Tulare County's Drinking Water:
Addressing Water Quality and Water Supply Challenges

Date: February 18, 2015

To: Members of the Assembly Committee on Environmental Safety & Toxic Materials

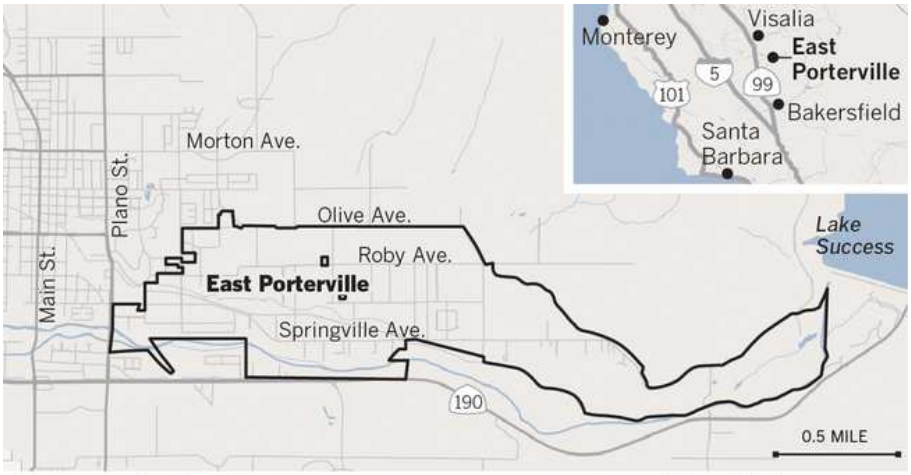
From: Assemblymember Luis Alejo, Chair

Subject: Informational Hearing on Tulare County's Water Quality and Water Supply Challenges

The Assembly Environmental Safety and Toxic Materials (ESTM) Committee's informational hearing on February 18 will have two parts. Part 1 will be a discussion on the impacts of the drought on water supply, and how the state has coordinated with local governments to disperse and utilize the emergency drought funding from the California Disaster Assistance Act. It will specifically focus on East Porterville. Part 2 will be a discussion on the implementation and status of the Disadvantaged Community Water Study for the Tulare Lake Basin.

PART 1

EAST PORTERVILLE



East Porterville[i] is an unincorporated community in Tulare County (County); it is a Census Designated Place. It is approximately 1,600 acres (~ 3 square miles) consisting of approximately

1,800 lots all with their own private wells. It has about 7,300 residents. East Porterville is surrounded on three sides by the City of Porterville (City). According to the U.S. Census Bureau's American Community Survey, the median household income in East Porterville is $27,924[ii].

CURRENT SITUATION

As of January 2015, the County is reporting that 896 private wells have gone dry. Each well impacts at least one home. Of those, 13 have been resolved (via a new well, connection to another system, etc.) Of the 883 remaining dry wells, the County has population information for 709 and knows that 3,251 people are out of water. East Porterville has by far the highest concentration of residents without water within the County, with an estimated 73 percent of the total reports to the California Office of Emergency Services (CalOES) originating from that area.

Based on a door-to-door survey, most of the homes that are out of water have wells that are 20- and 40-feet deep. Wells as deep as 140-feet have been reported dry in East Porterville. Many of the wells are quite shallow, and many of the residents don't know what the depth of the well is.

The state does not directly oversee or regulate private wells as it does public water systems; consequently, the State Water Resources Control Board (State Water Board) does not maintain any data on the health of the wells (such as if/when they may be replenished with winter rain storms).

The City's water system extends through a small portion of East Porterville and a handful of homes and businesses are on City water. The City would need additional water capacity to

connect the 100 or so homes that are currently adjacent, but not connected to the City's water main. It will require extensive capital investment to extend the infrastructure and create additional capacity to provide water to the residents through the City of Porterville's water system.

CURRENT WATER AVAILABILITY

Non-potable water

Tulare County set up two self-service non-potable 5,000-gallon water tanks for East Porterville residents to use for household uses (flushing toilets, irrigation, and laundry). They are located at the Fire Station on Success Drive and at the corner of East Springville Drive and Bennett Street next to Sunnyside Auto Body.

The County's Environmental Health Department is testing the water every week for contaminants, and indicated the water has consistently tested clean since August. The County said the water is technically safe, but legally can't be certified as potable.

