

December 1, 2015

Santa Clara Valley Water District
Application for SCVWD Board of Directors, District 1

To whom It may concern:

This letter is sent in regards to the application for the District 1 appointment request for the current vacancy.

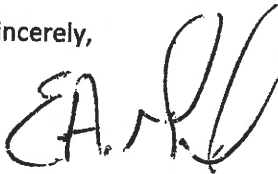
It is my interest to represent District 1 in the matters that concern the communities within the boundaries of District 1 --South and Eastern service areas in water and flood control as provided by the SCVWD.

As a second generation farmer in Santa Clara County, it is my sincere hope to give clarity to issues facing District 1 as a representative director.

Attached will be found responses to the supplemental questions as requested by the Board of Directors as well as Letters of recommendation from the Gilroy Chamber of Commerce and Santa Clara County Farm Bureau.

Thank you for your time and consideration of the enclosed application. I look forward to discussing the application in the coming weeks.

Sincerely,



Erin Gil

[REDACTED]
Morgan Hill CA 95037
[REDACTED]

Application for Santa Clara Valley Water District

Education:

Bachelor of Arts Degree, Business Economics UCSB 1985

Background

- Profession: Farmer - a multi-generation Santa Clara County family farm.
- Promoting water efficient landscaping systems.
 - Work: 1987 until present ~ Grass Farm & Garden Accents.
 - Family Farm in operation within Santa Clara County since 1969.
 - Single Father of Two, Daughter and Son.

Volunteer Work

- Morgan Hill Agricultural Representative General Plan Advisory Committee – Current.
- 2015 – 2016 President Santa Clara County Farm Bureau (2 year term).
- 2014 1st VP Santa Clara County Farm Bureau.
- 2013 2nd VP Santa Clara County Farm Bureau.
- 2012 Santa Clara County Farm Bureau Board Member.
- Santa Clara Valley Water District.
 - 1992 to present ~ Landscape Advisory Committee.
 - Past Committee Chair SCVWD
 - Current Co- Chair 2015 SCVWD
- California Landscape Contractors Association, San Francisco Bay.
 - President 2001.
 - 1st Supplier elected to presidency for SFBA CLCA -- founded in 1937.
 - 1987 – 2002 Participating Board Member San Francisco Bay Area Chapter, CLCA (largest & oldest chapter in the State of California).

Current interests & Projects:

- Landscape Water Conservation.
- 2013 Implementation of Sub Surface Drip Irrigation system to verify water savings on use of cool season turf grass. Peer reviewed process shows a water savings of 69% over overhead irrigation practices when compared with CIMIS data from Gilroy location. Placing cool season turf grass within specifications for MWEL0 inclusion to meet higher specifications directed by California DWR.
- Presented tour and data to Co-Op Extension, UC Emeritus, Dr. Ali Harivandi for data verification.
- Presented findings to SCVWD LAC 2012, 2013, 2014 & 2015 to review potential water savings within the urban landscape.
- Working with the City of Morgan Hill and the SCVWD grant program to implement SDI on retrofit of 12,000 square foot water conservation turf area, Morgan Hill Community Aquatic Center 2015.
- Protection of Agriculture within Santa Clara County.
- Implementation and selection of proven water conservation grasses for San Francisco Bay Area landscapes.

Application for Santa Clara Valley Water District Board of Directors – District 1.

Qualifying Supplemental Questions:

1. "Explain why you think you should be appointed to the District 1 Board of Directors seat."

"The mission statement for the district is to provide Silicon Valley safe, clean water for a healthy life, environment and economy."

What could be more important to "Silicon Valley" than to protect a local food source to help feed the 1.8 million inhabitants of the Santa Clara County as well as provide products that enhance the quality of life and provide employment for a segment of the Santa Clara County that does not work in the high tech industry?

Water is life. The provision of affordable, safe, clean water is paramount for continued health and wellbeing of our Nation, California and the Santa Clara Valley.

Those involved in agricultural processes do so to relieve the 'food production' duties of those involved in other economic pursuits. The elimination of agriculture in Santa Clara County does not relieve the needs for agricultural production. District 1 is that last of agriculture for Santa Clara County and the SCVWD deserves to understand issues facing agriculture today to either elect to protect working lands or convert 'open space' to other uses.

2. "Describe the experience you have that will assist you with the responsibilities required of a while serving as member of the Board of Directors."

- a. Agriculture is vital part of a healthy community and growers and ranchers deserve a voice for District 1. District 1 is the remaining agriculture within the valley of hearts delights, as water use policy is pursued -- great thought and insight is necessary for a quality community outcome. My family began farming in Santa Clara County in 1969. As a resident of Morgan Hill, since 1987, District 1, I have a unique perspective in the needs within Coyote Valley as well as Gilroy for water use and flood control.

