

# EMA'S ENGINEERING TODAY

JANUARY 2012

*Information and Helpful Hints for School Districts and the Architects who serve them.*

**Texas ISD's can take action to control and reduce water consumption. The following are a few suggestions:**

- Conduct a water audit by meter and campus.
- Evaluate application of heat pump chillers for energy recovery and to eliminate water usage by cooling towers.
- Evaluate water irrigation controls and system layout.
- Conduct inspection for water leaks.
- Monitor monthly water usage bills for potential leaks or equipment not functioning properly.
- Retrofit low water usage fixtures.
- Contact **Gary Bristow, P.E., of EMA** at [gbristow@estesmclure.com](mailto:gbristow@estesmclure.com) for a copy of Water Efficiency Guidelines for Buildings and Equipment.



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## A few words from our president

**Welcome 2012**

**I hope you had a very Merry Christmas!**

In 2011, EMA increased our college client base as well as work for additional school districts and architects. Our commissioning service business grew significantly. EMA's preventive maintenance program/consulting using ASHRAE's Standard 180 helped clients save money and extend equipment life. More of our staff obtained certification such as Lighting Consultant, Commissioning Agent, LEED Accreditation, and Licensed Engineers. All of this is to provide additional value to schools, colleges, architects, and other clients using our engineering and consulting services. We welcome 2012 with excitement, energy,



and thankfulness for all the many professional relationships and friends. EMA will continue to focus on quick response and quality work to you. We will be cross-training more employees and mentoring the development of more project engineers. Also in 2012, you will see EMA's continued development of joint efforts with clients to expand procedures, policies, and practices that increase value to schools, colleges, architects, contractors, and others. Thanks again for your business and support. **Happy New Year!**

A handwritten signature in black ink, appearing to read 'Mike Clendenin'.

Mike Clendenin, P.E.  
President & CEO

## Water - The next blue or next green?

The **Environmental Protection Agency** has estimated that the United States needs **\$500 Billion of water infrastructure** over the next 20 years. Major companies are looking to invest in water because industries and communities depend on clean water, especially for growth. Water shortages are increasing the cost of some food

crops and other crops. Some investors are buying up water rights where they can get them. Some believe there is a fortune to be made in water for growing populations. People keep moving to areas where there is little water (e.g. Texas, Arizona). Demographers have projected Texas will have about twice as many people by 2060.

## Flat tire in the rain? In Texas, not likely!!

The twelve months from October 2010 through September 2011 were the driest for that twelve-month period in Texas since 1895, when Texas started keeping rainfall records. Many, if not most

Texas cities have implemented water-rationing programs. Take or pay water pricing/policies should be reconsidered because of so much water rationing.

## Texas water plan

In a severe drought and dwindling water resources, Texas is on track to adopt a five-year statewide water plan. The Texas Water Development Board (TWDB) approved the plan in December 2011 and it goes to the governor and Texas legislature

in early January 2012. For more information see [www.twdb.state.tx.us/](http://www.twdb.state.tx.us/). The TWDB's newsletter is very informative about the plan and other water conservation strategies.

## Company Spotlight

Congratulations! Ed and Jo Ann Cliver recently celebrated their 40th wedding anniversary! Ed has worked at EMA for 21 years and is a shareholder and member of board of directors.





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37 years  
585 Texas ISDs  
47 colleges and universities  
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the country

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**WATER CONSERVATION – PART 1**

**School Districts conserve water and save money.**

With record drought conditions, conserving water by consuming less, wasting less, or reusing more not only saves water but also saves money. Some very simple behavior changes and basic installations can make a difference in the amount of water you use. Here are some suggestions:

**Carrollton-Farmers Branch ISD Proactive to Reduce Water Consumption**

Utilizing aeration and ET (evapotranspiration) Sensors are two effective ways C-FB ISD has successfully reduced water consumption. “Before this extreme heat, the district had reduced water usage about 20% due to conservation efforts and water management practices of the maintenance people,” says C-FB ISD’s Victor Melton. Aeration promotes growth, results in deeper roots and requires less water. Athletic fields get compacted from heavy use, and aeration not only saves water usage/costs, but eliminates the cost of re-doing of the fields. With about 800 acres to maintain, C-FB ISD’s James Richards installed an ET Sensor at one field for use in adjusting irrigation watering. Eventually Richards would like to see ET sensors and flow control irrigation to effectively conserve water consumption for all C-FB ISD irrigation systems.

**Northwest ISD Water Conservation Action**

Water control is the main emphasis for the NISD irrigation systems. “The irrigation control system at Steele Accelerated High School is being developed as the model design for the District,” says Dr. Charles Ashby, NISD Energy Manager. The school already has an Alerton Energy Management Control System. So NISD is building on this system for water control by including flow meters to detect leaks, auto-shut-off valves to stop leaks, and notifier capability to alert maintenance of problems.

**Water Saving Strategies: School Survey**

EMA is conducting a brief (only 8 questions) water survey of top strategies districts are using to reduce water consumption. Results will be published in the next newsletter. If you as a school district employee would like to participate go to [www.surveymonkey.com/s/MR62VZS](http://www.surveymonkey.com/s/MR62VZS).

For more information, Call David Fisher, P.E. at 903-581-2677.