Tulare County also set up portable showers at Iglesia Emmanuel Church where residents can take free, hot showers.

Porterville Area Coordinating Council (PACC), a non-profit funded by local churches and health care providers, provided 70 300-gallon water tanks in residents' yards on the east side of the community. The City of Porterville is currently providing water to fill all of the tanks by hauling potable water (via local fire truck) to fill the non-potable tanks for non-potable water use at residential homes.

In order to have pressure to flush toilets and take showers using the water from the 300-gallon tanks, residents need to obtain a sump pump to pressurize the system delivering water to the tank.

According to the County, many of these tanks have been plumbed and wired to the house without the appropriate permits. The County is working with Self-Help Enterprises to remedy safety hazards created by improperly grounded outlets being used for extension cords.

Potable tanks are not being used since the cost is too high. The non-potable tanks are being picked up from the dairy industry where soap and disinfectant had previously been stored. They are being rinsed out and used as non-potable water tanks.

Drinking water

Tulare County received a grant from the State Water Board to distribute more than 15,000 gallons of bottled drinking water.

Bottled water is being delivered by a vendor (i.e., Sparklettes, Arrow Head, etc.) to residents at their homes. The water is delivered on a scheduled route. Deliveries are made biweekly in volumes based on the number of people in a residence. Quantities for delivery were established with State Water Board funding staff.

In order for residents to take advantage of bottled water delivery, they must apply for the program through the County. Upon learning about a well failure, the County has mailed applications to the residents, but those that received the application (self-certifications) are not required to fill them out or return them, so the County can't track data on whether all eligible residents applied and are receiving water deliveries. Also, the information collected is limited to encourage participation (limited personal information to protect privacy). Therefore, the County's ability to track certifications is limited. Additionally, the County's community partners (Community Water Center, Self-Help Enterprises, United Way, Proteus, Community Services and Employment Training (CSET), etc.) are distributing the self-certification forms and the County does not have data on those distributions.

The County has partnered with CSET to have a person out in the community making contacts with residents, building relationships, and encouraging individuals to fill out and turn in the self-certification forms.

PACC is also distributing bottled water. Their distribution may lead to confusion over the need to apply for the County's bottled water services, which has also made it hard for the County to track who is receiving bottled water through the County.

Anheuser-Busch announced it will deliver emergency drinking water for Porterville residents. The company will distribute 2,156 cases of water to the people who've been affected severely by the drought. The water will be delivered to Iglesia Emmanuel.

Sequoia Beverage Company, the local distributor of Anheuser-Busch, is working with the American Red Cross of Visalia to get the water to where it's needed most.

LONGER TERM, BUT NOT PERMANENT SOLUTIONS

Tulare County is working with CalOES and the Governor's Office to provide 3,000-gallon potable water tanks to residences with dry wells (size may vary depending on the size of the household). The tanks will be plumbed to the homes, pressurized, and water will be delivered every three weeks to replenish the tanks. Through funding from the California Disaster Assistance Act (CDAA)[iii], tanks will be placed at *all* homes in East Porterville with dry wells with help from the following private nonprofit partners:

1. **Self Help** will be purchasing the tanks for placement at residences, as well as the pumps and appropriate apparatuses needed to connect the tanks to the homes (electrical and plumbing).

2. **Community Services and Employment Training** will provide the labor under the direction of the County to connect the tanks.

3. **United Way** will fill the tanks as necessary, based on consumption rates of 50- to 100-gallons per person per day.

The County will be providing all of the permits and inspections to ensure the tanks are hooked up effectively and properly.

The County has placed eight beta systems through its local non-profit partners and is in the process of testing them for system reliability. These were placed at residences that were willing to have a test system. The County expects the potable water tank program to roll out early February.

Residents are completing surveys regarding household size, ages of those in the home, medical needs, ability to haul water bottles, etc., so that when County's tank program rolls out (after the beta testing has concluded) the County can prioritize how the tanks are disseminated.

The County has been notified by CalOES that tanks cannot be placed at rental properties due to restrictions on subsidizing commercial activity (i.e., the landlord), which is an unallowable use of CDAA funds. Early estimates are 40 to 50% of those impacted are rentals. This may create a problem with displacement of renters.