- b. *Please see attachment past experience:* Application for Santa Clara Valley Water District.

3. "A. What are your detailed thoughts on the current SCVWD practice of using parcel (property) taxes for State Water Project Costs versus having the water consumers pay for 100% of these costs? B. If some of the costs are to be paid by property owners, should certain property owner who are not able to receive any water from the SCVWD despite asking for water, be required to pay costs?"

- a. In a quick overview of a City of Palo Alto City Council Staff Report, Dated March 23, 2015 (ID# 5596 – *Please see attached*), there is a discussion on whether there should be use

of Ad Valorem taxes used for the State Water Project (SWP). This appears to be a legal question. In reviewing the creation of the State Water Project as its inception began in 1945 through the Division of Water Resources (now DWR); contained within the legislation passed in 1960 includes contracts signed by the State, public agencies from San Francisco Bay Area (one would imagine that to include the City of Palo Alto), San Joaquin Valley to Southern California in a large \$1.75 Billion water delivery project ...providing for California's growth into what it is today: a nation state that leads the world in agriculture, innovation and technological development.

- b. According to the graph provided by the City of Palo Alto, ground water was delivered from 1910 to 1962 with emergency deliveries during the drought of 1988 -1991. This would seem to point to a possible need for SCVWD ground water deliveries during extreme drought conditions and possible emergency reliance on SWP deliveries.
 - c. SFPUC vs. SCVWD rates: Unfortunately rate differences between the two water suppliers' remain vastly different and points to a demand / supply curve that punishes Palo Alto's communities. This is a reflection of supply neglect by government inaction as populations and demand increases resulting in a reliance on an already stressed water supply system. The Bay Delta hearings as well as the recent Bond measure passed in the election of 2014, reflect the public's desires to solve this issue and focus on increasing storage to meet community needs at a reasonable cost structure.
 - d. What is missing in the conversation and pertinent to the "detailed" thoughts to the question posed, is clarification on why the city of Palo Alto chose to rely on SFPUC water after apparently becoming a signatory to the 1960 Bond Measure for the SWP as well as legal information from SCVWD legal counsel (Mr. Stan Yamamoto). It is unfortunate that the City of Palo Alto chose a water source vastly more costly than the option provided by the SWP given that there was a supplier choice between SFPUC and SCVWD. More information is needed within the framework of the application as it is an interesting legal question and I look forward to becoming more versed in its answer.
4. "Agricultural water rates in both the North & South County are heavily subsidized by water consumers and tax payers in Morgan Hill, Gilroy and others. Please explain your reasoning behind supporting the continuation of the rapidly expanding 'open space credit' expenses or reducing that expense so the SCVWD can use those funds for conservation, reduced water rates and other projects."
- a. Farmers and ranchers provide a valuable service to those who spend a majority of their time working on the development of Silicon Valley companies, infrastructure and governing bodies by the very nature of caring for the food delivery system and products that improve citizens' daily lives. Growers take on the costs of pumping and delivery of ground and surface water that is not born by the SCVWD. Well owners provide 100% of the costs of well drilling and maintenance. It is illusory to think that the entire cost of water by growers is solely the per acre foot revenue received by the SCVWD. What needs better definition is the costs associated with SWP deliveries to District 1 as well as the value of ecosystem-services such as ground water recharge of applied waters to

working lands and flood control. This economic service, of food production, ecosystem services and environmental products guarantees California's abilities to remain viable and enviable the whole world over.

It is best to understand California produces 25% of the nation's produce and Santa Clara County ranks 6th in the State in Production Value per acre. (*Please see attachments: a. USDA World Agricultural Outlook Board, b. Santa Clara Ag Commissioners ERA Economics analysis pge. 15.*)

Elimination of the 'open space' credit, or sudden increases in ground water prices, places undue pressure on our food production abilities and increases urban sprawl. The reduction of open space working lands increases flooding issues downstream from District 1 towards the bay and minimizes potential ground water recharge.

