



Industrial Groundwater Conservation Plan Form

Your Industrial Groundwater Conservation Plan Form Is Due:_____. Please submit your completed report to: Edwards Aquifer Authority (EAA), Attn: Groundwater Conservation Department, 900 E. Quincy, San Antonio, TX 78215.

I. General Information

Permit Holder Name: _____ Permit Number: _____

Permit Holder Address: _____

Permit Holder Phone Number: _____ Permit Holder Fax Number: _____

Permit Holder Email Address: _____@_____

Contact Person: _____

Contact Address (including City, State, Zip): _____

Contact Phone Number: _____ Contact Fax Number: _____

Contact Email Address: _____@_____

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

Total Connections to Edwards Aquifer Well: _____

Please describe any non-aquifer alternative water supplies you may be using and explain how these supplies are used to replace Edwards Aquifer water.

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 Groundwater Conservation Plan status reports, due by June 30 of every third year beginning 2010.

Signature of Permit Holder or Agent: _____ Date: _____

II. Industrial Information

Please list all purposes for which Aquifer water is used by volume and by percent for each purpose:

Purpose	Use By Volume	Use By Percent

III. Best Management Practices (BMP) Implementation Information

Industrial Best Management Practices

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

Optional BMPs	
If Applicable	Ind-3 Sub-Metering
If Applicable	Ind-4 Landscape Conservation Programs
If Applicable	Ind-5 Golf Course Conservation
If Applicable	Ind-6 Athletic Field Conservation
If Applicable	Ind-7 Nursery Conservation
If Applicable	Ind-8 Cooling Tower Conservation
If Ind-4 through Ind-8 Are Not Applicable	Ind-9 Conservation Programs for Industrial Users

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.

Ind-1: System Water Audit, Leak Detection and Repair

BMP Implementation Date: _____ Completion Date: _____

Describe your existing or planned annual pre-screening water audit program. In calculating your pre-screening system water audit, determine all metered end uses and other verifiable -withdrawals in comparison total supply (well metered use) and if metered end uses plus other verifiable uses represent less than 85% of total supply, perform a full scale distribution system water audit. Attach copies of documents showing your pre-screening water audit results and, if applicable, the results of your full distribution system audit:

Describe your existing or planned leak detection and repair program which is used to reduce water loss and repair leaks when detected. Unaccounted water losses must be no more than 15% of total water supply in the system:

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

Estimated water savings: _____ acre-feet annually

Ind-2: Water Waste Prohibition

BMP Implementation Date: _____ Completion Date: _____

Describe your existing or planned water waste prohibition measures and/or actions taken to prohibit wasteful activities including runoff from property, landscape irrigation during peak water loss due to evapotranspiration (typically between the hours following 10:00 a.m. and 8:00 p.m.) , single pass cooling systems in new connections, non-recirculating systems in new conveyor car washes, non-recirculating systems in new commercial laundry systems, non-recycling decorative water fountains and other wasteful activities. Attach copies of documents supporting your water waste prohibition measures:

Estimated water savings: _____ acre-feet annually

□ Ind-3: Sub-Metering

BMP Implementation Date: _____ Completion Date: _____

Describe your determination of feasibility of installing sub-meters on facilities or equipment which compromise at least 20% or more of the permit holder's total water use. Attach copies of documents showing results of feasibility study:

Describe the benefits of installing dedicated landscape sub-meters. Attach copies of documents showing results of your feasibility determinations:

If you are unable to measure water usage during low flow periods due to the use of large meters, describe your reasons for not converting to turbo water meters or similar technology.

Estimated water savings: _____ acre-feet annually

□ Ind-4: Landscape Conservation Program

BMP Implementation Date: _____ Completion Date: _____

Describe your existing or planned landscape water use survey, which at a minimum includes measurements of total irrigable area, irrigation system checks and distribution uniformity analysis and review or development of irrigation schedules. Attach copies of results of landscape survey:

Describe your existing or planned method for developing reference or evapotranspiration (ET_o) based irrigation schedules equal to no more than 80% of ET_o. To assist you in developing an ET_o based irrigation schedule, visit the Texas ET Network website at <http://texaset.tamu.edu>. Attach copies of irrigation schedules and documents showing annual water savings:

Describe your existing or planned method for maintaining your irrigation system(s). Maintenance should include pre-irrigation system checks, adjustment of irrigation times when necessary, installation of rain sensors and regular view of irrigation schedules. Attach copies of documents supporting your maintenance of your irrigation system(s):

