

**Michele King**

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**From:** Katja Irvin [katja.irvin@sbcglobal.net]  
**Sent:** Tuesday, September 27, 2016 12:04 PM  
**To:** Barbara Keegan; John Varela; Gary Kremen; Nai Hsueh; Board of Directors; testremera@valleywater.org; Richard Santos  
**Cc:** Clerk of the Board; Sierra Club Loma Prieta Chapter; Mike Ferreira; Tracy Hemmeter; Garth Hall  
**Subject:** Sept. 27 SCVWD Board Meeting Item 5.1, Water Supply Master Plan  
**Attachments:** SCLP Comments on Water Supply Plan.pdf; santa monica local supply plan article.pdf; SCLP-SCVWD Water Supply Planning Topics June 2016.docx

Dear Chair Keegan and Board of Directors,

The Sierra Club encourages the Santa Clara Valley Water District Board of Directors to push for more dramatic changes to water supply planning. We appreciate your analysis and attention to stakeholder comments about the Water Fix and at the same time we know that swifter action is needed.

Please read our brief attached comments on the subject agenda item staff report. We also attached a list of the water supply planning topics we discussed with District staff on June 24, 2016.

Thank you for considering the views of environmental stakeholders.

Sincerely,  
Katja Irvin, AICP  
Water Committee Chair  
Sierra Club Loma Prieta Chapter

**NOTED**

**SEP 27 2016**

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### Sierra Club Comments on SCVWD Water Supply and Infrastructure Master Plan

In response to September 27, 2016 Agenda Item 5.1, the Sierra Club Loma Prieta Chapter suggests several ways the Santa Clara Valley Water District (District) Board of Directors can introduce a more conservative and practical water supply planning approach for the future.

The following comments address some basic changes that could steer the District towards addressing the changes in water supply planning that will be needed in the 21<sup>st</sup> century.

#### Comment #1

The planning objectives rely on the following statement from the District Act (staff report pg 1).

The District Act states that one of the purposes of the District is “to do any and every lawful act necessary to be done that sufficient water may be available for any present or future beneficial use or uses of the lands or inhabitants within the District.”

This statement is outdated and shouldn't be the basis for a post-drought, climate change aware water supply plan. It is not possible to supply sufficient water for all future uses. At some point new uses will outstrip supply and we need to plan for that. This purpose should be reworded. The following minor change would better reflect future reality.

...one of the purposes of the District is “to do any and every lawful act necessary to be done that *available water is sufficient* for any present or future beneficial use or uses of the lands or inhabitants within the District.”

#### Comment #2

The District's 2015 Urban Water Management Plan (UWMP) future demand trends are based on questionable assumptions and should not be used as a basis for this plan, or at least should be tracked as the Water Supply and Infrastructure Master Plan is developed. One year from now when the final plan is considered for approval are we on the trends the UWMP predicted?

#### Comment #3

The District needs to plan for reduced imports and no overall increase in supply. A recent article about how Southern California communities are planning to decrease imports is attached. Please consider following the example of Southern California water suppliers.

#### Comment #4

The Sierra Club has suggested various infrastructure opportunities the District should be pursuing. The water supply options listed on page 6 of the staff report include some of the items we have suggested but the following items are not listed: **blackwater reuse in addition to graywater reuse (see San Francisco); stormwater capture (rain barrels, cisterns, etc); and maintenance and loss prevention.**

**Sierra Club Identified Needs for Water Supply Planning**  
**For meeting at Santa Clara Valley Water District**  
**6/24/16**

1. Set clear GPCD targets (residential and overall) and explain how these relate to SB x7-7.
2. Include supply scenarios that reduce demand on the Delta (per LADWP and San Diego examples).
3. Include water supply for the environment / creeks in demand numbers.
4. Use more conservative assumptions for new development. District needs to promote and plan for stricter requirements, not base water use for new development on past development water use trends. The CalGreen State Building Code is moving towards net-zero water use.
5. Show specifically how new water will be allocated to Gilroy, Morgan Hill, and Milpitas which have high predicted growth in water use levels.
6. Start working on a process to require new development pay for new water, so we're ready when we hit the inevitable "peak water," and **clarify how SB 610 and SB 221 will be implemented in relation to the UWMP**. SCVWD must determine the nexus between continued growth and increased conservation, recycling, stormwater capture and loss prevention. How much population growth potential do we have with current water supplies and current assumptions in the UWMP (especially under 3 dry year projections)? This needs to be documented and tracked to measure the sustainability of our region going forward.
7. Document and plan for high, medium and low population growth projections and range of future water usage outcomes.
8. Show clearly how future planned developments (such as those documented in the UWMP) will result in the predicted water demand increases.
9. Moving in the same direction as Southern California will require more investment in stormwater resources and groundwater protection. Options to study include:
  - Underground Tanks for Water Capture: Requirements for gathering and infiltrating stormwater when new construction occurs could be increased, including underground tanks when needed
  - Basement Size: Underground construction could be limited to reduce groundwater pumping to keep basements dry, which results in groundwater being discharged to the sewer/storm sewer. This could lower the groundwater level and have other impacts.
10. Discuss how open data project could help the public be more involved. GIS layers available to staff should be available to the public unless there are safety/security concerns. For example, GIS data about water risk can be found at <http://www.wri.org/applications/maps/aqueduct-atlas/#x=8.00&y=0.48&s=ws!20!28!c&t=waterrisk&w=def&g=0&i=BWS-16!WSV-16!SV-2!HFO-4!DRO-4!STOR-8!GW-8!WRI-4!ECOS-2!MC-4!WCG-8!ECOV-2&tr=ind-1!prj-1&l=3&b=terrain&m=group>

