

WATER CONSERVATION PLAN

FOR

WIEDENFELD WATER WORKS, INCORPORATED

CERTIFICATE OF CONVENIENCE & NECESSITY

NUMBER 12052

2010

WATER CONSERVATION
WIEDENFELD WATER WORKS, INCORPORATED

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WATER CONSERVATION PROGRAM

WIENFELD WATER WORKS, INCORPORATED CCN 12052

CHAPTER 1. WATER CONSERVATION PLAN

1.1 INTRODUCTION

Raymond C. Wiedenfeld, dba Wiedenfeld Water Works began as an owner/operator of public water systems in 1986. On 27 February 1997, Raymond C. Wiedenfeld transferred all personal assets, encumbrances and rights to Wiedenfeld Water Works, Incorporated; Charter No. 1329419, which was certified by the Secretary of State on 14 October 1994.

Wiedenfeld Water Works, Incorporated is an Investor Owned Utility (IOU) dealing with Public Water Supplies, for which is regulated by the Texas Natural Resources Conservation Commission (TCEQ) having authority, principally provided in 30 TAC, Chapter 291 and 31 TAC, Chapter 290.

CCN #12052 currently includes 13 individual Public Water Systems in Kendall, Kerr, and Medina Counties, Texas serving approximately 770 customers.

The source of water for all systems is groundwater, predominately produced from the Trinity Aquifers. An exception, being a system in Medina County, which is primarily supplied by the Edwards Aquifer (recharge zone).

The utilization of a Surface Water Source may be available to some of systems in the vicinity of Kerrville & Center Point (unincorporated areas of Kerr County) by the year 2015. The Upper Guadalupe River Authority, Kerrville, Texas is evaluating feasible areas within Kerr County for providing treated surface water on wholesale terms.

The Water Conservation Plan involves the conscientious utilization of a limited resource, while the Water Rationing Program specifies curtailment of usage during periods of emergency conditions and limited supplies.

The purpose of the water conservation plan is a continual implementation and practice of the most efficient use of the available water resources. This plan attempts to describe the methods and means by which water conservation is to be achieved. The various methods are employed throughout the year regardless of water demand.

1.2 GOALS

The goals of this plan are based on improving the poor performance of the past and include the following:

- a. to establish an effective educational program with available materials that will promote the various practices of water conservation, conscientious use and reuse of available water supplies.
- b. to achieve the following total production rates of: a 88 gpd/person by year 2010, 80 gpd/person by year 2020, and 72 gpd/person by year 2050.
- c. To reduce utility water losses (those differences in volume between that produced by utility versus that metered to the customer), <20% by the year 2010 (35 gpd/person), <15% by the year 2020 (25 gpd/person), and < 10% by the year 2050 (15 gpd /person).
- d. To meet the expectations of my customers.

1.3 UTILITY EVALUATION

The following evaluation of each utility is provided as an aid in evaluating the potential effectiveness of the proposed conservation measures:

INDIVIDUAL SYSTEM ANALYSIS

KERR COUNTY

CEDAR SPRINGS

Cedar Springs MHP water system, PWS # 1330019, is located approx. 1 mile west of Ingram, TX, adjacent to and north side of US Hwy 39. This system was acquired in 2004.

CENTER POINT

Center Point Water System, PWS Id. # 1330007, is located in the northwest portion of the city of Center Point, Kerr County, Texas, generally the area bounded on the north by Hwy 27, on the south by the Guadalupe River, and on the east by FM 480. The service area includes approximately 63 acres, being a 2100 ft. x 1300 ft. rectangular area.

HERITAGE PARK

Heritage Park Water system, PWS #1330080, is located approx. 2miles northeast Center Point, TX and being approx. 1 mile north of US Hwy 27. This system was acquired in 2002.

HILLS 'N DALES

Hills 'N Dales Water System, PWS Id. # 1330030, is located approximately 2.0 miles west of Ingram, Texas, adjoining State Hwy 39. The service area includes approximately 330 acres, being a 2400 ft. x 6000 ft. rectangular area north of State Hwy. 39.

OAK RIDGE

Oak Ridge Water System, PWS ID #1330134, is located approx. 2 miles north of Hwy 27 on Stoneleigh Rd., Center Point, TX. The Service area includes the boundaries of the 28.2 acres of platted subdivision. This system was acquired in Nov. 2006.

