks (faucets)				
Whirlpool				
Other				
Other				
Other				

Industrial Water Use Survey (Continued)
(Attachment to Ind-9)

Water Use	Number	Average Flow Rate or Water Use Per Unit (e.g., gallons per use per minute, etc)	Average No. Uses Per Unit Per Day	Annual Use
Cleaning and Sanitation				
Manual Washing				
Vehicle Washing				
Dust Control				
Steam Sterilizers				
Mop Sink				
Laboratory				
Other				
Other				
Other				
Other				
Process Water Uses				
Process water and rinsing				
Other				
Other				
Other				
Other				
Kitchen and Restaurants				
Sinks				
Dishwashers				
Icemakers				
Other				
Other				
Other				
Other				
Laundries and Laundromats				
Washing Machines				
Other				
Other				
Other				
Other				
Swimming Pools, Ponds & Lakes				
Swimming Pools				
Fountains/Water Falls				
Ponds				
Lakes				
Other				
Other				
Other				

Industrial Water Use Survey (Continued)
(Attachment to Ind-9)

Water Use	Number	Average Flow Rate or Water Use Per Unit (e.g., gallons per use per minute, etc)	Average No. Uses Per Unit Per Day	Annual Use
Cooling Systems				
Cooling Systems/Towers				
Heating Systems				
Other				
Other				
Other				
Other				
Leaks and Losses				
Leaks and Losses				
Malfunctions				
Other				
Other				
Other				
Other				
Miscellaneous Uses				
1				
2				
3				
4				
5				
6				

Areas where conservation (efficiency measures) can be implemented. Please include the areas and items recommended for improvement and the recommended conservation measures.

Item/Area	Qty.	Description:

Industrial Water Use Survey (Continued)
(Attachment to Ind-9)

Potential Water Savings After Improvements

Water Efficiency Measure	Current Water Use (A)	Potential Water Savings From Efficiency Measures (B)	Estimated Future Water Use (A-B)	Estimated (%) Future Water Use With Conservation (B/A)	Projected Life of Conservation Measure

Industrial Water Use Survey (Continued)
(Attachment to Ind-9)

Water Use Estimates: The following water use estimates are provided to assist you in determining your current use and/or water savings.

House Hold Use

Type of use and year of installation.	Use Rate or Flow Rate	Frequency of Use (per persons per day)
Clothes Washer Use	Gallons per load	Loads per day
1998 - Present	27	0.37
1990-Present	39 or 43	0.37
1980-1990	51	0.37
Dishwasher Use	Gallons per load	Loads per day
1997 - Present	4.5	0.10
1995 - Present	7-10.5	0.10
1990-1995	9.5-12.0	0.10
Faucet Use	Gallons per min.	Minutes per day
1994-Present	1.5 or 2.5	8.1
1980-1994	2.75 or 3.0	8.1
Pre-1980	3.0-7.0	8.1
Showerhead Use	Gallons per min.	Minutes per day
1994-Present	2.5	5.3
1980-1994	2.75, 3.0 or 4.0	5.3
Pre-1980	5.0-8.0	5.3
Toilet Use	Gallons per flush	Flushes per day
1994-Present	1.0 or 1.6	5.1
1980-1994	3.5, 4.0 or 4.5	5.1
1950s-1980	5.0 or 5.5	5.1

Office Building Use

Type of use and year of installation.	Use Rate or Flow Rate	Frequency of Use (per persons per day)	
Urinal Use	Gallons per flush	Male	Female
1990-Present (waterless)	0.0	2	0
1994-present (flush)	1.0	2	0
1980-1994 (flush)	1.5, 2.0, 3.0 or 4.5	2	0
Pre-1980 (flush)	5.0	2	0
Toilet Use	Gallons per flush		
1994-Present	1.0 or 1.6	1	3
1980-1994	3.5, 4.0 or 4.5	1	3
1950-1980	5.0 or 5.5	1	3

Modified from Water Use and Conservation, Amy Vickers & Associates, Inc., 2001