Consider the Economic Benefits of Water-saving Landscapes

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At times when I'm traveling across the state preaching about the environmental and economic benefits of Xeriscape (pronounced Zera-scape for those who have a problem saying those X words), I can relate to Chicken Little and his proclamation "The Sky is Falling." The statement "we're running out of water" often draws the same sort of apathetic response.

Sometimes the Xeriscape concept even provokes negative comments from the audience. "You're killing my business!" said one irate commercial landscaper after hearing my presentation. "If I follow your advice and use less water, use less fertilizer and prune less often, I'm NOT going to be able to stay in business because I charge my customers for my time on the job," he added.

"That's not entirely true," I countered. "The Xeriscape concept can make you money. Let me show you how."

Xeriscapes not only are low-maintenance landscapes (another strong selling point in today's market), they also are economically practical. By implementing the seven steps of Xeriscape when designing a new landscape or retrofitting an existing landscape, you can reduce maintenance requirements and thereby reduce your fixed costs as well as those of your client, WHILE INCREASING YOUR PROFIT MARGIN!

For example, let's say your fixed cost (materials, labor and equipment) on the maintenance of a traditional landscape is $10,000. By implementing the Xeriscape approach to the same landscape occupying the same space, you will likely be able to reduce your fixed costs of maintenance by 20% or $2,000 (less input - less cost). Here are how the numbers might look in a hypothetical example of what I'm talking about:

Traditional Landscape Maintenance:	
Fixed Costs:	$10,000
Overhead (25% of fixed costs):	$ 2,500
Profit (25%):	$ 2,500
Total Job Cost:	$15,000
Xeriscape-type Landscape Maintenance:	
Fixed Costs:	$ 8,000
Overhead (25% of fixed costs):	$ 2,000
Profit (35%)	$ 2,800
Total Job Cost:	$12,800

Notice that by reducing your direct costs via less input, you can increase your profit margin by 10% and still save your clients'

money. In fact, if you were somewhat greedy, as I would be in the business world, you would have enough flexibility to increase your profit to 45% ($3600) and still come in with a bid $1400 less than the traditional landscape. Your client will love saving money, and you'll love him or her for making you money! A WATER-CONSERVING XERISCAPE NOT ONLY SAVES WATER . . . IT ALSO SAVES MONEY. What a powerful selling tool for this practical, low-maintenance approach to environmental conservation!

The economic benefits of a water-saving landscape can further be illustrated by using water and wastewater rate data for several cities in metro Atlanta[1]. Water rate data for seven cities in metro Atlanta having a uniform water rate structure was used to compute an average residential water rate per 1,000 gallons (see Table 1). A uniform rate structure is one in which the price of water per unit remains constant regardless of the consumption, so the cost of water is directly proportional to the amount of water used. Fifty-eight percent of the water utilities in metro Atlanta use a uniform rate structure, a structure which promotes water conservation.

Using the data in Table 1, an average water rate of $4.26/1,000 gallons was computed and used to compare water cost under various irrigation regimes typically specified in the Xeriscape model. Similarly, an average wastewater rate of $4.81/1,000 gallons was computed using data from six of the same cities (see Table 2). (It's interesting to note that wastewater disposal rates to carry the water off a property are higher, on the average, than the cost of water itself - guess that reinforces the old adage that it "costs more to leave this world than to enter it.")

Table 1. Water rate structure for residential water service for seven cities in metro Atlanta.

City	Base Rate [1] (1st 2,000 gal.)	Charge/1000 gal. (Over 2,000 gal)	Cost/7,000 GPM[2]
Austell	$6.93	$2.42	$19.03
Fairburn	$22.00	$2.48	$34.40
Fayetteville	$27.00	$2.40	$39.00
Lawrenceville	$4.84	$2.17	$15.69
Loganville	$23.10	$5.50	$50.60
Palmetto	$8.75	$3.75	$27.50
Powder Springs	$10.14	$2.57	$22.99
		Average:	$29.89
			$4.26/1000 gal.