- i. Communities of the United States currently favor locally grown food sources. This ought to remain an important factor in the SCVWD Board of Directors decision making processes. Growers and food consumers are placed at risk to rising costs or elimination of production altogether as we raise the production costs of inputs such as water.
- b. Is the 'subsidy' too high? The cost of water to agriculture is not solely the price of water paid upon the open space credit to the SCVWD. A growers cost of water also includes the well costs, maintenance costs, energy used for pumping -- either diesel or electric pumping costs, and delivery costs (infrastructure) associated with moving water from local aquifers to the irrigation of crops.
 - i. Our food system – produce, fruit, production animals, etc.... need affordable water. If we are to care for ourselves, it is important to maintain a system that does not aggravate an already burgeoning problem of Silicon Valley's cost of living and those most vulnerable in the food chain. Food production, feeding ourselves, ought to have a special place for keeping costs as low as possible. Water is part of that equation. (*Please see attachment: "Dude! Where Does My Water Go? Hidden Water Imports into YOUR kitchen."*) *Please note that the 80% Ag rate usage, by the author, does not take into account 'environmental' releases. Environmental releases account for 50% of all hydrologic potential in California.*
- c. "Open space credit" as it pertains to funds for conservation, reduced water rates and other projects: Agriculture is a partner in conservation; Conservation of open lands for productive people focused on the needs of the community. Agriculture also plays an important part in caring for working lands, reducing flooding and allowing for ground water recharge.
 - i. The increase in population(s) necessitates the creation of additional on site, off site storage supplies as well as the development of 'new' sources. With the potential construction of storage such as Sites and Temperance Flats reservoirs,

the realization of the AWTP, California and SCVWD can better meet the needs of its citizens.

5. "What do you think will be the most significant challenges that the District will be facing in the next few years?"
- Ground Water Sustainable Act implementation.
 - Protecting health and safety issues through pricing stability.
 - Protecting market share of available waters.
 - Providing revenue for infrastructure improvements.
 - Storm water runoff as we eliminate living products that can help clean, delay runoff and recharge clean water to our aquifers.
6. "What three items would be your highest priority if you are appointed as a SCVWD District 1 Board Member?"
- a. Represent the constituents of District 1.
 - b. Advocate for "new" water resources available to SCVWD areas.
 - c. Provide voice for "open space" areas contained in District 1 whether they are agriculture or 'habitat / view shed' properties.



City of Palo Alto City Council Staff Report

(ID # 5596)

Report Type: Study Session

Meeting Date: 3/23/2015

Summary Title: Santa Clara Valley Water District Property Tax Issue

Title: Update on the Santa Clara Valley Water District's Collection of All of its State Water Project Costs via Property Taxes Instead of Water Rates

From: City Manager

Lead Department: Utilities

Recommendation

Staff is providing this update on the Santa Clara Valley Water District's (SCVWD, or District) practice of collecting of all of its State Water Project (SWP) costs via property taxes, instead of water rates, for the Council's information and as background for the study session on this topic. No action is requested.

Summary

For over 40 years, property owners in Palo Alto have paid, via their property tax bills, for the District's SWP costs. However, the City of Palo Alto Utilities (CPAU) receives no water from the District or the SWP. Instead, the City receives all of its potable water supplies from the San Francisco Public Utilities Commission (SFPUC). CPAU's water costs have risen significantly in recent years to pay for the substantial costs for upgrading the SFPUC's regional water system. Yet the District has chosen to recover all of its SWP costs from Santa Clara County property taxes instead of from District water users.

Staff has raised the issue with the District several times over the past several years, but the District has continued to collect all of its SWP costs from property taxes, instead of through water rates paid by those who use District water.

