



**Citizens Environmental Committee  
of the City of Arlington, Texas**

**Report and Recommendations on  
Water Conservation and Efficiency**

**For Presentation to the Mayor and City Council**

**February 19, 2008**



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## **Introduction**

### **Formation of the Committee**

The Citizens Environmental Committee (CEC) was created as a standing committee of the City of Arlington on January 10, 2006, through Council adoption of Ordinance 06-008. That ordinance originally established a nine-member Committee; this was subsequently amended on February 14, 2006, to provide for one additional member to be appointed by the Mayor.

### **Committee Membership**

The current membership of the Committee is as follows:

Michael Bobo, Chair - nominated by Mayor Robert Cluck  
Laurie Hines Ackerman - nominated by Mayor Pro Tem Ron Wright  
Roger Behgam - nominated by Mayor Robert Cluck  
Grace Darling - nominated by Council member Lana Wolff  
Glen Dixon - nominated by Council member Gene Patrick  
Terry Gratton - nominated by Council member Kathryn Wilemon  
Michelle Licater - nominated by Council member Mel LeBlanc  
Roy Miliner - nominated by Council member Steve McCollum  
Craig Savela - nominated by Council member Sheri Capehart  
Vacant membership - due to the resignation of LaWanda Staten, nominated by Council member Robert Rivera

### **Committee Charge**

The City Council's charge to the Citizens Environmental Committee is as follows:

The Citizens Environmental Committee (CEC) is charged with evaluating and recommending to the Arlington City Council initiatives and strategies for improving the quality of the natural environment in Arlington. These initiatives and strategies will focus on the following areas: air quality, solid waste/recycling, water quality, handling and disposal of household hazardous materials, clean-up events, restoration of natural habitat, "brownfields" information, and recommendations for developing and implementing "green building" standards that ensure energy-efficient and environmentally-conscious construction of City buildings to the extent attainable under budgetary constraints. The CEC will select a single policy area on which to focus, meet periodically (not less than four times per year) to gather information and formulate its recommendations, and submit those recommendations to the City Council before moving on to another policy area.

The policy area addressed by the CEC in 2007 was the formulation of recommendations on water conservation and efficiency. This document includes an overview of the CEC's work in that area, along with recommendations on water conservation and efficiency for the City Council's consideration.

### **Meeting Schedule**

The Committee met eight times from May to December 2007 to address this topic. The regular meeting schedule is the evening of the third Wednesday of each month in the Council Briefing Room at City Hall (subject to availability).

## **Report and Recommendations on Water Conservation and Efficiency**

### **Presentations and Committee Discussions**

The Committee began its work by receiving a presentation by Travis Andrews, Assistant Director of the City's Water Utilities Department, on that department's proposed changes to its Water Conservation Program, scheduled for implementation during FY 2008. The primary change would involve adding a new upper-tier rate for water usage. The new rate would be \$3.50/1,000 gallons for all usage over 29,000 gallons per month. Currently, the highest rate tier is \$3.00/1,000 gallons for usage over 16,000 gallons per month. Mr. Andrews noted that the new rate is designed to highlight the importance of conserving water used outdoors, which comprises about 50 percent of all water usage in the City.

The new rate will generate an estimated \$1.0 million in additional revenues. This revenue will be spent for: Programs to reduce water use and improve water use efficiency, including low-flow toilet distribution, water use audits, incentives for converting to low water-use landscaping, and public education (\$160,000); City facility landscaping conversions and conservation rebates (\$120,000); and selected capital improvement projects (\$720,000).

The Committee noted the comparison rate chart included in the presentation, and several members observed that Arlington's new rate will still be lower than the upper rates in Fort Worth, Dallas, and Austin, and will trigger at a higher usage threshold than those cities' upper rates. The members indicated that they would have little difficulty supporting an even higher rate (\$4.00 was mentioned) and/or a lower triggering usage threshold.