SOUTHERN HILLS (Montebello & Silver Creek)

Southern Hills Water System, PWS Id. # 1330128, is located approximately 4.5 miles south of downtown Kerrville, Texas adjoining State Hwy 16. The service area includes approximately 960 acres, from Hwy. 16 westward to Kerrville South Drive, bounded on north by Hidden Acres Drive (& eastward to HWY16) and on the south by Kerrville South Drive (& continuing eastward to Hwy 16). This system serves, after 2002, the previously identified systems as:

Montebello Estates Water system, (formerly PWS id # 1330067), is located approx. 4.0 mile south of downtown Kerrville, Texas and bounded by Calcotte Dr. & Kerrville South II Dr. on the west, Nixon & Shadow Drive on the North, and Codrington Drive on the south. The service area includes approximately 280 acres with 24 customers and was expanded in 2004 to include the extent of the Hidden Acres Drive properties.

Silver Creek Water System, (formerly PWS Id. # 1330114), is located approximately 4 miles south of downtown Kerrville, Texas adjoining to State Hwy. 16. The service area includes approximately 69 acres, being a 1200 ft. x 2500 ft. area west of State Hwy. 39.

VERDE PARK ESTATES

Verde Park Estates water system, PWS Id # 1330027, is located approx. 1.0 mile south of Center Point, Texas, bounded by FM 480 on the West, Elm Pass Rd. on the northeast, and with the remaining North, East, and south generally, being the boundary of a subdivision. The service area includes approximately 424 acres.

VISTA HILLS

Vista Hills water system is unregistered, located approx. 2.0 miles west of Hwy 16 and east of Scenic Hills Drive, Kerrville, Texas. The boundaries are co-terminus with Vista Hills Subdivision and include 75 acres.

WESTWOOD

Westwood Oaks water system, PWS # 1330015, is located approx. ½ mile west of US HWY 27 on Westwood Drive or approx. 1 mile southwest of Comfort and just inside Kerr County. The system encompasses approx. 110 acres as a platted Subdivision in early 1970's. This system was acquired Eddie Taylor in Nov. 2006.

WINDWOOD OAKS

Windwood Oaks water system, PWS # 1330141, is located approx. 5 miles south of Kerrville, TX and 1 mile west of Hwy 173 and adjacent on the north side of FM 2771. System was acquired in 2004

WOODHAVEN

Woodhaven Water System, PWS Id. # 1330024, is located approximately 5 miles west of downtown Kerrville, Texas adjoining south side of State Hwy. 27 and bounded on west by Riverview Drive, Ingram, TX.. The service area includes approximately 18 acres in 2006.

KENDALL COUNTY

PLATTEN CREEK

Platten Creek Water System, PWS Id. # 1300035, was acquired in 1996 and is located approximately 18 miles north of Boerne, Texas adjoining Farm-To- Market 1376 and eastward along both sides of Platten Creek Drive. The service area includes approximately 196 acres.

MEDINA COUNTY

ROCKY CREEK

Rocky Creek Water System, PWS Id. # 1630038, is located approximately 2 miles southwest of Mico, Texas adjoining County Road 265. The service area includes approximately 320 acres within the platted subdivision and approx. 100 acres in 3 tracts outside. This system was acquired in 1996

Annualized Groundwater Withdrawal (acre-feet)