Side Note on Vegetation

- Given the trend towards “water efficient landscaping” there is concern that urban properties will remove all landscaping.
- Cities and counties should require native drought-tolerant trees and vegetation.
- Mature trees must be protected and development projects should be required to retain the maximum amount of native vegetation possible. A large oak can sponge up a lot of rain water that otherwise could cause floods. Statistics from Andy Lipkis of Tree People:  
<http://www.planningreport.com/2015/09/08/lipkis-wiser-drought-policies-collaboration-can-save-our-trees>.

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# How One California City Is Reducing Its Dependence on Imported Water

Santa Monica is helping to reduce pollution and increase its water supply by capturing urban runoff. We talk to Neal Shapiro, the city's Watershed Management Program coordinator, about its unique programs.

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In this Feb. 28, 2014 photo, Santa Monica, Calif., resident Josephine Miller stands next to her 200-gallon water storage tank that collects rain from her home's roof to water her garden. *Reed Saxon, AP*

**ONE OF THE** few upsides to California's drought is that it has helped reduce pollution at some urban beaches, because less precipitation has meant less runoff from city streets and other paved surfaces. This in turn means less pollution draining into streams and bays.

Urban runoff is the number one source of pollution in places like Santa Monica Bay in Southern California. But the city is not relying on drought to help stop the problem. Instead it has taken the lead in implementing solutions, like "green streets" and runoff recycling to catch urban runoff before it hits the bay.

## Related Articles

**How One California City Is Reducing Its Dependence on Imported Water**

September 21st, 2016

**How California Accounts for its Water Resources**

September 15th, 2016

**Tapping Storm Flows to Boost California's Urban Water Supplies**

September 26th, 2016

**Northern California Towns Are Running Out of Water**

August 15th, 2016

**The Price of Water Conservation – Using Less and Paying More**

September 26th, 2016

**Feeding Aleppo Below the Bombs**

June 14th, 2016

**A California Water Mystery: the Vital Spring-fed Streams of the Shasta Region**

August 16th, 2015

**What Are Water Allocations for the Environment?**

February 23rd, 2016

Meeting water quality standards is one of the drivers for the city's actions, but in some cases, the harnessed runoff is also being used to supplement nonpotable water sources, which means Santa Monica has to rely less on imported water to meet its needs.

To learn more about the city's efforts, Water Deeply spoke to Neal Shapiro, the city's Watershed Management Program coordinator.

**Water Deeply: Santa Monica has developed an ordinance for reducing runoff leaving properties, including requirements for new construction to have an Urban Runoff Mitigation Plan. How does it work?**

Neal Shapiro: I do inspections for all construction projects required to do stormwater mitigation. Generally an infiltration pit or drywell is the most common structure people chose to implement. Most of our projects, 95 percent, are single-family homes and they have enough space in the yard to put in a subsurface chamber that is filled with rocks or a plastic matrix that takes up space and will hold rainwater coming off roof and driving surfaces, directing water into an

underground drywell, and then water infiltrates into the ground. We want to get the water back in the ground. Or it could be directed into a storage tank, cistern or rain barrel, and then the property owner could use it for nonpotable exterior or interior purposes.

We have rebates if people want to retrofit their property if they are not doing construction, the city offers rebates up to \$1,000.

**Water Deeply: Have more homeowners opted to try to catch water for storage and reuse during the drought, instead of just slowing it until it can infiltrate underground?**

Shapiro: People still mostly do infiltration because it is simpler and cheaper. Otherwise it gets more complicated and expensive. But there are people that want to do that, because they have extra money and they are more strongly motivated to do a more sustainable strategy.