[1] Rate for cities having a uniform rate structure. Charge shown is outside the city limits.
[2] GPM=gallons per month. The Atlanta Regional Commission uses 7,000 GPM as an average winter month water usage for a residential client in metro Atlanta.

Table 2. Wastewater rates for six cities in metro Atlanta

City	Base Rate[1] (1st 2,000 gal.)	Additional per 1,000 gal.	Charge Cost/7,000 GPM[2]
Austell	$10.75	$3.09	$32.38
Fairburn	$17.60	$2.31	$29.15
Fayetteville	$12.00	$1.65	$20.25
Loganville	$20.00	$6.20	$51.00
Palmetto	$4.50	$2.75	$18.25
Powder Springs	$6.36	$3.18	$22.26
		Average:	$28.26
			$4.81/1,000 gal.

[1] Rate for cities having a uniform rate structure. Charge shown is outside city limits.
[2] GPM=gallons per month.

Using water and wastewater rates from Tables 1 and 2, the next step was to calculate the projected annual cost of irrigation water and wastewater runoff per 1,000 square feet of landscaped area under the three water-use regimes promoted in the Xeriscape concept; high, moderate and low water-use zones. High water-use zones are limited areas in a Xeriscape where plants are provided supplemental irrigation as needed to maintain optimum growth and performance. Plants in the moderate water-use zones are watered only when they show signs of stress, while low water-use zones, the largest area in a Xeriscape, are not irrigated.

Typically one inch of water is recommended at each irrigation to thoroughly wet the root zone. This is equivalent to 600 gallons per 1,000 square feet, according to the literature, although these recommendations frequently fail to compensate for such things as soil type, existing soil moisture and temperature.

Using these data and the assumptions shown in Table 3, an annual average savings of $196.20 was shown for each 1,000 sq. ft. of landscaped area converted from a high water-use zone to a low water-use zone, while $87.20 could be saved annually for each 1,000 sq. ft. of landscaped area converted from a moderate water-use zone to a low water-use zone. If a typical residential property (° acre lot) contains 15,000 sq. ft. of landscaped area (trees, shrubs, turf and flowers), and as little as 20% (3,000 sq. ft.) of it is converted from a high water-use zone to a low-water use zone via a retrofit from water-demanding plants to drought-tolerant ones, an annual savings of $588.60 could be realized in water and sewage costs alone. Add to this savings realized through the reduction of other inputs (ie. fertilizers, pesticides and labor) and the annual savings could be well over $1,000; enough to pay for the retrofit in short order.

Table 3. Comparison of water and wastewater costs for 1,000 sq. ft. of landscape under three irrigation regimes.

Irrigation Regime[1]	Average Annual Water Cost	Average Annual Wastewater Cost	Average Annual Cost
High	$92.16	$104.04	$196.20
Moderate	$40.96	$46.24	$87.20
Low	0	0	0.00

[1] Assumptions: 1 in. of water=600 gal./1000 sq. Ft.
High Water-use Zone: Apply 1 in. irrigation water 4 times/mo: March-Oct.;
Apply 1 in. water 1 time/mo: Nov.-Feb.
Moderate Water-use Zone: Apply 1 in. irrigation water 2 times/mo: March-Oct.;
No irrigation: Nov.-Feb.
Low Water-use Zone: No Supplemental Irrigation

The moral of this rather lengthy scenario is that water-saving landscapes are not only an environmentally friendly approach to landscape management but also an economically practical approach you can bank on. Despite the growing public concern and interest in the environment, most clients are reluctant to adopt the water-saving principles just because it is good for the environment. But "show them the money" they can save, and they'll jump on the concept like fleas on a hairy dog (or is it spelled dawg?).

Today, more than ever, ***"The Environment is Our Business,"*** and profitability and success await those who make it a part of their business.

LITERATURE CITED

1. **Atlanta Region Water and Wastewater Rate Survey**, August, 1996, Atlanta Regional Commission, 200 Northcreek, Suite 300, 3715 Northside Parkway, Atlanta, GA 303327-2809.