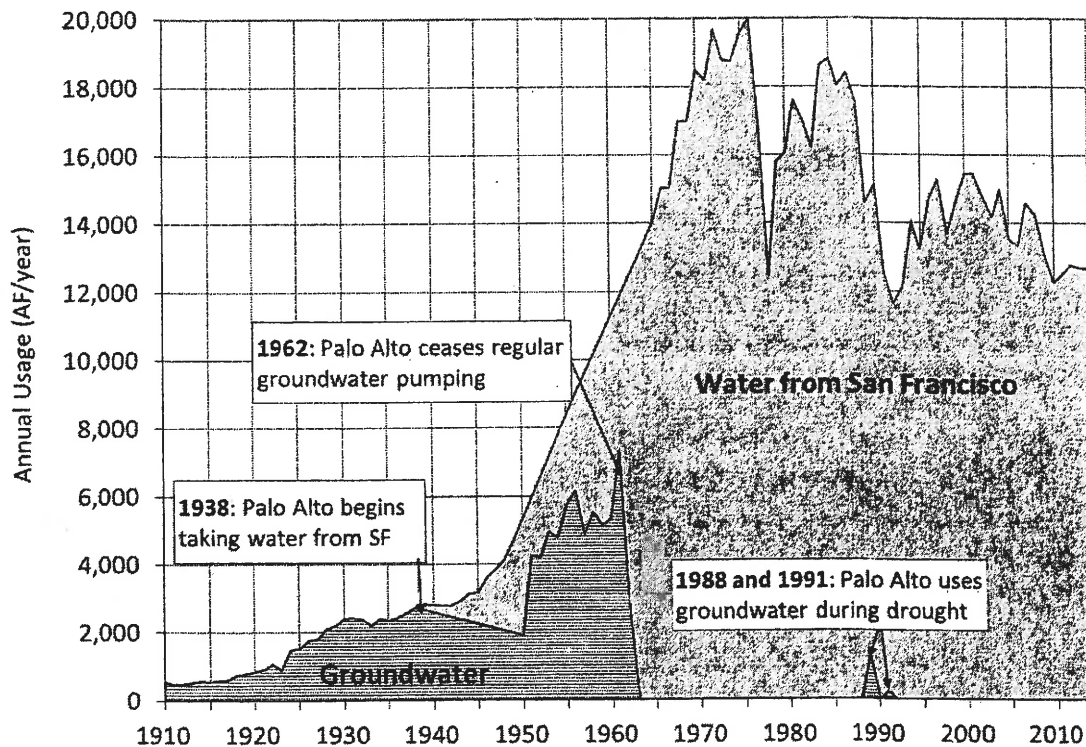
Background

The City of Palo Alto purchases all of its potable water from the SFPUC and has five connections to SFPUC's regional water delivery system. The City also owns emergency standby groundwater wells to meet system demands during a local or regional emergency. Over the last several years, the City refurbished five existing wells and drilled three new wells as part of our comprehensive emergency water supply and storage project. The wells are able to meet a portion of system demands during any emergency. If the City, or any person or business in Palo

Alto, pumps groundwater (the District claims that there are over 250 private wells in Palo Alto), they would pay the District for that water, at the rate set by the District.

Historically, the City pumped groundwater to meet potable demands until the time the City contracted with San Francisco for water deliveries, beginning in 1938. Figure 1 below illustrates the historical distribution of groundwater use compared to use of SFPUC supplies in the City. The City no longer relies on groundwater and has long term water delivery contracts with the SFPUC.

Figure 1: Palo Alto's Historical Water Purchases



The District is the main water resources agency for Santa Clara County. It acts not only as the county's water wholesaler, but also as its flood protection agency and is the steward for its streams and creeks, underground aquifers and district-built reservoirs. Despite the fact the City has independently secured long-term water supplies with the SFPUC, the City works with the District on numerous water supply, flood protection, and other issues of interest to the City and the District. The City is represented on the SCVWD Board of Directors, District 7 (Gary Kremen, Board Chair), and participates directly on the District's Water Commission, the Retailers Committee, the Flood Control and Watershed Advisory Committee, and the Recycled Water Sub-Committee.

The City does not purchase any water from the District (except for very small amounts when testing its wells, or if the wells are used in an emergency). As mentioned above, City residents or businesses with wells pay the District for any groundwater pumped. However, whether or not City residents or businesses pump groundwater, all City property owners make payments to the District through their property tax assessments. Currently, the District collects the following payments through property taxes:

- Clean Safe Creeks – A special parcel tax approved by the voters in 2000 to pay for a 15-year program which will provide additional flood protection and other benefits to the county. This tax was set to sunset in 2016, but an extension to 2028 was approved by the county's voters in 2012. The amount charged to a residence is based on the area of the parcel and the land use category of the parcel (i.e. single family residence, commercial and industrial, rural, etc.)
- Flood Control charge – A benefit assessment (the amount differs by flood control zone) to pay for debt service associated with past debt issuances for flood protection projects. The benefit assessments will sunset in 2030, with the exception of the Uvas Llagas flood control zone which sunsets in 2013. The amount charged to a residence is based on the area of the parcel and the land use category of the parcel. (SWP charge – An ad valorem tax to pay for the District's annual contractual obligations to the State of California associated with the SWP.
- The 1% county-wide ad valorem tax – A general tax available for any lawful District purpose. In FY 2014, the District received about \$68.4 million from this tax, of which \$5.1 million was directed to the Water Utility, \$5.7 million to the General Fund, and \$57.6 million to flood protection.

