

# EMA'S ENGINEERING TODAY

FEBRUARY 2012

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

## Tyler ISD's Master Plan - A Fountain of Youth

Tyler Independent School District's Master Plan is a proactive approach for looking ahead and preparing for the future. The uniqueness of TISD's approach is that it incorporates preventive maintenance (PM) and budgeting for current year projects as well as the future by specific timelines, tasks, and costs. TISD's Director of Facilities Tim Loper says, "A key to our success is support from the school board." **Loper uses this PM approach to keep building infrastructure in good condition for the students' learning environment, to extend life of the infrastructure, and reduce overall operating costs for TISD.** The interactive continuous Master Plans include HVAC, paving, roofing, painting, and other infrastructure.

EMA worked with Loper to create, develop, and update periodically TISD's HVAC Master Plan. Full building surveys were conducted collecting information such as equipment identification, serial numbers, manufacturer, model, size or capacity, refrigerant, year installed, campus, specific location, working

life, replacement year budget, etc. All this data is located in an interactive continuous spreadsheet.

**"TISD is getting more life from the HVAC equipment than originally anticipated", says Loper.** "We are seeing 3 to 5 years more life than ASHRAE's predicted HVAC life because of our PM program". Filters are changed regularly, equipment is inspected and needed repair made in quick response, on a regular basis. Loper added, "We are finding that our PM results in HVAC coils needing to be cleaned less frequently."

TISD's strategy certainly results in a better learning and working environment. By extending the rated life of infrastructure TISD is saving the area taxpayer direct costs. **TISD's Master Plan is "A Fountain of Youth" for infrastructure.**

For more information contact EMA's Gary Bristow, P.E. ([gbristow@estesmclure.com](mailto:gbristow@estesmclure.com)) and also refer to EMA's website for previous newsletter articles on Preventive Maintenance and Master Planning.

## Save the Date

### We Will Be At TASBO 2012!!

Please stop by and see us!  
Exhibit Booth# 720  
February, 28-29, 2012  
George R. Brown Convention Center,  
Houston, TX

### Healthy Schools Environments Across Texas Conference

Garland ISD's Special Events Center  
April 23-24, 2012  
Contact Stacey Murphy, US EPA Region 6  
214-665-7116 or [murphy.stacey@epa.gov](mailto:murphy.stacey@epa.gov)

### National Engineers Week February 19 - 25, 2012

East Texas Area engineers, students, teachers, and guests will celebrate National Engineers Week with dinner and a program at LeTourneau University on Tuesday, February 21, 2012, in the Solheim Building. For more information/registration contact Mike Farren at [mfarren@eastman.com](mailto:mfarren@eastman.com).

## Company Spotlight

EMA's Tommy Fenter, P.E. and Catherine Hollenshead, P.E. recently passed the Lighting Certified exam. The exam and certification are administered by the National Council on Qualifications for the Lighting Professions. Congratulations Tommy and Catherine!



Tommy Fenter, P.E.  
BSEE, MSEE - Texas A&M



Catherine Hollenshead, P.E.  
BSEE - UT Tyler



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**ENGINEERING**

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Mechanical  
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Technology

Fire/Safety  
Lighting  
Master planning  
Media  
Research studies  
Sustainability  
Security  
Technology  
Workshops/Training

**CONSULTING**

Commissioning  
Communications  
Emergency power  
Energy

**SCHOOL EXPERIENCE**

37 years  
585 Texas ISDs  
47 colleges and universities  
Other schools throughout  
the country

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*WATER CONSERVATION – PART 2*

**School Districts Share Strategies**

EMA conducted a recent survey of some Texas ISD’s about their strategies and priorities to conserve water and save money. The following are results provided;

- 1. What are your top 3 water conservation strategies?**
  - Water audits and leak detection
  - Central control of sprinkler irrigation
  - Use of sensors such as evapotranspiration for amount of irrigation
- 2. Do you track water usage and costs on a monthly basis?**
  - 89% respondents said “yes”
- 3. Have you conducted a water audit in past 12 months?**
  - 67% respondents said “yes”
- 4. Most of the water usage in my district is for:**
  - 56% respondents said “Domestic”
  - 33% respondents said “Irrigation”
  - Remaining said “Domestic and Irrigation”
- 5. Do you have any type leak detection on your irrigation?**
  - 22% respondents said “yes”

- 6. Do you have irrigation systems metered separately?**
  - 100% respondents said “yes”

**Bottom Line**

School districts may conserve water and save money by implementing the above strategies. Since most water in schools is used for domestic purposes and irrigation, the following priorities are a great place to focus.

- Identify Leaks & Repair
- Install Low Flow Fixtures
- Control Irrigation

It’s not too late to participate in the  
“Water Saving Strategies: School Survey”.

Go to EMA’s website and see  
January 2012 newsletter for details.