Water System	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Kerr County										
Center Point	14.5	11.7	9.8	8.9	10.9	11.0	10.7	9.7	9.8	12.8
Verde Park	21.0	17.1	14.6	12.5	11.2	13.8	12.0	11.6	13.2	12.5
Silver Creek	26.5	21.8		4.8						
Southern Hills	19.4	23.2	38.4	34.9	52.7	40.4	40.4	41.9	45.8	47
Montebello	5.8	4.9	4.6	7.0						
Woodhaven	7.0	8.2	6.1	7.0	6.5	6.7	6.7	6.4	7.5	6.2
Hills-n-Dales	17.1	15.6	15.3	12.4	16.2	14.7	15.6	13.4	17.3	16.4
Heritage Park			4.6	8.4	6.3	6.8	7.5	5.4	5.9	5.4
Cedar Springs					6.8	7.4	8.9	8.3	8.9	8.2
Vista Hills					7.1	6.5	5.3	2.3	2.9	2.6
Windwood				1.1	1.5	2.4	2.4	3.3	5.1	3.8
Westwood								25.9	29.2	25.0
Oak Ridge								8.9	9.9	9.2
Totals	111	102	99	100	119	110	109	138	155	150
Kendall County										
Platten Creek	5.8	6.3	8.4	6.2	6.1	6.7	7.1	6.8	8.2	7.4
Medina County										
Rocky Creek	8.9	8.3	8.9	8.9	6.4	7.5	7.1	6.8	8.6	8.2
Customer usage (billed)										
Kerr County	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Center Point	11.4	10.0	8.9	8.9	11.0	9.3	8.8	8.4	8.6	9.8
Verde Park	13.3	11.6	10.5	10.1	11.2	11.7	10.8	10.0	12.3	11.3
Silver Creek	20.6	17.2	8.9	3.6						
Southern Hills	12.9	15.8	28.6	18.9	37.1	36.2	37.4	38.8	44.7	47.2
Montebello	5.5	4.7	4.3	4.5						
Woodhaven	6.9	7.0	5.8	6.6	5.8	6.4	6.3	6.0	7.2	5.8
Hills-n-Dales	12.8	11.5	12.1	12.4	11.2	12.6	12.9	12.0	14.0	14.0
Heritage Park			4.1	6.4	5.2	5.7	6.2	4.6	5.3	4.7
Cedar Springs					6.1	6.2	6.6	6.6	7.7	7.5
Windwood					6.8	6.1	5.1	3.1	4.3	3.6
Vista Hills			0.6	1.2	1.7	2.1	2.5	2.4	3.5	2.7
Oak Ridge								7.6	8.3	8.3
Westwood								23	26.9	23.0
Totals	83.8	78.0	80	8.	96	96	97	125	145	136
Unaccounted for water %	24	24	15	17	19	13	11	9	7	4
KENDALL COUNTY										
Platten Creek	5.8	6.1	6.6	5.8	5.9	6.7	7.1	6.0	7.6	7.0
Unacct for water %	10	4	21	7	2	10	1	11	7	5
MEDINA COUNTY										
Rocky Creek	5.5	5.6	5.6	5.4	5.6	7.5	6.8	5.6	7.2	6.5
Unacct for water %	38	32	10	26	13	15	7	14	16	21

UTILITY GROWTH

Customers/system

Water System

Kerr County	1990	1995	2000	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Center Point	48	52	57	52	48	53	52	53	58				
VerdePark	37	47	55	59	58	61	67	63	63				
Silver Creek	63	82	84										
Southern Hills	15	26	80	202	206	221	235	232	257				
Montebello			22										
Woodhaven	37	31	33	34	33	37	35	34	33				
Hills-n-Dales	45	60	67	69	68	71	73	73	73				
Heritage Park				28	27	26	26	26	27				
Cedar Springs				48	46	47	48	47	47				
Windwood				18	18	18	19	19	19				
Vista Hills			3	7	12	11	13	12	12				
Oak Ridge						40	41	39	42				
Westwood						94	101	97	98				
Kendall County													
Platten Creek		20	29	33	35	34	34	35	35				
Medina County													
Rocky Creek		14	29	32	33	34	35	35	35				
TOTALS	245	332	453	584	584	747	779	765	799				
Growth Rate: % increase from previous yr	2.5	3.5	5.9	4.4	0	4	5.4	-1.8	5.0				

PROJECTED GROWTH

(Customers estimates based on 2.5% annualized growth)

Water System	2000	2005	2008	2009	2010	2020	2050
Kerr County							
Center Point	57	48	53	58	60	65	65
Verde Park	55	58	63	63	66	86	115
Silver Creek	84						
Southern Hills	80	206	232	257	226	266	326
Montebello	22						
Woodhaven	33	33	34	33	36	38	44
Hills 'n Dales	67	68	73	73	70	75	85
Heritage Park	22	27	26	27	32	38	38
Cedar Springs	44	46	47	47	50	52	56
Windwood	16	18	19	19	19	19	19
Vista Hills	2	12	12	12	14	24	40
Oak Ridge			39	42	42	43	45
Westwood Park			97	98	106	120	125
TOTAL	398	516	695	729	721	726	958
Kendall County							
Platten Creek	29	35	35	35	35	40	43
Medina County							
Rocky Creek	26	35	35	35	40	50	70
TOTALS	453	584	765	799	796	816	1069

