

PROPOSAL PAPER

Independent Technical Panel on Demand Management Measures Final Report on California Landscape Water Use *1-18-16 Draft*

Section #3: ITP Vision Statement *(From the current draft outline)*

Section Title: Achieving Sustainable Urban Landscapes throughout California

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In the grip of a drought that is truly unprecedented in California's recorded history, communities throughout the state have been directed to curtail urban water use by 25 percent, and initial reporting indicates that most communities have met their goal thus far. Prior to these extraordinary reductions, approximately half of the urban water provided for all purposes in California was used outdoors, primarily for landscape irrigation. This staggering amount of potable water, roughly four million acre feet per year, illuminates the critical importance of the choices individuals and communities make about landscaping.¹

Functional and attractive landscapes are essential to our quality of life, providing places to recreate and relax, cooling the environment around buildings, offering wildlife habitat, and creating places of beauty. But the current drought is a reminder that the landscape designs we have brought to California, coupled with ingrained habits of water use, are not sustainable. Homes, businesses, and parking lots surrounded by vivid green turf make inordinate demands on the same water supplies we depend on for cooking, bathing, sanitation, and business activity. A cultural norm that originated in the English countryside is increasingly out of place in today's California – let alone, in a more populous California with an even warmer climate in the years ahead.

A break with the past would involve at least three key changes for new landscapes—

- Attractive water-wise plants would be used in place of most turf in ornamental lawns.
- Outdoor water use would be separately measured to allow for careful water management.
- Rainwater would be largely retained on site or nearby for landscape use or groundwater recharge.

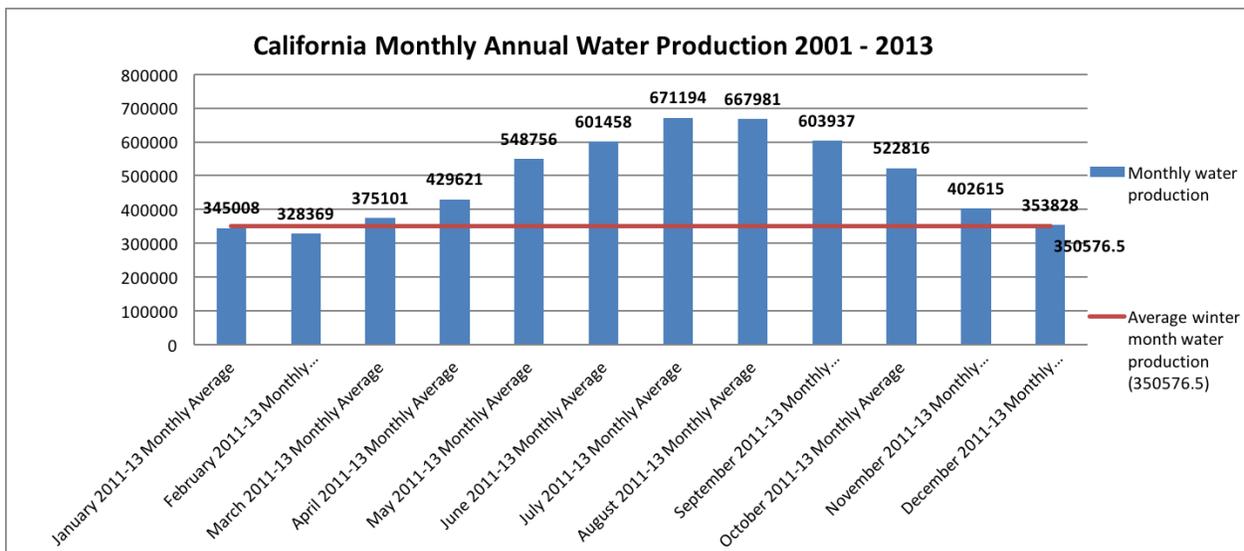
These same strategies can be applied to existing landscapes, albeit to a degree that is financially practical and at a pace that allows for public awareness and acceptance. The good news is that these practices are well known and available today. A growing selection of water-wise plant materials and more water-efficient irrigation equipment is available at home centers and nurseries around the state. A growing movement of landscapers and gardeners treat rainwater and stormwater as resources to be used on site, rather than as a nuisance to be quickly expelled from the property. And the remarkable