EMERGENCY DROUGHT FUNDING

CalOES is coordinating with the County to administer the state's CDAA funding to East Porterville. CDAA requires a 75% state / 25% local cost-share; however, the law allows a local government to contract with a private nonprofit and receive 100% of the funds, avoiding the cost share ratio. The County is taking advantage of this by contracting with the aforementioned groups.

CDAA provides funding based on reimbursements. To date, CalOES has received a reimbursement request ("funding letter") for $204,000 for Self Help's costs to procure potable water tanks. That cost covers about 100 of the needed tanks to place at individual residences. The County plans to place a tank at each home without water – between 800 to 1,000 tanks, so that cost will continue to increase.

CalOES plans to obligate $510,000 in additional funds that Self-Help can draw down on for future costs. Once CalOES has estimated costs from the other nonprofit partners, it plans to obligate funds for those entities to draw down on as well.

Funds from the Act will continue to be available to the County for East Porterville as long as there is a drought and as long as funds are available.

COMMUNICATIONS WITH RESIDENTS

As it relates to communications with the residents about the availability of the short-term water solutions, the County has run radio and TV spots in English and Spanish, but said the community mostly gets its information through word of mouth; therefore, the County has used the local schools to disseminate information, and local nonprofits have been advertising the availability of the non-potable water and bottled drinking water.

The ‘water alert’ signs posted by the County notifying residents that the non-potable water should not be consumed are posted in English and Spanish, and there is a stack of stickers with the information available for every self-filled container.

LONG-TERM SOLUTIONS

There are several complications to identifying a workable long-term solution for East Porterville. The lack of public funds for private wells, the City of Porterville's constrained water capacity, proximity to water mains, and costs to drill new wells all make finding an affordable solution challenging.

That said, there are several potential options for long term solutions.

1. Drill existing shallow wells deeper.

   Wells can be drilled deeper to tap groundwater reserves, but costs for well drillers are high due to increased demand statewide.

2. Fix malfunctioning wells.

   Some of the residents' personal wells may have various malfunctions (such as broken well casing, need pump replacement, etc.) that can't retrieve water until they are fixed.

3. Expand the City of Porterville's Public Water System (PWS) to include some or all of the residents of East Porterville.

   The City of Porterville relies solely on groundwater for supplying municipal water to its residents. A series of groundwater wells generally scattered in the area extract water from the aquifers underlying the City, which are recharged from rainfall and runoff from the Western Sierra Nevada. The primary water system contributing to the recharge of the Tule Basin Aquifer underlying Porterville is the Tule River. The City has also purchased water rights for about 900 acre feet annually from the Pioneer Ditch Company and Porter Slough Ditch Company, but historically this water is not used by the City[iv].

   The City of Porterville is analyzing its capacity to extend service to those who are currently adjacent to a water main in East Porterville. Should the city have the capacity

to do so, contact will be made with those property owners to determine their desire to connect to the City. According to preliminary calculations, an expansion would be a 5-year, $30 million project.

The State Water Board has resources (grants, low-interest loans) to finance the infrastructure and regulate the PWS (note: State financing would not cover operations and maintenance). The State Water Board will expound on this at the February 18 hearing.

4. Annex East Porterville into the City.

   Annexation is when a city or special district gain territory. A city can annex pieces of unincorporated land through the Local Area Formation Commission (LAFCo) process.

   While the City has not expressed an explicit interest in annexing East Porterville, on December 18, 2014, in preparation for the possibility of extending water service to residents of East Porterville and connecting those areas to the city's water services, the Porterville City Council voted to establish procedures and homeowner fees.

   Recently, the County Planning Commission approved Porterville's general plan, which defines the Urban Boundary District (UBD). Only properties within the UBD can be annexed, and therefore hooked into the city's services. According to a September 2014 Tulare LAFCo report[v], there are islands (unincorporated urban pockets) within East Porterville that can qualify for a streamlined annexation process[vi], which exempts qualifying islands from protest and election processes.

   The City is also considering extending their water service without an annexation requirement, but rather through an extraterritorial service agreement.

   On January 13, 2015, the Tulare County Board of Supervisors approved the amendment of the City of Porterville's general plan into the County's general plan. The connection fees to connect to the City's water system would be paid by homeowners, the State Drinking Water Program, or Emergency Drought funds, depending on how the connections are funded. Lateral service lines (those that connect the home to the water main) are not covered by any public funding source and would need to be paid for by the home owner or a non-profit.