1.4 Customer education and information program

Wiedenfled Water Works, Incorporated will promote water conservation by informing customers of ways to conserve water, primarily through identifying non-essential uses. The following are examples of programs that will be utilized:

- a. Each current customer will receive a copy of the approved Water Conservation Plan and the approved Drought Contingency Plan upon application for water service.
- b. Annually and upon declaration of Stage I drought, customers will receive a copy of an updated list of “Water Saving Ideas” (Appendix B).
- c. Customers will receive an annual report of their monthly usage, with a survey of water-conservation practices they employed during the year.
- d. Customers using unusually high volumes of water between months will be notified and requested to perform a water audit in and outside their home.

1.5 Water conserving rate structure

A uniform rate for all water systems was approved by TCEQ in Spring 2009, but having an effective date of 20 Dec 2008, and contained a tiered usage rate structure, as well as a proportional tiered rate structure during drought or limited supply periods;

normal operation (non-drought stages):

<u>Residential usage</u>	<u>Rate</u>
0 gallons	\$ 30.00 (minimum)
0 - 9,999	\$ 4.00/1000 gal.
>10,000	\$ 6.00/1000 gal.

Conservation Rate (drought conditions)

Stage II	Stage III	Stage IV	per 1000 gallons for
\$4.44	\$5.00	\$5.71	additional gallonage 0-10,000
\$6.60	\$7.20	\$7.80	additional gallonage over 10,000

Commercial and industrial customers are not present or anticipated in future.

1.6 Universal metering and meter testing program

Wiedenfled Water Works, Incorporated is required by Rule to meter each customer and supply source (each well). Additionally, where possible, meters are used to record flushing activities. WWW, Inc. doesn't supply unmetered water for public or related purposes.

Positive Displacement or Compound type meters, meeting AWWA public water supply accuracy standards, are used by WWW, Inc.

Annually, > 2% of all utility's meters suspected of being inaccurate or over 10 years old are planned to be replaced. Proper operation of each meter is ensured by approved testing standard. Meters will be checked for accuracy at low (0.25 GPM) and moderate (5 GPM) flow rates. All meters having an **error of >3 % or not registering flows < 0.25 GPM will be replaced.**

1.7 Unaccounted Water Loss audits and leak detection

Wiedenfled Water Works, Incorporated has implemented an UNACCOUNTED/WATER LOSS PROGRAM, found in Appendix “C”, to better manage water usage:

- a. **Monthly and annual review of unaccounted water**, to include well production in relation to metered usage.

- b. Monthly reports from the operators, accounting for water losses resulting from leaks and the associated repair process, storage tank overflows, fire hydrant use, main flushing and etc.
- c. Monthly (or sooner upon suspicion of leaks), operators will inspect water lines.

1.8 Plan implementation and enforcement

The plan is adopted by the Board of Directors for Wiedenfeld Water Works, Incorporated as evidenced by Resolution, and attached as Appendix “A”. The President and staff will oversee the execution and implementation of all elements of the plan.

Conservation of limited supplies is addressed in Chapter 2 and is enforced by provisions of WWW, Inc.’s **Drought Contingency Plan** adopted as Resolution 08-2 and approved by TCEQ.

This plan and appropriate records are available to the public for evaluating the effectiveness of this water conservation plan.

Copies of the educational & informational items mailed to customers during the past year will be provided to requesting authorities.

1.9 Periodic plan review

The President of WWW, Inc., annually will review, update and revise this plan prior to an annual public meeting held by WWW, Inc.

1.10 Coordination with groundwater districts and appropriate regional water plans

Regional Planning Groups “J” (Plateau) & “L”(Edwards) will receive a copy of this Plan for their consideration in developing Regional Water Conservation Plans. If necessary, WWW, Inc. will revise this plan to comply with provisions of the Regional Plans.