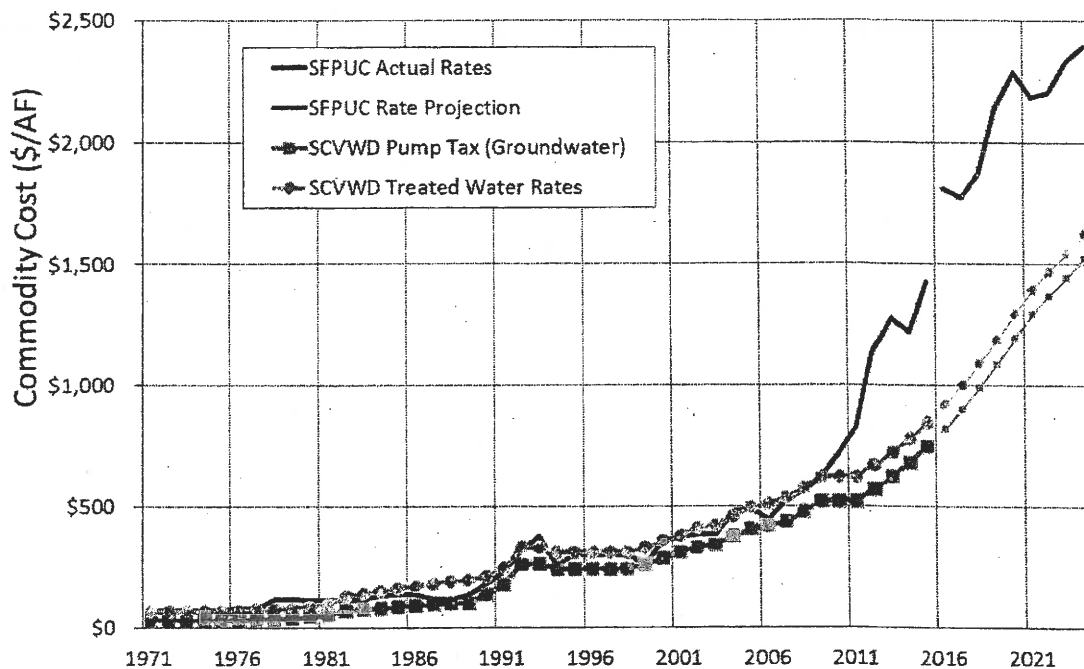
Overall, in FY 2014, the District collected \$27 million in property taxes for the Water Utility Enterprise out of total revenues of \$188 million; property tax revenue accounted for 14.4% of the District's FY 2014 Water Utility Enterprise revenue. According to the District's FY 2014 financial statements, \$21.9 million of the property taxes collected is for the SWP.

This memo discusses the City's concerns with the District's longstanding and inequitable practice of collecting 100% of its SWP costs via property taxes, rather than via water rates.

SFPUC vs. SCVWD Water Rates

When the costs for SFPUC's \$4.6 billion Water System Improvement Program started to be reflected in its wholesale water rates, SFPUC rates began to increase in comparison to District rates. SFPUC's wholesale water rates for FY 2015 are \$1,425 per acre-foot (AF) while SCVWD's FY 2015 water charges are \$847/AF for treated water and \$747/AF for groundwater. Current rate projections show the wholesale rate divergence continuing into the next ten years. Figure 2 below shows the actual and projected wholesale water rates for the SFPUC and the District.

Figure 2: SFPUC and SCVWD Wholesale Rates – Actual to FY 2015 and Projections Beyond
SFPUC/SCVWD Wholesale Water Rates



Discussion

One of the District's sources of water is the State Water Project, operated by the California Department of Water Resources (CDWR). The District can collect the costs associated with its long-term contract with CDWR for deliveries from the SWP system through water rates, but has chosen to collect 100% of its SWP obligation via property taxes. Staff estimates the District collects over \$1.6 million per year from Palo Alto property owners.

In June 2010, Utilities staff met with District staff to discuss the fact that since the City purchases all its potable water supplies from the SFPUC, Palo Alto property owners' SWP tax payments to the District are used to offset water rates charged to other District water customers. Palo Alto taxpayers receive no direct benefit for the taxes they pay.

In August 2011, the City Manager sent a memorandum to the City Council advising them of the issue (Attachment 1). The memo outlines Palo Alto's concerns regarding: 1) The District's practice of using property tax collections to offset District water charges; 2) the divergence in SCVWD and SFPUC wholesale water prices; and 3) the potential increase in SWP costs related to "Delta tunnels" being contemplated by the State which will further increase Palo Alto property tax collections.

In a meeting in June 2011, the District discussed its prior practice of providing an "In-County Credit" for those agencies that partially or completely relied upon SFPUC supplies. Palo Alto received the credit for 20 years until the District ended the policy in 1984. SCVWD CEO Beau Goldie committed to evaluate the reinstatement of the In-County Credit in a July 2011 letter. Subsequently, the SCVWD Board of Directors was notified of the intent to evaluate a successor crediting mechanism.

In meetings and letters, the District has stated that the City's residents and businesses benefit from property tax payments for the SWP water because the SWP supplies provide the District with flexibility in managing the county's groundwater by introducing imported water to the county and using it to recharge groundwater, reducing the likelihood of ground surface subsidence and saltwater intrusion in the county, and ensuring that groundwater supplies are available for emergencies.