Throughout the course of its discussions, the Committee continuously confronted its most significant challenge: the inherent difficulty of devising strategies for conserving a natural resource that, in comparison to other resources, is not broadly perceived as being very expensive . . . and therefore, not scarce. The Committee noted that, in the unregulated private sector, a scarce commodity is priced as such, which naturally promotes conservation. Dramatically increasing the price of water would be the surest way to reduce consumption. However, the City is constrained by municipal water pricing structures throughout the region and state, as well as the guidelines established for the City's Water Utilities Department, which does not seek to make a profit, but simply to generate sufficient revenue to cover its operational and capital expenditure needs.

Over the course of several meetings, the CEC requested and received clarifications from the Water Department on the new proposed rate structure. Overall, the Committee was very supportive of the proposed Water Conservation Program changes, and has included a recommendation on rate tier pricing in this report.

In an effort to make the topic more manageable, the Committee identified several broad policy areas in which opportunities may exist to improve water conservation. These areas were identified as:

1. Financial Incentives
2. Technology Improvements
3. Potential Changes to City Ordinances, Regulations or Programs
4. Green Strategies to Conserve Water

As with its topic on green building standards, the members agreed to choose a selected sub-topic within the discipline and report their individual research findings and preliminary recommendations back to the full Committee for consideration. Throughout the course of its meetings, the Committee received several reports and presentations from members that form the basis of the recommendations presented below.

### **Recommendations of the Committee**

The recommendations of the Citizens Environmental Committee on water conservation and efficiency are the following:

#### **Recommendation 1**

The City's Water Utilities Department should consider a higher water rate for usage in excess of 30,000 gallons per month. The current rate is \$3.50 for each 1,000 gallons above this usage threshold. The cities of Dallas and Fort Worth both have an upper-tier rate of \$4.00 or more. In Dallas, that rate applies above the 15,000 gallon-per-month level, and in Fort Worth it applies above 26,708 gallons per month. The Committee believes that a \$4.00 rate, and perhaps a lower triggering threshold, would be in line with regional pricing and would strengthen efforts to get the biggest consumers of the City's water resources to reduce their consumption. The Committee also recommends that the additional revenues generated by the higher rate be spent exclusively on supporting and expanding the department's Water Conservation Program.

#### **Recommendation 2**

The City Council should consider a resolution to decrease water consumption citywide, which could include a specific goal to reduce per-capita water consumption by a certain percentage over a stated period of time. Any targeted reduction should be consistent with goals and guidelines established by the state.

### **Recommendation 3**

The Committee strongly supports the elements of the City's new Water Conservation Program. Because approximately 50 percent of all water usage occurs outdoors, reducing water usage for irrigation and landscaping is a top priority. The City should begin the process of converting its landscaping at City facilities to low-water-use, SmartYard features as soon as feasible, and should continue to identify strategies to encourage and promote private landscaping conversions. The Committee notes that promoting water-efficient landscaping was one of its recommendations on green building standards; a 50 percent reduction in the use of potable water for landscaping at newly-constructed facilities generates one LEED-NC point.

### **Recommendation 4**

The Water Department could consider expanding the daily lawn watering restriction, which currently prohibits watering between 10:00 a.m. and 6:00 p.m. The restriction could be expanded to cover a longer period during the day, and the department could also consider an odd/even watering schedule (based on the last digit of a building's street address).

### **Recommendation 5**

The City Council should consider strengthening enforcement efforts of all City ordinances and policies related to water conservation. No exemptions to the provisions of these ordinances and policies should be granted for churches, schools, or other public or non-profit entities. The effectiveness of conservation ordinances and policies should be continuously monitored and periodically reported to the City Council and the public.

