Strategy #4:
Encourage Climate-Appropriate Landscaping

We can increase our water storage in normal rainfall years and increase our resilience in drought years by transforming our landscapes so that they need less water.

In decades past, the City focused on water conservation measures that reduced *indoor* water use. This focus was based on the idea that outdoor irrigation constitutes discretionary water use that could be scaled back in drought years when water curtailment is required. Outdoor water use was considered a buffer that protected more essential water uses from the need for cutbacks during drought. Reducing the amount of the buffer didn't seem like a good idea.

Recently it has become apparent that a focus on conservation in landscape irrigation would actually increase the City's drought year resilience:

- ✓ The less water used in the dry season of normal years, the more water is stored in Loch Lomond and aquifers in case of drought the following year. So reducing landscape irrigation maximizes the buffer of stored water.
- ✓ Drought-tolerant landscapes give the system more resilience. When people have invested in plants that need frequent watering to survive, they feel resistant to dialing back irrigation in drought years.

Learning from this year's drought

The big lesson from the customer response to the City's Stage 3 curtailment is that there is significant ability of customers to cut back on water use (elasticity in water demand). In its April forecast, the Water Department expected customers to reduce water use by 383 million gallons during the months of May through October. Customers have done better than that. The latest estimate from the Water Department is that water production will be 470 million gallons below last year during May-October.[1]

It will be valuable to read the Water Department's analysis of where the cutbacks in water use have taken place. In the meantime, is reasonable to assume that much of the cutback has been in landscape irrigation. If that is so, then there is a large amount of demand elasticity in landscape water use.

---

[1] Slide 54a, Document D, Agenda Packet for Water Supply Advisory Committee August meeting. As a result of customer response, Loch Lomond Reservoir is higher than projected in April's forecast, at 62% capacity as of September 3, 2014, rather than 55%.

A concerted effort should be mounted to analyze how to reduce landscape water use. The draft Master Conservation Plan does not provide measures that significantly impact landscape water use. For example, the estimated water savings from continuing the City's current turf-replacement rebate is just 1 million gallons per year. Doubling the rebate only saves 2 million gallons a year. Converting to water-budget based billing for landscape accounts is estimated to save only 7 million gallons per year---just 6% lower than these accounts would use without water budget billing. Comparing these small savings to the large reduction in landscape water use this year suggests a need to better understand how to achieve the untapped potential in landscape water use.

Here are some potential measures that could impact landscape water use:

- **Revise the water budget allotments.** The small (7 million gallons per year) savings from converting to water-budget based billing suggests that the allotments in the water budgets are high. Compare Maddaus' projected savings from the City's landscape ordinance, 8 million gallons per year. That's a savings between now and 2030 on the small number of properties that the ordinance covers: *new* landscape projects and accounts associated with business, municipal and multi-family properties. If that much water can be saved on a relatively small number of *new* projects, this suggests that existing landscapes can save a whole lot more.
- **Water budgets for *all* landscape accounts** not just the current large landscape accounts.
- **Price landscape water at Block 3 rates.** Currently single-family residential customers pay Block 3 prices for "average outdoor needs", while golf courses and dedicated landscape accounts pay Block 2 rates for landscape water.
- **Co-sponsor community efforts to promote climate-appropriate landscaping** such as the Native Garden Tour; Monterey Bay Friendly Landscape; etc. The City could provide recognition or a prize for customers who achieve a "Water-Friendly Landscape" rating.
- **Offer a free checkout of drip systems and training on how to use irrigation controllers**. We are finding many systems have leaks and are overwatering plants and most people struggle with programming their irrigation controllers. Many people have no idea on how much time to water plants. In some cases, we have reduced water use as much as 70% after a landscape review and repair.
- **Offer free greywater and rainwater evaluations for every property that receives City water.** Implementation of alternatives could save as much as 70% on water bills during the highest demand times. The goal being Water Neutral--zero municipal water used for irrigation.
- **Increase rebate incentive to convert lawn and shrub spray irrigation heads, including drip micro-spray heads, to drip tubing.**