5. Drill new wells, either just for East Porterville, or to support the City's water supply if its PWS is expanded to include residents of East Porterville.

   Any new well would require infrastructure to deliver the water to the homes impacted.

PART 2

BACKGROUND: Tulare Lake Basin Disadvantaged Community Water Study

Disadvantaged communities (DACs) in the Tulare Lake Basin region face widespread drinking water and wastewater challenges. In many cases, local counties and Integrated Regional Water Management (IRWM) planning groups have been unable to help DACs within their planning areas to address these challenges. The Tulare Lake Basin Disadvantaged Community Water Study (Study) was designed to investigate and develop solutions for DACs that can be integrated into IRWM planning efforts for the Tulare Lake Basin region.

ENACTING LEGISLATION - SBX2 1

In 2008, Senate Bill X2 1 (Perata) was enacted requiring the Tulare Lake Basin Disadvantaged Community Water Study, which was intended to develop an integrated water quality and wastewater treatment program plan to address the drinking water and wastewater needs of disadvantaged communities in the Tulare Lake Basin. The legislation appropriated $2 million ($2,000,000) for the Study.

CALIFORNIA WATER CODE §83002(b)(3)(D) as enacted by SBX2 1:

> (D) Of the funds described in clause (iii) of subparagraph (A), the department shall allocate two million dollars ($2,000,000) to Tulare County for development of an integrated water quality and wastewater treatment program plan to address the drinking water and wastewater needs of disadvantaged communities in the Tulare Lake Basin. Funds allocated pursuant to this paragraph shall be available for assessment and feasibility studies necessary to develop the plan, and the plan shall include recommendations for planning, infrastructure, and other water management actions, and shall include specific recommendations for regional drinking water treatment facilities, regional wastewater treatment facilities, conjunctive use sites and groundwater recharge, groundwater for surface water exchanges, related infrastructure, and cost-sharing mechanisms. Tulare County shall consult with appropriate stakeholders, including representatives of disadvantaged communities, when preparing the plan. The department, in consultation with the State Department of Public Health, shall submit the plan to the Legislature by January 1, 2011.

OVERVIEW OF THE STUDY

The Study was intended to identify projects and programs that will create long-term reliability and regulatory compliance, while optimizing the ongoing operation, maintenance, and management costs for small water and wastewater systems.

The Tulare Lake Basin Study Area encompassed most of the four-county area, including Fresno, Kern, Kings, and Tulare Counties.

In order to meet the objectives of the Study, the project team performed the following five tasks:

1. Baseline data gathering, mapping, and database creation of disadvantaged communities in the Tulare Lake Basin;

2. Stakeholder consultation and community outreach;

3. Selection of pilot projects and studies to develop representative solutions to priority issues;

4. Implementation of pilot project stakeholder process to develop studies and representative solutions to priority issues; and

5. Preparation of final report.

STUDY STATUS

The final report[vii] was transmitted to the Department of Water Services (DWR) in August 2014. DWR, after its review, will submit a copy to the Legislature, per SBx2 1.

A copy of the Study can be found here on the County's website: http://tularecounty.ca.gov/cao/index.cfm/tulare-lake-basin-disadvantaged-community-water-study/final-report/

Since various state, federal, and local agencies are involved directly in the provision of drinking water and wastewater services, or provide regulatory oversight of drinking water and wastewater systems, the final report of the Study includes recommendations on how the Study can be integrated into those existing planning and funding processes and disseminated to the appropriate agencies. The Study also makes recommendations on how state, federal, and local agencies can provide funding and other resources and support to assist communities with implementing the solutions presented in each of the pilot projects.

KEY PLAYERS

Members of the Tulare Lake Basin Disadvantaged Community Water Study Project Team included Community Water Center, Self-Help Enterprises, Provost & Richard Consulting, and Keller Wegley Engineering Consultants.

DATA GATHERING

Approximately 196 of the 353 DACs in the Study area (map of area attached) had water quality data available. Of those DACs with water quality data available, approximately 89 were considered to have a water quality issue, based on an exceedance of a drinking water maximum contaminant level (MCL) of a primary constituent more than one time between 2008 and 2010. While not all of these systems were in violation of a drinking water regulation, an exceedance indicates there may be a potential issue. Many communities (approximately 96) also rely on a single source of water supply, typically a single well. This puts the system at risk if that well were to fail.