### **Recommendation 6**

The Committee believes that many opportunities exist to expand public education and outreach efforts to promote water conservation. Perhaps in partnership with the University of Texas at Arlington and the Arlington Independent School District, the City should consider programs in the following areas:

- Expanded newspaper and web site presence of water conservation advertising
- Public displays, information stands, workshops
- Publications of FAQs and tips for water saving in the home and outdoors, such as H<sub>2</sub>Ouse Water Saver
- Training for teachers and educators (e.g., Project WET)
- Integrating water conservation activities into school curriculum

- Public workshops on design, installation and maintenance of Texas SmartScape landscapes for homes and businesses
- Programs to publicize/celebrate those who save the most water by:
  1. Newspaper feature articles
  2. Saver-of-the-Week/Month on web site
  3. City Council certificate presentations at regular intervals
- Contests among specific groups for most water conservation
- Educational outreach to publicize the benefits of:
  1. “Turning off the tap” when brushing teeth, other opportunities
  2. Mulching and other “softscape” yard options
  3. Permeable “hardscape” options
  4. Artificial turf, where appropriate
- Rebates or reduced pricing for:
  1. Low-flow toilets
  2. Faucet aerators and shower head flow regulators
  3. Low-flow appliances (e.g., dishwashers, washing machines)
  4. Rain/freeze sensors for watering systems
- Free water usage audits

### **Recommendation 7**

The City should explore all opportunities to re-use waste water (effluent) from various sources, including the General Motors manufacturing facility and the Village Creek Treatment Plant, for appropriate non-potable uses such as landscape watering. The City Council should consider establishing targets for increasing the use of waste water in the City by specified percentages over a given period of time.

### **Recommendation 8**

The Committee believes that two key components of residential water conservation are appropriate landscaping and efficient watering schedules. The City should take steps to promote the use of native, drought-resistant landscaping that requires less watering and lower cutting maintenance (to reduce the use of mowers and blowers). The Committee’s research into residential watering practices leads to the conclusion that most lawns receive more water than they need. The City should establish and actively publicize more efficient lawn watering schedules that are appropriate for this region, a sample of which is included in the attachment below as part of Committee member Craig Savela’s presentation.

### **Recommendation 9**

The Committee notes that homeowner associations (HOAs) in the City may inadvertently impose restrictions in their communities that contravene water efficiency and conservation. The Committee recommends that the City review its ordinances to facilitate removal of restrictions imposed by HOAs that run counter to conserving water. The City should also expand its outreach to neighborhoods to offer ideas to HOAs about alternatives that will promote water conservation without reducing the attractiveness of residential neighborhoods.

### **Recommendation 10**

The Committee recommends that the City evaluate the following ideas and concepts for possible inclusion in appropriate City codes and ordinances.

1. A lower maximum for the percentage of the area occupied by a new facility (not including parking areas) that is covered in turf.
2. A requirement that all new residential irrigation systems be designed and installed by state-licensed irrigation specialists.
3. Better alignment and cooperation between the City's storm water and water conservation efforts. For example, increased permeability can reduce run-off and improve water efficiency by maximizing the benefits of rainfall.
4. Recommended percentages for permeable hardscaping and softscaping that should be incorporated into new facility site plans.

## **Summary and Conclusion**

Opportunities exist in several areas for the City to continue and expand its water conservation efforts. Perhaps the biggest challenge will be changing underlying attitudes about resource conservation, which can only be achieved through substantial increases in conservation-themed education at all levels. Changing attitudes and perceptions about conservation will be crucial for the City's future economic development efforts to be successful. Without significant changes in water consumption trends, future demands on the City's water resources are expected to increase beyond our ability to meet them. Promoting behavioral changes that conserve and make more efficient use of this natural resource is the only way to ensure that our future needs will be met.

Respectfully submitted,

The Citizens Environmental Committee

Michael Bobo, Chair  
Laurie Hines Ackerman  
Roger Behgam  
Grace Darling  
Glen Dixon  
Terry Gratton  
Michelle Licater  
Roy Miliner  
Craig Savela

**Presentations by Committee Members and Staff**

Roger Behgam - Water Conservation Strategies

Michael Bobo - Wastewater Reuse

Craig Savelle - Residential Water Conservation

Travis Andrews - Water Conservation Program Changes

Matt Young - Parks Department LEAF Program

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