

ORDINANCE #375

AN ORDINANCE OF THE CITY OF MONTEZUMA, GEORGIA ADOPTING THE ATTACHED WATER CONSERVATION PLAN AND ESTABLISHING PENALTIES FOR VIOLATION OF SAID PLAN.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MONTEZUMA

SECTION 1. WATER CONSERVATION PLAN ADOPTED

That the attached water conservation plan is to be implemented on date of adoption.

The City Clerk is hereby directed to publish the caption of this Ordinance as required by law.

PASSED AND APPROVED this 14th day of July, 2009 at a regular meeting of the City Council of the City of Montezuma, Georgia by the following vote:

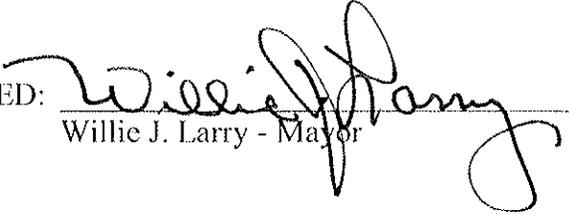
Yes _____

No _____

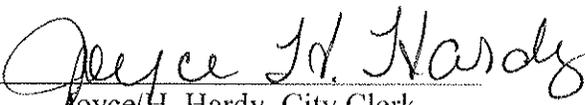
Abstain _____

Absent _____

APPROVED:


Willie J. Larry - Mayor

ATTEST:


Royce H. Hardy, City Clerk

CITY SEAL

WATER CONSERVATION PLAN

**CITY OF MONTEZUMA
WATER SYSTEM ID# 1930002
MACON COUNTY, GEORGIA**

INTRODUCTION

The Georgia Environmental Protection Division (EPD) mandates that the City of Montezuma must develop a Water Conservation Plan using EPD guidelines for the Montezuma Water System ID #1930002. The purpose of the Water Conservation Plan is to use measurable water conservation methodology to reduce drinking water loss in the Montezuma water system. The Water Conservation Plan will consist of strategies that utilize measurable bench marks in the areas of:

1. Water Conservation education of the citizens of Montezuma.
2. Maximizing the efficiency of the water treatment and delivery system.
3. Investigate a water conservation incentive based rate system.
4. Assist water customers in decreasing both indoor and out door water usage.

A current assessment of each area will be preformed. A plan will be developed and implemented which will have achievable goals with in a set time frame. City Hall and the Water and Wastewater Department will be responsible for developing and implementing the water conservation programs.

EDUCATION

Assessment: Currently the City of Montezuma issues a basic water conservation handout in the welcome packet to resident when a new account is set up. The City also holds regular Council meetings monthly. The City Council meets one time each month on the second Tuesday of each month. These meetings are open to the public and citizens have the opportunity to be informed or voice an opinion concerning the City's water system.

Proposed: An educational package will be developed based on the water customer's specific water usage patterns and needs (residential, commercial, and industrial) and recommend the most appropriate water saving methodology. The educational medium will be chosen based on the target group and can include but will not be limited to direct mail out, newspaper, radio, and presentations with local organizations to include the school system. The effectiveness of the education program will be difficult to assess but should be able to be measured by a decrease in water usage at each point of application and in the water system as a whole.

Schedule: Development of educational material, target groups and delivery methods should be accomplished by June, 2010. The final education package should be ready to disseminate by the January, 2011.

WATER SYSTEM EFFICIENCY

Assessment: A consistent water meter replacement program has not been implemented for some time and all the water meters are in need of replacement. The City is addressing water efficiency by replacing all water meters in the city and developing an “unaccounted for water” (UAW) method which will be the main tool to quantify if water conservation is occurring. The meter replacement project began in December, 2008 and the UAW tracking began in January, 2009 but is still in the developing stages.

Proposal: The main tool that will be used to measure the efficiency of the water treatment and delivery system will be the (UAW) calculation. This measure is expressed as a percent and is calculated as the difference between the amount of water pumped out of the City’s four wells (source water) and the amount of water that is actually delivered to metered water use customers. This will develop the baseline data to verify if improvements to the water system are actually conserving water.

The main water efficiency methods to be employed will be meter replacement and installing master meters through out the system to detect line breaks.

Meter replacement location and strategy:

1. Water System Meter Replacement – Replace all existing meters and identify water customers that are not metered. The City is in the process of replacing all meters with in the water system. This project was started in December 2008 and is 25% complete with a projected completion date of January 2011.
2. Water Plants Meter Replacement – Replace water meters at the water facilities (Water Plant #1 & #2). Each facility has two well flow meters and one main distribution meter. This will identify water loss with in the water production facility by comparing source water flow with distribution flow.
3. Water District Master Meter Feasibility Study and Plan - Develop water districts by distribution line configuration with each district metered. This will allow for early leak detection and repair as well as the ability to verify total usage for that district.

Schedule:

1. The City is developing a UAW program and projected completion is June of 2010.
2. Water System Meter Replacement – Projected completion by December, 2011.
3. Water Plants Meter Replacement – Projected completion December, 2009.
4. Water District Master Meter Feasibility Study and Plan - District mapping, metering plan and materials list will be prepared by January 2010. If it is feasible to implement a time table will be decided upon By June, 2011.

WATER CONSERVATION INCENTIVES

Assessment: The City uses a Residential Equivalent Unit (REU) tiered rate structure which gives high volume users a monetary incentive to conserve water as higher water usage increases the base rate. The City offers no other water conservation based incentives or rebates.

Proposal: A feasibility study will be preformed to investigate incentives that would conserve water and be economically viable for a sustainable water system.

Schedule: Complete the initial feasibility study by June, 2010 and recommend whether an incentive plan has merit or not.

DECREASING INDOOR AND OUTDOOR WATER USAGE

Assessment: The Cities basic water conservation handouts to new water customers have a section concerning indoor/outdoor water usage and ordinances are in place for water curtailment based on EPD guidelines. These ordinances are found in Article III, Division III, and Sec.94-106 to Sec. 94-118 of the City of Montezuma municipal code.

Proposal: To develop an approach that will combine both education and City ordinances to decrease indoor/outdoor water usage. Both educational literature and ordinances would be developed together and be distributed to water customers as outlined by the education program.

The main focus would be to:

1. Outline existing water curtailment ordinances and make them accessible to the public.
2. To developed, with public input, accepted water conservation methodologies such as but not limited to grey water usage and codify these practices.

Schedule: The indoor/outdoor usage program will be developed with the education program with initial assessments completed in June, 2010 and finalized in January, 2009.

UTILITY EVALUATION:

The Montezuma Water System serves a population of 3999 in approximately a 4.5 square mile area including the incorporated area of Montezuma, Georgia. The system is located at and around the intersection of State Highway 90, State Highway 26 and State Highway 49, approximately 21 miles northeast of Americus, Georgia.

- A. Population of Service Area (estimated) - 3999
- B. Area of service area - 4.5 square miles
- C. Number and type of service connections – Residential: 1380 / Commercial: 246
- D. Water use information:
 - 1) Average Daily water production for the last two years – 696,850 MG January 2007 to December 2008.
 - 2) Average monthly water purchase for last two years – 27,500,083 MG January 2007 to December 2008.
 - 3) Monthly water sales per period January 1, 2008 to Dec. 31, 2008 totaled 126,701,000 gallons for a daily average of 347,126 gallons.