Rain barrels are simple and inexpensive but you have to have more hands-on management during winter because you have to drain the rain barrels before the next storm if they aren't

empty. There are automated systems that are starting to be used that can do that based on weather gauges.

## **Water Deeply: What's the impact on the city from reducing runoff?**

Shapiro: It helps the city because that rainwater isn't discharged as stormwater and carrying potential pollutants. The goal is to keep the water onsite and let it infiltrate in the ground where it normally would have gone before we paved over the area with roads and rooftops.



The Santa Monica Urban Runoff Recycling Facility collects dry water runoff to keep pollutants out of the bay. The water is also recycled for nonpotable uses. (Santa Monica SMURRF Virtual Tour)

**Water Deeply: For the runoff that does make it to the streets, you also have a first-of-its-kind facility to treat that – how does it work?**

Shapiro: SMURRF is the Santa Monica Urban Runoff Recycling Facility. It collects dry water runoff; it's not a stormwater facility. It was built to prevent dry weather runoff during the summer months from getting to the beach where people could get sick playing in that water. We divert all our dry weather runoff and most of it goes to the SMURRF and it includes runoff from the City of Los Angeles, so it's a joint project between our two cities. We treat that and we reuse it for landscape irrigation, and in a few cases for indoor flushing.

**Water Deeply: What role do “green streets” play?**

Shapiro: We have three green streets. Our first one includes a lot of different strategies. It has a pervious concrete parking lane on each side that helps the water percolate in the ground. It also has curb cuts so the water comes out of the gutter and goes into the depressed parkways – that landscaped area between the curb and the sidewalk – so water goes in there

and then can infiltrate into the ground. Then we also have underground storage chambers under the parking lane and water goes through catch basins and goes into plastic concave chambers where the water is stored and then infiltrates into the ground.

There are different strategies you can use, it doesn't always have to use permeable surfaces. You can just have the water go into depressed large parkways and have it infiltrate there. It depends on each site and what you have available.

**Water Deeply: With limited resources, how do you decide where to put green streets?**

Shapiro: Ideally you want to put them where you get the most bacterial exceedances at the beach.

We are putting a 1.6-million gallon cistern at the Santa Monica pier, so that can actually capture stormwater and then we wouldn't need green streets there.

Right now we are doing a capital improvement project for alleys. Many alleys are resurfaced so

when we do that we are putting in a pervious concrete swell down the center of much of the alley so we can get infiltration there. Every year we do about 10 to 12 alleys.

When we do have major projects to redo streets we'll be incorporating these strategies.

### **Water Deeply: What other exciting projects is the city doing?**

Shapiro: We have a new library, and it has our first cistern that uses the water for indoor flushing.

We also started building a new project at one of our parks, Los Amigos Park, that will take stormwater out of a stormwater pipe under the city street and will put it in a cistern under an athletic field and that water will be used for irrigation and flushing of the park bathroom.

The City of Los Angeles installed an almost 2.7-million gallon cistern underneath one of their parks and will put in a treatment system and the water will be used for irrigation of the park by the city, irrigation of their golf course and we are going to take some of that water and pump it to our Marine Park, which is on

the border with Los Angeles and we'll use it for irrigation. The water they collect includes runoff from parts of our city.

These are some really exciting projects we have to help reduce our use of potable water and make us more sustainable and help us be more self reliant on local water resources.

### **Water Deeply: Where does Santa Monica's water come from?**

Shapiro: Over 70 percent comes from local aquifers, many in Los Angeles. The balance of supply comes from Metropolitan Water District of Southern California, which comes from the Colorado River and Northern California. So our goal is to eliminate that imported water we are using so we are 100 percent self-reliant, the goal is by 2020.

We're making headway toward reducing the use of imported water through additional groundwater pumping, and the use of rainwater and stormwater. We also have a program to reduce demand – we have rebates for people to remove their turf, replace spray irrigation with drip irrigation and use climate appropriate plants.

Our Sustainable Water Master Plan is getting underway and that is going to install three 1-million-plus gallon cisterns to collect stormwater and another million-gallon cistern to collect wastewater. We're going to tap into our sanitary sewer system and mine that wastewater, treat it and then use it for nonpotable purposes. That will be a unique project for us. All of our wastewater is sent to Los Angeles for treatment now and we're actually going to start using it for beneficial purposes.

The important thing is we hope to be self-reliant by 2020, living on the water that's available to us locally and not having to use imported water because taking water from distant watersheds is obviously not sustainable. Hopefully we can meet that goal, and hopefully everyone else in the region can work toward that strategy. ■

#### *About the Author*

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