If imported water supplies benefit the county, then so does the City's use of SFPUC water. However, while Palo Alto property taxpayers help lower the cost of District water, the entities that purchase District water do not help lower Palo Alto's SFPUC costs.

In May 2014, the SCVWD Board of Directors unanimously agreed to continue the practice of collecting the SWP costs via property taxes for FY 2015. In July 2014, the SCVWD Board of Directors discussed the SWP tax issue (see Attachment 2, the SCVWD Board memo) and requested to have a study session in November 2014 for further discussion.

During the November 2014 race for the SCVWD Board of Directors seat for District 7, which includes Palo Alto, the SWP tax issue was raised again (see Attachment 3). The District's study session, originally scheduled for November 18, was rescheduled for December 16 so that Gary Kremen, the new Board Member for District 7, could participate. In advance of the meeting, letters were sent to the SCVWD Board by Palo Alto's City Manager (Attachment 4) and the Purissima Hills Water District (PHWD) General Manager (Attachment 5). Palo Alto's letter asked the District to "correct its practice of relying on property taxpayers to meet 100% of its SWP obligations." PHWD's letter requested "that SCVWD eliminate the SWP tax on our constituents, or in the alternative credit to PHWD 100% of the SWP tax levied on our constituents."

The December 16, 2014 SCVWD Board Agenda item (Attachment 6) for the study session included three discussion topics: 1) a review of the District's Taxing and Pricing Policy; 2) an overview of the SWP Tax; and 3) a review of SFPUC water management issues. At the meeting, the Board discussed the issue generally but declined to change the practice or even to set a date for a final policy decision.

The January 13, 2015 SCVWD Board Agenda item (Attachment 7) on setting the FY 2016 groundwater production charge shows that District staff assumed that SWP costs would

continue to be collected 100% via property taxes for the foreseeable future. The Board took no action with respect to that position at the meeting.

On February 10, 2015, the City Manager sent a letter to the SCVWD Board (Attachment 8) that made two fundamental requests:

"First, the Board should develop and adopt Groundwater Production Rates that will allow it to abandon the untenable 100% property tax approach this year, and replace it with meaningful movement towards a more equitable funding structure.

"Second, the Board should calendar a further discussion intended to establish a longer term sustainability policy reflecting how much, if any, of the SWP costs are appropriate to raise through property taxes. Once an appropriate target is determined, the District may need to adopt a multi-year program that allows it to reach this level in a reasonable time."

At its meeting on February 10, 2015, the District Board considered the issue of groundwater production charges (see Attachment 9). The staff memorandum prepared for the District Board includes a summary of concerns raised by Purissima Hills Water District (Purissima Hills) and the City of Palo Alto regarding the collection of the SWP tax. The memorandum explains Purissima's concerns that every year the SCVWD intentionally delays the decision on whether to levy the SWP tax until after the District's water charges have been approved, leaving the District Board no choice but to continue to rely on the SWP tax. The District's staff memorandum further states that continuation of the practice to rely on the SWP tax to pay for 100% of SWP contractual obligations comports with the District Board's direction provided at the December 16, 2014 meeting.

A number of speakers representing various retail customers, including the City of Santa Clara, Purissima Hills Water District, and Palo Alto provided public comments at the District's February 10 meeting. The District Board deliberated over the latest analysis provided by District staff and concluded that, for the purpose of finalizing the District's upcoming Proposition 218 water rate increase notices, the maximum groundwater production charges should reflect an increase of 31.5% for North County (which includes Palo Alto) and 13.8% for South County. This maximum rate increase is based on District staff's updated worst-case drought scenario, and includes an additional revenue requirement of \$3 million. The action taken by the District Board stipulated that the \$3 million additional revenue requirement would be used for a recycled water project in Palo Alto.

Staff (including the City Attorney's office and the City Manager's office) continues to work with District staff on the SWP issues while the District prepares its FY 2015 budget and wholesale water rate proposals. Most recently, on February 25, 2015, Mayor Holman and City Manager Keene hosted District Board Members and staff to discuss the ongoing drought, the District's water supply projects and the SWP tax. This is an annual meeting with the District. Attendees

included the City Attorney and Utilities Director, as well as Chair Kremen, Director Estremera, and the District's executive management staff. The City again encouraged the District to change its SWP tax collection practice, to ensure that District water users bear the costs of the project from which they benefit. The District again pressed for increased "partnership" with the City. From the District's perspective, a change in the property tax collection creates some challenges for the district county-wide. This explains the District's pursuit of alternatives, rather than effecting the fundamental policy change of ceasing charging Palo Alto taxpayers (and some others) for SWP costs.