¹ Department of Water Resources. *California Water Plan Update 2013*. 2014. Section 3 – Resource Management Strategies. Chapter 3 – Urban Water Use Efficiency. 3-10.

enthusiasm for participation in turf conversion rebate programs is a sign that significant public interest is already here for making this transition.

Over the long term, water suppliers and their customers will benefit by a gradual but steady reduction in outdoor water use. Landscape water use is the most variable part of urban water demand – subject to wide swings in use between wet and dry years and from winter to summer. Nearly every urban water utility’s peak demands are shaped by landscape water use, and these peak demands drive requirements for costly conveyance, treatment, and distribution capacity (see Figure 1). A less thirsty urban landscape would mean less volatility in demand throughout the year and from one year to the next, and provide greater revenue stability for water suppliers and lower peak-related costs to be recovered from customers. Ideally, for many water suppliers, reduced landscape water use will improve the reliability of water supplies, allowing additional water to be drawn upon during future droughts.

Figure 1



The professional landscape industry will benefit through new and profitable business models, incorporation of new technologies, efficiencies, and a better trained and educated workforce while still creating and managing outdoor areas for enjoyment, relaxation, habitat and social wellbeing.

A Goal for the State: Reduce potable water use on urban landscapes by half over the next twenty years

The purpose of this report is to provide a comprehensive and complementary set of recommendations for adoption of the policies and practices that will make landscape water use far more sustainable than today. The ITP recommends a goal to reduce potable water use on urban landscapes statewide on the order of 50 percent from pre-drought levels over the next 20 years. This will result in an average annual savings of more than two million acre-feet, or about four times the amount of water used by the entire city of Los Angeles. In broad terms, these savings will largely come from three sources –

- Approximately 800,000 acre-feet from the replacement of roughly 140,000 acres of ornamental turf – about seven percent of the state’s turf area – with water-wise plant material;
- Approximately 800,000 acre-feet from improved irrigation equipment, plant selection, soil health, and rainwater catchment at other existing residential and commercial landscapes;
- Approximately 400,000 acre-feet from the application of stronger landscape water use standards for all new landscaping, as per the state’s Model Water Efficient Landscape Ordinance;

By 2035, the use of potable water on urban ornamental landscapes will be much less common than today. Residential and commercial landscapes will be attractive and functional, and will be largely sustained by natural precipitation where it falls, harvested rainwater, and on-site sources of water acceptable for landscape use. Such landscapes will retain most precipitation for storage, direct use, or recharge, rather than generating runoff.²

The use of recycled water can contribute to the reductions in potable water applied to urban landscapes recommended in this report. Recycled water provides a drought-proof local water supply whose availability is not subject to variations in weather. Because of this, recycled water should play an expanded role in the state’s efforts to reduce potable water use on urban landscapes.

There is no single program that will achieve these results, and it is unrealistic to expect that all landscape conversions will be financed with public funds. The policies and practices that will achieve these results will involve a combination of market forces, targeted incentives, reasonable regulations, improved business models, workforce preparation, evolving social norms, and applied research. Specific recommendations for each of these areas are contained in the chapters that follow.

² According to the California Urban Water Conservation Council’s *Achieving A New Normal in California Landscapes*, a watershed-based approach to urban landscapes promotes a balance between resource efficiency and protection, environmental stewardship and quality of life. It is a more collaborative and integrated way of managing water, soil, energy and air resources, as well as improving water quality, reducing runoff, protecting wildlife habitat, reducing waste and mitigating the effects of climate change.