Estimated water savings: _____ acre-feet annually

□ Ind-5: Golf Course Conservation

BMP Implementation Date: _____ Completion Date: _____

Describe the location and dimensions of the golf course(s) and type(s) of turf:

Describe your existing or planned landscape survey used in determining reference evapotranspiration (ET_o) based irrigation schedules. Attach copies of landscape survey with estimated ET_o-based irrigation schedule and annual water savings:

Describe your existing or planned water regimen that uses only the amount of groundwater necessary to maintain the viability of the course and maintain the course in a safe condition:

Describe your existing or planned computer controlled irrigation system (CCIS) or similar technology used for achieving enhanced groundwater conservation and the cost effectiveness of using such technology. The CCIS should include computer controlled (digital operating system), software, interface modules, satellite filed controller, soil sensors, and weather stations:

If non-Edwards aquifer water is available, describe your existing or planned method to convert to use of such non-Edwards water. Include the implementation date or projected implementation date to convert to alternative water supplies. Use of reclaimed, reused and/or recycled water by golf courses located on the Recharge Zone must meet Texas Commission on Environmental Quality (TECQ) water quality standards for treated effluent. For non-Edwards alternative water, attach a copy of any letter of commitment and a copy of TCEQ's permit to use treated effluent:

Estimated percentage of Edwards Aquifer water converted to alternative water source(s): _____ acre-feet annually

□ Ind-6: Athletic Field Conservation

BMP Implementation Date: _____ Completion Date: _____

Describe the location and dimensions of the athletic field(s) and type(s) of turf:

Describe your existing or planned water regimen that uses only the amount of groundwater necessary to maintain the viability of the turf and maintain the turf in a safe condition:

Describe your existing or planned landscape water-use survey and reference evapotranspiration (ET_o) based irrigation schedules equal to no more than 80% of reference evapotranspiration. The survey must include measurement of total irrigable area, irrigation system checks and distribution uniformity analysis, and review or development of irrigable schedules. To assist you in developing an ET_o based irrigation schedule, visit the Texas ET Network website at <http://texaset.tamu.edu>. Attach copies of landscape survey with estimated ET_o-based irrigation schedule and annual water savings:

Indicate whether your landscape use exceeded 20% of total water use and whether there was a need to install a dedicated landscape meter:

If cost-effective to implement, describe your existing or planned computer controlled irrigation system (CCIS) or similar technology used for achieving enhanced groundwater conservation and cost effectiveness of using such technology. The CCIS should include computer controlled (digital operating system), software, interface modules, satellite field controller, soil sensors, and weather stations:

Estimated water savings: _____ acre-feet annually

□ Ind-7: Nursery Conservation

BMP Implementation Date: _____ Completion Date: _____

Describe your existing or planned water regimen that uses only the amount of groundwater necessary to replace evapotranspiration and to maintain the viability of the plants. Water regimen should include multiple watering zones and groundwater must be applied through usage of current irrigation techniques such as low-pressure sprinklers and/or micro irrigation systems:

Describe your existing or planned mulching practices and soil amendments:

Describe your existing or planned water recovery and reuse system:

Estimated water savings: _____ acre-feet annually

Ind-8: Cooling Tower Conservation

BMP Implementation Date: _____ Completion Date: _____

Cooling Tower Description/No.:	Cooling Capacity of Tower (in Tons)

Describe the process the cooling tower is used for:

Describe the system requirements for the cooling tower:

Cooling Tower Description/No.:	Required Water Temperature:	Volume of Water Required by Tower:	Duration of Flow (Hrs/Day):

Water use records for each tower that includes the following:

Cooling Tower Description/No.:	Amount of Bleed-Off Water Used (Gal/Day):	Amount of Make-Up Water Used (Gal/Day):	Number of Cycles of Concentration (Measured by Productivity)

Ind-8: Cooling Tower Conservation (Continued)

Describe the methods and sensors used to control bleed off:

Describe any alternate water source used for composing make-up water:

□ Ind-9: Conservation Program for Industrial Permit Holders

BMP Implementation Date: _____ Completion Date: _____

Describe the existing or planned water use survey used to evaluate all water using equipment and the conservation measures and expected payback:

Describe the existing or planned alternate program, in lieu of water-use survey, that allows reduction of water by 10% of baseline usage annually.

Estimated water savings: _____ acre-feet annually