Applicable Groundwater Conservation Districts (created by legislative act or by Chapter 35, Texas Water Code) will receive a copy of this plan annually. If necessary, WWW, Inc. will revise this plan to comply with provisions of their Rules.

1.11 Reservoir system operation plan (n/a)

WWW, Inc. does not own, control, or have responsibility for the operation of surface water storage reservoirs.

1.12 Utility conservation Practices

WWW, Inc.,in addition to above measures, will:

- a. attempt to reduce water pressures to the extent possible, while meeting minimum requirements for all customers,
- b. minimize water losses during water treatment processes, and
- c. minimize watering of utility owned landscapes at all times, and
- d. minimize or eliminate unmetered water uses, and
- e. repair leaks as soon as possible, and
- f. eliminate storage tank overflows, and
- g. reduce line flushing by eliminating dead-ends

APPENDIX "A"

**RESOLUTION FOR THE ADOPTION
OF A
WATER CONSERVATION PLAN**

WWW, INC. RESOLUTION NO. 09-1

A RESOLUTION OF THE Board of Directors of the WIEDENFELD WATER WORKS,
INCORPORATED
adopting a WATER CONSERVATION PLAN-2009.

WHEREAS, the Board recognizes that the amount of water available to WIEDENFELD WATER WORKS,
INCORPORATED and its water utility customers is limited and subject to increased demands with utility growth; and

WHEREAS, the Board recognizes the need for the conscientious utilization of a limited resource and the most efficient use of
the available resources; and

WHEREAS; as authorized under law, and in the best interest of the customers of WIEDENFELD WATER WORKS,
INCORPORATED, the Board deems it necessary and prudent to establish policies for the efficient management of limited
water supplies;

NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE *WIEDENFELD WATER WORKS,
INCORPORATED*:

THAT the WATER CONSERVATION PLAN attached hereto as Exhibit A and made part hereof for all purposes be
and the same is hereby, adopted as the official policy of the WIEDENFELD WATER WORKS, INCORPORATED;

THAT the PRESIDENT is hereby directed to implement, administer, and enforce the WATER CONSERVATION
PLAN-2009;

THAT this RESOLUTION shall take effect immediately upon passage.

DULY PASSED BY THE BOARD OF DIRECTORS OF THE *WIEDENFELD WATER WORKS, INCORPORATED*, ON
THIS 1st DAY OF FEBRUARY, 2009.

President, Board of Directors

ATTESTED TO:

Secretary, Board of Directors

APPENDIX “B”

WATER CONSERVATION IDEAS

A. GENERAL INFORMATION

1. “Waste” of water is prohibited by law, and includes the following examples:
 - A. not beneficially using groundwater, and
 - B. willfully or negligently allowing groundwater to escape your property.

2. **Water conservation plumbing fixtures**, if not already present in your home, should be installed as an effective means to conserve usage. Since 1992, the following fixtures are considered low-flow or water conservation types:
 - i. Toilets 1.6 gallons/flush (GPF)
 - ii. Wall-mounted toilets 2.0 GPF
 - iii. Shower heads 2.75 gallons/minute (GPM)
 - iv. Faucet aerators 2.2 GPM
 - v. Urinals 1.0 GPF
 - vii. laundry machines adjustable water usage to match loads
 - viii. water softeners on-demand types rather than timed-event

Other fixtures that aid in conserving water:

 - i. Pressure reduction valves on incoming water supplies, set at 50 PSI or less.
 - ii. Valves placed liberally throughout interior and exterior plumbing aids in isolating and controlling leaks when immediate repair is unfeasible.
 - iii. Water softener eliminates scale buildup on rubber gaskets, such as toilet gaskets, causing leaking faucets seat.
 - iv. Plumbing that will allow capture of graywater
 - v. 2-6 gal. point-of-use hotwater heaters to eliminate the wait for hot-water.

3. Water recycling and reuse

Wiedenfeld Water Works, Incorporated encourages the reuse of graywater to the extent permissible by law and has recommended practices herein. Graywater now must be collected in a tank prior to applying to landscapes and includes showers, lavatories, tubs, and laundry (everything except toilets and kitchen sink) Owners should consider cost effectiveness for having separate plumbing.

