



## Municipal Groundwater Conservation Plan Form

**Your Municipal Groundwater Conservation Plan Form Is Due:** \_\_\_\_\_. Please submit your completed report to: Edwards Aquifer Authority, Attn: Groundwater Conservation Department, 900 E. Quincy, San Antonio, TX 78215.

### I. General Information

Permit Holder Name: \_\_\_\_\_ Permit Number: \_\_\_\_\_

Permit Holder Address (City, State, Zip): \_\_\_\_\_

Permit Holder Phone Number: \_\_\_\_\_ Permit Holder Fax Number: \_\_\_\_\_

Permit Holder Email Address: \_\_\_\_\_@\_\_\_\_\_

Contact Person: \_\_\_\_\_

Contact Address (City, State, Zip): \_\_\_\_\_

Contact Phone Number: \_\_\_\_\_ Contact Fax Number: \_\_\_\_\_

Contact Email Address: \_\_\_\_\_@\_\_\_\_\_

Estimated Per Capita Water Usage (Gallons Per Person Per Day): \_\_\_\_\_

Brief Description of Water Use (golf course, nursery, athletic field, etc.): \_\_\_\_\_

Total Number of Connections in Service Area: \_\_\_\_\_

Total Number of Edwards Aquifer Connections in Service Area: \_\_\_\_\_

If you have acquired a non-aquifer alternative water supply in addition to your Aquifer water, determine the number of Aquifer connections that count toward Best Management Practices (BMPs) by using the following formula: multiply the total number of all connections by the ratio of the amount of water supplied from your Aquifer wells divided by the total amount of water used by the municipality. The calculation will determine your number of Aquifer connections.

[Amount of Aquifer Use] \_\_\_\_\_ ÷ [Total Water Use] \_\_\_\_\_ x [Total Connections] \_\_\_\_\_ = \_\_\_\_\_  
[Aquifer Connections]

### Certification

I hereby certify that the information given herewith is true and accurate to the best of my knowledge and belief. I understand that I must submit to the EAA triennial GCP status reports, due by March 31 of every third year beginning 2009.

Signature of Permit Holder or Agent: \_\_\_\_\_ Date: \_\_\_\_\_

## II. Municipal Information

Please provide your projected annual water usage for the next ten year period.

<b>Projected Water Usage</b>	
<b>Year</b>	<b>Acre-Feet</b>

Please list each customer type within your service area, and number of connections for each type. Provide total water use by volume and by percent for each customer type.

<b>Type of Account</b>	<b>Number of Connections</b>	<b>Use by Volume</b>	<b>Use by Percent</b>
Residential			
Commercial			
Industrial			
Institutional:			
Other:			
Other:			

### III. Best Management Practice Implementation Information

<b>Mandatory BMPs To Be Implemented</b>	
All Municipal Users	Muni-1 System Water Audits, Leak Detection and Repair
All Municipal Users	Muni -2 Metering of All New Connections and Retrofit of Existing Conditions
All Municipal Users	Muni-3 Water Waste Prohibition

<b>Optional BMPs</b>	
If Applicable	Muni-4 Conservation Pricing for Purveyors Only
If Applicable	Muni-5 Public Information and School Education Programs
If Applicable	Muni-6 Landscape Conservation Programs
If Applicable	Muni-7 Conservation Coordinator
If Applicable	Muni-8 Water Use Survey Programs
If Applicable	Muni-9 Residential Plumbing Retrofit, Rebate and Replacement Programs
If Applicable	Muni-10 Reuse of Treated Effluent

**Please note:** Municipal permit holders may submit an approved Texas Water Development Board Water Conservation Plan in place of an EAA required Groundwater Conservation Plan.

Please check the BMPs below that have or will be implemented and provide the appropriate information. Descriptions should include schedules, goals, cooperative parties and steps taken to avoid double counting of water conservation savings, supporting materials, etc. Attach additional pages if necessary showing estimated water savings and any other supporting documentation and calculation worksheets.