As the City pointed out at the February 25th meeting, paying the City for a portion of the City's recycled water project fails to fix the District's inequitable SWP taxation practices. It does nothing to make City property taxpayers whole in exchange for the years they have paid for the District's SWP costs while using no SWP water. Nor does it assist Purissima Hills and other North County tax payers who have similarly covered the District's SWP costs. The City stated that the appropriate mechanism to recover SWP costs is through the District's rates.

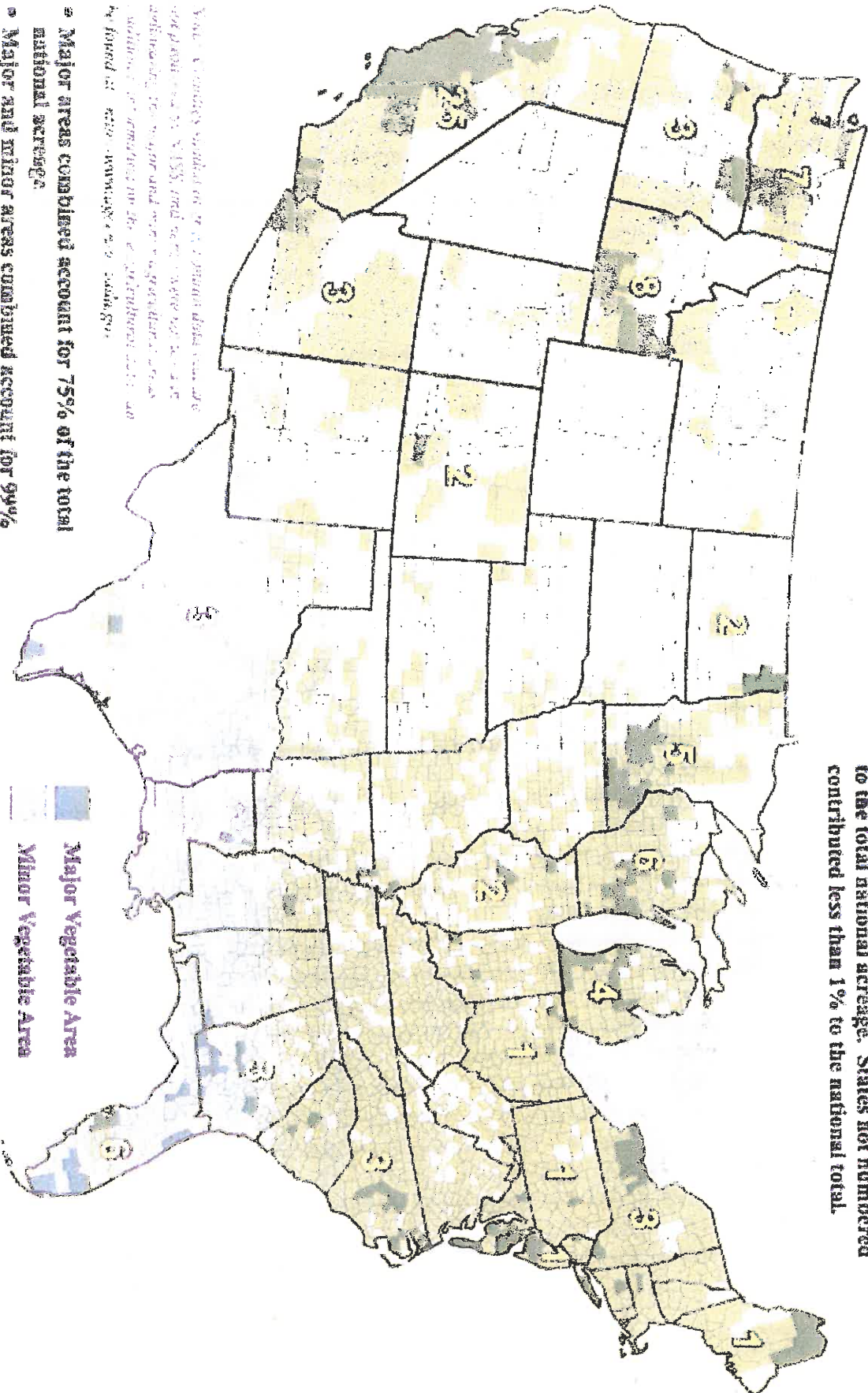
Commission Review

The Utilities Advisory Commission (UAC) received an informational report on this item at its February 4, 2015 meeting. SCVWD staff attended and made a brief presentation. The UAC expressed surprise and concern that property taxes paid by Palo Alto residents and business subsidized the District's water rates since the City does not get District water supplies. Draft minutes from the UAC's meeting are provided as Attachment 10.

