

## Hamlin Comments September 2019 LARWQCB Meeting Item “Water Resilience Portfolio”

This document is a response to the September 12 LARWQCB meeting in Simi Valley by Sheryl Hamlin of Santa Paula with suggestions for improving following sessions.

### **Agriculture Industry Not Included**

CDFA (California Department of Food and Agriculture) was included in the Water Resilience EO (Executive Order). Why was no one from the agricultural industry included on the speaking list? There are many examples of agricultural innovation and conservation. In Ventura County, Houwelings generates 1 MB of solar (max state will allow by the way) and also recycles its CO2 as food for the giant hot houses. <http://www.houwelings.com/files-2/about-us.php>

### **Water Stagnation in Collection Pools**

There was no discussion about water stagnation in the collections of water runoff. As Dr. McGowan said, the higher the temperatures, the more bacteria will grow

### **Water Salinity Increasing**

As Henry Graumlich said, the salinity in the water is increasing. More focus should be made on water softening and purification before distribution. The State should also consider legislation to ban salt-based water softeners.

This VCSTAR article notes the following “The Santa Clara River feeds the groundwater basins in the valley, so chlorides in the river wind up in the groundwater and can harm crops in Ventura County, particularly salt-sensitive ones like avocados and strawberries. Treated sewage water from Santa Clarita is high in chlorides, for two reasons: it starts out as State Water Project water from Northern California, which picks up salt as it moves through the Sacramento-San Joaquin Delta; and more chlorides are added as the water is used, flushed and treated.”

The quotation was taken from an article written in 2013 and the Santa Clarita area is just now in 2019 starting its regional chloride plan. <http://archive.vcstar.com/news/groundwater-growing-scare-but-fillmore-farmers-told-not-to-panic-ep-292422587-351634491.html/>

### **Public Health**

The next meeting should include a section on Public Health. Pathogens in wastewater which is intended for reuse cannot be underestimated.

<https://www.ncbi.nlm.nih.gov/pubmed/25734765>.

Antibiotic resistance is measurable ... <https://phys.org/news/2019-03-antibiotic-resistance-wastewater-treatment.html>

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### **Solar Energy**

There was no discussion about the use of solar energy for the water treatment plants.

### **Backup Plan in Drought Years**

The water resilience portfolio depends on water runoff capture. What is the backup plan in the event of a ten-year drought?

### **Demographic Monitoring**

The water resilience portfolio depends on water reuse from wastewater plants. Population growth is slowing which means wastewater growth will also slow. A 1% growth compounded for thirty year says that CA will be around 53 million by 2050. The plan should include regular demographic updates.  $(1.01^{**30})=1.3478$  times 40 million estimated in 2020 is about 53 million.

### **Earthquake Planning**

The topology of the water distribution must include backup paths in the event of earthquakes. Such possibility favors smaller rings of distribution. One speaker mentioned earthquakes but it was not prioritized.

### **Taxes and Project Funding**

La County is wealthy so the recent tax over a large base could be spread over the entire county. However, less affluent counties will not have the ability to raise such huge sums via taxation. I suggest a pool of funds be available for such projects, perhaps through Cap and Trade or the CA I-bank.  
<https://www.latimes.com/local/lanow/la-me-ln-measure-w-20181130-story.html>

### **Coordination with All State Agencies**

Two State documents: “Proposed Framework for Regulating Direct Potable Reuse” and “Expert Panel Final Report: Evaluation of the Feasibility of Developing Uniform Water Recycling Criteria for Direct Potable Reuse”. Both were produced by the State Water Resources Control Board. There should be another meeting just on this topic.

See pages 13-14 for statement on pathogens.

[https://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/direct\\_potable\\_reuse.html](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/direct_potable_reuse.html)

Chapter 7 is dedicated to antibiotic resistance and antibiotic resistant genes (ARB and ARG).

[https://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/documents/rw\\_dpr\\_criteria/app\\_a\\_ep\\_rpt.pdf](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/rw_dpr_criteria/app_a_ep_rpt.pdf)

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As Dr McGowan explained: “ An enteric virus is about 30 nm, but cryptosporidium is about 1 um or 1000 nm. Same for giardia---1000 nm or 1 um. Thus, something set up to catch an enteric virus will also catch the crypto or gardia, but will not catch an antibiotic resistant gene which can squeeze through a 2 nm pilus, where 2 nm is the internal diameter of the tube one bacteria extends to another to exchange genetic information. “.

This means that depending on the wastewater plant membranes for filtering is unlikely. The Santa Paula Public Works Director stated that the only issue with the treated wastewater in Santa Paula is salinity; he and others need to be updated on these health issues.

### **Use of Executive Order**

The SGMA (Strategic Groundwater Management Act) was a three bill package signed in 2014 by Governor Jerry Brown. Governor Newsom chose to use an Executive Order (EO) for this important initiative. An EO can be changed by a current or future executive. Is there legislation on the horizon to codify this into law?

Below is the link to the article summarizing the September 12 Water Board meeting:

<https://www.citizensjournal.us/california-water-resilience-portfolio-and-channel-islands/>