In addition to water supply issues facing DACs, there are also challenges related to the treatment and disposal of wastewater. Of the 353 DACs in the Study Area, 38 communities have their own wastewater treatment facility (WWTF). Some of the communities not having their own wastewater treatment facility may have their wastewater treated at a nearby WWTF operated by another community or city, or they may rely on individual septic systems. Of these 38 DACs with WWTFs, 25 are listed as having a violation of their waste discharge requirements.

COMMUNITY OUTREACH

The County of Tulare established a basin-wide Stakeholder Oversight Advisory Committee (SOAC) comprised of community representatives, as well as regulatory and funding agency representatives and other organizations that work on and are familiar with disadvantaged community water and wastewater needs. The SOAC worked with the project team to identify priority issues, potential pilot projects, and review project recommendations.

The project team also conducted outreach to community representatives, including residents and local water board members that were the subject of individual pilot projects. These community representatives assisted the project team in confirming the viability of the proposed solutions. In order to ensure that each pilot project was developed with input from stakeholders, a separate Pilot Project Stakeholder Advisory Group was convened for each of the four pilot studies. Each group was comprised of members of impacted communities, regulatory and funding agencies, local water or wastewater providers, and other agencies and organizations as appropriate, in order to provide input and recommendations to the project team.

SELECTION OF PILOT PROJECTS

Using this list of common problems, the project team worked with the SOAC to identify priority issues facing disadvantaged communities in the Tulare Lake Basin. The five priority issues included:

1. Lack of funding to offset increasingly expensive operations and maintenance costs in large part due to lack of economies of scale;
2. Lack of technical, managerial, and financial capacity by water and wastewater providers;
3. Poor water quality;
4. Inadequate or unaffordable funding or funding constraints to make improvements; and
5. Lack of informed, empowered, or engaged residents.

The project team further developed and evaluated the possible solutions recommended under each of the four pilot studies identified. The four pilot projects ultimately included[viii]:

1. Management and Non-Infrastructure Pilot,
2. Technical Solutions Pilot,
3. New Source Development Pilot, and
4. Individual Households Pilot.

RECOMMENDATIONS

As the culmination of the Study, recommendations are provided for legislation, funding opportunities, and other support that Federal, State, and local agencies can provide to help facilitate this plan.

OTHER IMPACTED COMMUNITIES

On the heels of the work done on this Study, the Legislature recognized other regions are in need of similar coordination and conflict resolution. For example, in 2014, the Legislature appropriated $500,000 to the Monterey County Regional Water Management Group to develop an integrated plan to address drinking water and wastewater needs of the disadvantaged communities in the Salinas Valley, focusing on nitrate contamination in drinking water. The task force that formed to implement that funding has reached out to Tulare County and its partners on the Study to find out lessons learned in the Tulare Lake Basin and see what can be applied to the Salinas Valley.

[i] https://maps.google.com/maps?hl=en&ll=36.058675,-118.944855&spn=0.114766,0.154324&t=h&z=13

[ii] http://www.geostat.org/data/east-porterville-ca/household-income

[iii] On September 19, 2014, Governor Brown issued Executive Order (EO) B-26-14, authorizing the California Governor's Office of Emergency Services (Cal OES) to provide California Disaster Assistance Act (CDAA) funding, as deemed appropriate, for local government assistance to provide emergency water supplies to households without water for drinking and/or sanitation purposes. Costs relating to the emergency distribution of water for drinking and/or sanitation incurred after January 17, 2014, may be eligible for CDAA reimbursement.

[iv] City of Porterville Municipal Service Review, Tulare County Local Agency Formation Commission, September 2014, page 16

[v] City of Porterville Municipal Service Review, Tulare County Local Agency Formation Commission, September 2014, page 12

[vi] California Government Code section 56375.3

[vii] http://www.tularecounty.ca.gov/cao/index.cfm/tulare-lake-basin-disadvantaged-community-water-study/

[viii] http://www.tularecounty.ca.gov/cao/index.cfm/tulare-lake-basin-disadvantaged-community-water-study/pilot-projects/