

December 5, 2008

Via email: 2020comments@ccp.csus.edu

Re: 20x2020 Draft Technical Memorandum Task 5

Dear Members of the 20x2020 Task Force:

On behalf of San Francisco Baykeeper, we are submitting the following comments on the November 2008 *Conceptual Draft Technical Memorandum Task 5 – Potential Conservation Savings from New Actions* (TM5 Report) produced by the 20x2020 Task Force. San Francisco Baykeeper is the Bay’s pollution watchdog using science, litigation, and advocacy to benefit the Bay’s ecosystems and human communities.

The San Francisco Bay-Delta ecosystem is facing an unprecedented crisis and progressive measures must be taken to protect this important estuary. Baykeeper supports the 20x2020 team’s efforts to develop a comprehensive plan for improving the efficiency of urban water use and the 20x2020 team’s prioritization of conservation measures. Unfortunately, the State’s current baseline estimates indicate that only the San Francisco region would be able to meet the 20% goal by 2020.

The TM5 Report identifies additional actions and conservation tools that might be considered to enable other regions to meet the 20% goal by 2020. The Report characterizes Low Impact Development (LID) as a water management measure for “augmenting water supply, managing flood flows, and protecting water quality.”¹ Recent research at demonstration sites confirms that LID practices are highly effective to reduce runoff volumes, improve water quality, and collect a significant amount of water that can be used to irrigate lawns and in some cases, used for indoor water needs.² Despite the potential for rainwater capture devices to decrease potable water demand and significantly improve water quality, the TM5 Report only provides one LID-related recommendation—to encourage utilities to reduce the connection fees for new developments that incorporate LID. While we support this suggestion, we feel that the Program would benefit from stronger LID-related provisions. We recommend that LID be more prominently highlighted in the TM5 Report as a critical conservation tool to help achieve the 20% reduction goal statewide, including, but not limited to, the following recommendations:

1. Promote Retrofit.

The 20x2020 team’s suggestion to reduce connection fees should not be limited to the context of new developments. While new developments are a common occurrence in California, there is also vast opportunity for implementing LID techniques in the urban areas that are already built out. Rain barrels and cisterns can be easily retrofitted into existing urban infrastructure and the technology is readily available and can be implemented in a relatively cost-effective manner.³

¹ TM 5: Potential Conservation Savings from New Actions, p. 14.

² U.S. Environmental Protection Agency, 2000. *Low Impact Development (LID); A Literature Review*, EPA-841-B-00-005, Office of Water and Low Impact Development Center, Washington, DC, October, p. 41; *Rainwater as a Resource*, TreePeople (2007) p. 56.

³ New State Department of Environmental Conservation (2008) New York State Stormwater Management Design Manual Chapter 9. *Alternative Stormwater Management Practice, Cisterns*. p. 51; Low Impact Development Center, LID Urban Design Tools, Rainbarrels and Cisterns. See www.lid-stormwater.net/raincist_cost.htm

2. Promote Additional Rainwater Capture Mechanisms.

Reducing connection fees for developments that incorporate LID is a worthwhile policy, however the 20x2020 team can explore additional ways to encourage the wider use of rainwater capture. For example, one hindrance to the use of rain barrels in residential homes is the existence of bylaws that either require permits for rain barrels or prevent downspouts from being disconnected from collection systems. Another option would be to support municipal programs that subsidize residential rain barrels.

The TM5 Report states that “utilities may want to encourage new developments to incorporate design features that will capture and store water for later use or to enhance percolation.”⁴ In this context, there are a number of LID practices that are highly relevant to decreasing potable water use, like rain barrels and cisterns, and also practices that promote groundwater recharge.⁵ These measures should be better highlighted. In addition, water collected by rain barrels and cisterns has the added benefit of reducing water demand at the site of capture and can be used for irrigation of landscapes. According to the Pacific Institute, “substantial amounts of water are used in the outdoor residential sector, primarily for landscape irrigation.”⁶ The Pacific Institute estimated that the average outdoor residential water use for the year 2000 in California was ~1.45 MAF/yr.⁷ Functioning capture systems could provide a significant reduction in potable water demand statewide.

Cities have already begun to promote rainwater capture—for example, the City of San Francisco just launched its Rainwater Harvest Campaign that included a partnership program with a local hardware store to subsidize the purchase of residential rain barrels. The City expects that their program will allow for 325 60-gallon rain barrels to be purchased by residents, for a total capture volume of 19,500 gallons and that for a 1000 sq ft roof, one barrel would fill each time there was 1/10 inch of rain.⁸ Additionally, San Francisco changed its plumbing code so that it is now legal for a homeowner to disconnect their downspout to facilitate the implementation of rain barrels. A similar program implemented by the City of Chicago estimated that their subsidized rain barrel program would capture 760,000 gallons per year.⁹

3. Promote Water Quality Benefits Associated with Water Conservation.

Promoting rainwater capture and reuse will also function to reduce pollution to our State’s already-impaired waterways. According to the United States Environmental Protection Agency, stormwater runoff is one of the leading sources of water quality impairment to our nation’s waterways. In the Bay Area, many pollutants in urban stormwater, including lawn care products used in residential areas, are a significant source of pollution to local waterways. Water collected in rain barrels and cisterns will not only reduce water demand at the site of capture, but can significantly decrease runoff from the site, resulting in less pollution being carried to nearby waters and reducing channel modification. Groundwater recharge that accompanies LID practices in coastal areas also has the added benefit of protecting brackish and freshwater marshes from saltwater intrusion during periods of drought. If LID practices are more actively encouraged, the Governor’s water reduction mandate could present a valuable opportunity to move towards water sustainability in terms of both water quantity and water quality.

⁴ TM 5: Potential Conservation Savings from New Actions, p. 15.

⁵ While many LID practices promote groundwater recharge, this would only be useful in this context in areas where municipalities tap groundwater for potable water supply.

⁶ Pacific Institute (2003) Waste Not, Want Not: The Potential for Urban Water Conservation in California, November 2003.

⁷ *Id.*

⁸ R. Jencks, Urban Watershed Management Program, San Francisco Public Utilities Commission, *personal communication*, Dec. 3, 2008.

⁹ Natural Resources Defense Council (2006), *Rooftops to Rivers, Green Strategies for Controlling Stormwater and Combined Sewer Overflows*. p. 54, See <http://www.nrdc.org/water/pollution/rooftops/rooftops.pdf>.

We recognize that promoting LID approaches will not decrease total water use or entirely reduce pollutants in stormwater runoff. Instead, when properly implemented and maintained, LID techniques can help offset the demands made on the potable water supply and help decrease the pollution impact to our waterways. The multiple benefits afforded by promoting LID-based best management practices makes these options extremely important to the protection of California's water resources.

The 20x2020 Program was born in the face of California's water quantity crisis—but water quality in California is also suffering. Stormwater runoff is the leading cause of water quality impairment, in the Bay Area and across California. Thus, measures that can help improve water quality *and* decrease demands on water supply should be vigorously promoted by the State.

Sincerely,



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