4. Water use budget

Read your water meter no less than monthly on the same date as your water company, to include checking water meter dial for continuing operation when water use appears to have ceased. This will indicate the presence of a leak. (If the water meter is not registering a known water leak, please contact your water company for checking and possible replacement with an accurate meter.)

Use your water meter to determine usage of major water use events, such as: watering lawn, washing clothes, washing car, morning and evening periods, etc.

For determining more exact water use information, utilize a “rain gauge” and stop watch to estimate flows and usage from showers, sinks and other routine or standardized use patterns.

5. Rainwater

Due to the extreme weather patterns, population growth, aquifer water level fluctuations(water availability), and the limitations on using potable water by Utility Drought Contingency Plans in the future, I highly recommend the use of rainwater to maintain your investments in landscaping around your home.

B. CONSERVATION PRACTICES INSIDE THE HOME

1. Leak detection
 - a. Shut-off all faucets (eliminate water usage) and then inspect your water meter for continuing dial rotation. Check all faucets for drips.
 - b. Toilet: pay attention to those dripping sounds and fix any leaks. Hard water ruins rubber parts over time. Periodically remove the top of the toilet tank and watch it flush. If there are any leaks replace that flapper or rubber washer. Add a few drops of food coloring or a dye tablet to the water in the tank, but do not flush the toilet. If the coloring appears in the bowl within a few minutes, the toilet has a leak that need to be repaired.
2. Take a shower instead of taking a bath. Showers with water efficient shower heads often use less water than taking a bath.
3. Clothes and dishwashers should utilize the appropriate water/load settings (full loads preferred).
4. Recycle, reuse or avoid waste of water.
 - a. Collect dish rinse water for watering plants.
 - b. Collect shower and sink flow prior to the onset of the desired water temperature (insulating hot water pipes to the points-of-use reduces water and energy use) for watering plants.
 - c. Avoid running the water continuously for brushing teeth, washing hands, rinsing kitchen utensils, or for cleaning vegetables.
 - d. Keep a container of drinking water in the refrigerator.
 - e. For pre-1992 toilets, place a commercial dam or quart-sized containers in tank to displace unnecessary water.
 - f. Install aerators on sink and lavatories faucets.

B. CONSERVATION PRACTICES OUTSIDE THE HOME

1. Landscaping
 - a. Xeriscape (native vegetation or minimal water-demanding vegetation) is strongly recommended in order to comply with the management plan of the Utility.
 - b. Information and reference materials on selections for trees, shrubs, grasses and flowers are available from TWDB, TCEQ, and Wiedenfeld Water Works, Incorporated, as well as, native plant organizations and local nurseries.
2. Watering practices
 - a. Avoid watering outdoors during dry, windy days. Water during the night or in above normal humidity to reduce evaporation.
 - b. Use a commercially available "moisture meter" to determine the soil's water content.
 - c. Utilize a drip-irrigation (or equivalent) system that can be a slow, time - regulated operation. Water deeply and infrequently.
 - d. Avoid the use of automatic systems and fine mist/aerosol spray irrigation.
 - e. Eliminate over-watering, which may run off your property and be considered waste.
 - f. Collect and/or divert rain to water outdoor plants or for other non-potable uses.
3. Maintenance
 - a. Don't scalp-mow your lawns (nature intended her vegetation to produce seed).
 - b. Fertilize lawns at least twice a year for root stimulation.
 - c. Mulch around trees and bedding plants. Mulch, as well as other evaporation barriers (i.e. hay, bark, leaves, plastic, or rock) help absorb and retain water in the soil, as well as, keeps soil cooler. Avoid bare ground, which also contributes to run-off.
 - d. every fall check & insulate plumbing, especially outdoors to avoid water loss after freeze damage.
4. General Non-essential water uses
 - a. Leaks in yard piping will show as green lush vegetation.
 - b. Use a bucket of soapy water when washing vehicles; use hose sparingly for rinsing.
 - c. Maximize the enclosure on stock watering troughs, outdoor spas, pools, and other large open water-containers to reduce water loss through evaporation.
5. Outdoor Plumbing (represents the biggest water losers)
 - a. Support and/or locate Yard spigots/faucets from being broken by dogs, lawnmowers, yard activity, etc.