**Muni-1: System Water Audit, Leak Detection and Repair**

BMP Implementation Date: \_\_\_\_\_ Completion Date: \_\_\_\_\_

For the pre-screening system water audit include metered sales and other verifiable uses in comparison to total supply (well metered use) into the system and if metered sales represent less than 85% of total supply in the system, you must conduct a full distribution audit. Attach copies of documents showing your pre-screening audit results and if applicable, your full scale audit results:

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Describe your existing or planned leak detection and repair program which is used to reduce water loss and repair leaks when detected. In addition please include your method of advising customers of existing leaks if applicable. Unaccounted water loss must be no more than 15% of total water supply into the system:

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Estimated water savings: \_\_\_\_\_ acre-feet annually

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

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**□ Muni-2: Metering of All New Connections and Retrofit of Existing Connections**

BMP Implementation Date: \_\_\_\_\_ Completion Date: \_\_\_\_\_

If you are a purveyor, describe your existing or planned method for installing meters on all new connections and existing unmetered connections within the service area. Identify the number of new connections in the service area and the number of unmetered connections within the service area:

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If you are a purveyor, describe your existing or planned feasibility study that will show the benefits of installing dedicated landscape irrigation meters on industrial, commercial and institutional (ICI) accounts. Attach copies of documents showing results of feasibility study and indicate the number of dedicated landscape irrigation meters on ICI accounts installed during the reporting period:

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If you are a purveyor, describe your existing or planned schedule for testing and replacing meters within the service area. Indicate the number of meters tested, the number of meters replaced and the number of pressure regulators installed on meters during the reporting period:

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If you are a purveyor, describe your existing or planned feasibility study to retrofit multi-family and ICI accounts with turbo meters or similar technology:

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**(Continued) Muni-2 Metering of All New Connections and Retrofit of Existing Connections**

Indicate the number of new connections metered during the reporting period and the number of existing unmetered accounts within the service area:

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If you are a non-purveyor, describe your existing or planned schedule for testing and replacing meters within the service area. Indicate the number of meters tested, the number of meters replaced and the number of pressure regulators installed on meters during the reporting period:

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Estimated water savings: \_\_\_\_\_ acre-feet annually



**□ Muni-4: Conservation Pricing (For Purveyors Only)**

BMP Implementation Date: \_\_\_\_\_ Completion Date: \_\_\_\_\_

Describe your existing or planned economic incentives for billing by metered volume of use consistent with an Increasing Block Rate Structure which provides for an increase in the unit price of water as the volume of water used increases. Include a copy of your Increasing Block Rate pricing structure for each class:

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Describe your existing or planned seasonal or excess surcharge imposed to reduce demand during summer months. Rate should be established based upon long-run marginal costs, or the cost of adding the next unit of capacity to the system. Attach a copy of the rates charged in order to reduce demand during summer months:

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Describe your existing or planned method for working with sewer agencies so they may adopt conservation pricing for sewer service, in the event you supply water but not sewer service:

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Estimated water savings: \_\_\_\_\_ acre-feet annually

**Muni-5: Public Information and School Education Programs**

BMP Implementation Date: \_\_\_\_\_ Completion Date: \_\_\_\_\_

Describe your existing or planned public information program. An effective public information program includes but is not limited to providing speakers to employees, community groups and the media; paid and/or public advertising, bill inserts, trend comparison information on bills, informational pamphlets and manuals. Include the number of type of public speaking events, media events, paid or public service announcements and written information disseminated during the reporting period:

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Describe your existing or planned school education program to achieve water conservation. Your school education program should include but is not limited to classroom presentations, instructional assistance and distribution of educational materials. Educational materials must meet the state education framework requirements. Include the number and type of school presentations and approximate attendance, the number of in-service presentations or teacher workshops conducted and the number and type of curriculum materials developed or provided by the permit holders:

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Estimated water savings: \_\_\_\_\_ acre-feet annually

**□ Muni-6: Landscape Conservation Program**

BMP Implementation Date: \_\_\_\_\_ Completion Date: \_\_\_\_\_

Describe your existing or planned land conservation programs including accounts with dedicated irrigation meters and assigned reference evapotranspiration (ETo) based irrigation schedules equal to no more than 80% of reference ETo per square foot of landscape area:

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Describe your existing or planned steps to market landscape water-use surveys to Industrial Commercial Institutional (ICI) and residential accounts. Include number of surveys offered and number of surveys completed:

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If cost-effective, describe your existing method or planned method to offer financial incentives to customers to convert landscape material to xeriscape, landscape water-use analysis and surveys, installation of dedicated landscape meters and follow-up to water-use analysis and surveys. Include the number, type and dollar value of incentives, rebates, and loans offered to and accepted by customers:

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For new customers and change-of-service accounts, describe your existing or planned climate appropriate landscape design and efficient irrigation equipment and management:

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**(Continued) Muni-6 Landscape Conservation Program**

If applicable, describe your existing or planned method for adopting an ordinance that requires all new homes and all new apartment complexes and commercial buildings to install a water conserving landscape:

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Estimated water savings: \_\_\_\_\_ acre-feet annually



**Muni-8: Water Survey Program**

BMP Implementation Date: \_\_\_\_\_ Completion Date: \_\_\_\_\_

Number of Residential Customers: \_\_\_\_\_ Annual Water Use: \_\_\_\_\_ acre-feet

Describe your existing or planned marketing of water-use surveys per customer class and the number of surveys completed.

Water-use surveys for ICI customers must include a site visit, evaluation of all water using equipment and processes, a report identifying conservation measures and expected payback and available agency incentives. Annual follow up visits are to be conducted to evaluate water savings improvements.

Water-use surveys for residential customers must include meter checks, leak checks for toilet and faucets, determination of flow rates for showerheads, aerators, and toilets, irrigation system and timer checks and review or development of irrigation schedules. Measurement of currently landscaped and total irrigable areas should also be included. Customers must be provided with information packets including evaluation results and water saving recommendations:

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Estimated water savings: \_\_\_\_\_ acre-feet annually

**Muni-9: Residential Plumbing Retrofit and Rebate Programs**

BMP Implementation Date: \_\_\_\_\_ Completion Date: \_\_\_\_\_

Number of single-family residences in the service area which were constructed prior to 1992: \_\_\_\_\_

Number of multi-family residences in the service area which were constructed prior to 1992: \_\_\_\_\_

Describe your existing or future plan to distribute or directly install high-quality, low-flow plumbing devices as needed. Distribution and installation programs must be maintained to achieve retrofit on at least 10% of residences during the reporting period.

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Describe your existing or future plan to offer financial incentives to customers that encourage the purchase and use of high-efficiency washing machines. Include the number of high-efficiency washing machine rebates offered and completed during the reporting period:

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Estimated Water Savings Devices Planned To Be Retrofitted Annually.

	<b>Quantity</b>	<b>Estimated Savings</b>
Shower heads 2.5 gpm or less	_____	_____ acre-feet annually
Faucet aerators 2.2 gpm or less	_____	_____ acre-feet annually
Toilet displacement devices	_____	_____ acre-feet annually
Toilet flappers	_____	_____ acre-feet annually
High efficiency washing machine	_____	_____ acre-feet annually
Ultra low flush toilets	_____	_____ acre-feet annually
<b>Total Annual Savings</b>		_____ acre-feet annually

**Muni-10: Reuse of Treated Effluent**

BMP Implementation Date: \_\_\_\_\_ Completion Date: \_\_\_\_\_

Describe your existing or planned method of identifying ICI customers according to use and your process of investigating the feasibility of replacing their Edwards Aquifer groundwater use with treated effluent. Include a description of effluent treatment facilities in addition to the number of gallons or acre-feet of previous average groundwater use for customers served by reuse water, number of gallons or acre-feet of current groundwater use and number of gallons or acre-feet of current treated effluent use.

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Estimated water savings: \_\_\_\_\_ acre-feet annually

## Retrofit Device Savings Table

Device	Initial Savings (gpd per device)	Device Life Span
Low Flow Showerheads	5.5 gpd	3-7 years
Toilet Displacement Devices	4 gpd	2-5 years
Faucet Aerators	1.5 gpd	1-3 years
Toilet Leak Detection	.64 gpd (8 gpd per repaired leaking toilet; 8 percent of toilets leaking)*	7-10 years
Other Household Leak Checks	.5 gpd (12.4 gpd per household repair; 4 percent of households with leaks)	7-10 years
Turf Survey	12.2 gpd	4 years
Turf Survey with Timer	25.9 gpd (12.2 gpd for turf audit plus 14.7 if timer)	4 years
Source	Field Studies	Judgment

\*Municipal purveyors that implement conservation programs with household leak repairs are recommended to update retrofit devices based on the device life span as water hardness and age of device will have direct impacts on these rates.

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Source: A&N Technical Services, Inc. (1999)