Attachments:

- Attachment 1: Memorandum to Palo Alto City Council dated September 8, 2011 with its attachments (PDF)
- Attachment 2: SCVWD Board Agenda Memo Subject: "State Water Project (SWP) Tax Discussion" dated July 8, 2014 (PDF)
- Attachment 3: Daily Post Article dated August 9, 2014 (PDF)
- Attachment 4: Letter from City Manager Keene to SCVWD Board of Directors dated November 14, 2014 (PDF)
- Attachment 5: Letter from Purissima Hills Water District General Manager Walters to SCVWD Board of Directors dated November 18, 2014 (PDF)
- Attachment 6: SCVWD Board Agenda Memo Subject: "Water Management, Financial Incentives, and Override Tax to Pay for State Water Project Costs Workstudy" dated Dec. 16, 2014 (continued from Nov. 18) (PDF)
- Attachment 7: SCVWD Board Agenda Memo Subject: "Preliminary Fiscal Year (FY) 2015-16 Groundwater Production Charges Analysis" dated January 13, 2015 (PDF)
- Attachment 8: Letter from City Manager Keene to SCVWD Board of Directors dated February 10, 2015 (PDF)
- Attachment 9: SCVWD Board Agenda Memo Subject: "Update on Preliminary Fiscal Year (FY) 2015-16 Groundwater Production Charges Analysis" (PDF)
- Attachment 10: Excerpted Draft UAC Minutes of February 4, 2015 meeting (PDF)

Yellow numbers indicate the percent each state contributed to the total national acreage. States not numbered contributed less than 1% to the national total.



- Major areas combined account for 75% of the total national acreage.
- Major and minor areas combined account for 99% of the total national acreage.
- Major and minor areas and state acreage percentages are derived from USDA 2007 Census of Agriculture data.

Santa Clara County Summary

County	Production Value per acre*	Ranking
Orange	\$30,500	1
Santa Cruz	\$28,500	2
Ventura	\$18,500	3
Napa	\$15,000	4
San Diego	\$13,500	5
Santa Clara	\$11,000	6
Monterey	\$10,900	7
Santa Barbara	\$10,500	8
San Mateo	\$9,500	9
Sonoma	\$8,900	10

* Excludes rangeland and non-irrigated acreage; 2014 dollars

Dude! Where does My Water Go? Hidden Water Imports into Your Kitchens

Aziz Baameur, FarmAdvisor, Santa Clara County

I bet you have not considered how much water you use. As a responsible citizen, you more likely have assessed your water use and probably used one of those e-calculators* to help do this. Consequently, you may have fixed leaky faucets, started using water saving showerheads, and installed irrigation timers for your garden and yard. You have done everything that is rationally and environmentally required to reduce your water footprint.

Yet, there is one area you may have not considered yet. Your food. Let me explain.

We hear that agriculture is the largest water user in the state. It consumes around 80-85% of the water.

While this statement is true, it tends to operate in an economic, cultural, and environmental vacuum. In fact this statement may be very misleading. It's not wrong, but it leads to unfounded conclusions that farms consume most of our water. What is needed is the proverbial "on the other hand..." to complete its meaning.

Some basics.

Water in agriculture is geared toward two main functions: crop or meat production and post-harvest processing. Production is by far the main user of irrigation water. As a plant scientist, I'll focus on plants, but infer to agriculture in general. Irrigation water fulfills two functions. It provides needed evaporative cooling of plant and supports its metabolic processes. The most popularly known of these metabolic processes is photosynthesis, where sun light energy is used to capture carbon from the air to build plant tissue necessary for growth and development.

Photosynthesis produces water, carbohydrates, sugars, and oxygen. It takes place in the leaves, stems, and other green tissues of the plants. The carbon is stored under different forms mainly in edible parts of the plant such as leaves, stems, roots, tubers, flowers, and fruit. These are reflected in the every-day consumed produce such as crispy lettuce, succulent asparagus, crunchy carrots, tender broccoli, and juicy peaches and tomatoes, to name a few.

However, the majority of the irrigation water is evaporated to cool plant off, which is known as transpiration. Without transpiration, plants would overheat and die. This brings memories of my old car that suffered from overheated engine because of a leaky radiator.

Another portion of the applied water directly evaporates from the soil, and in other instances is lost to deep soil percolation, beyond plants roots.

The goal of a good irrigation manager is to minimize water loss through deep percolation and even minimize evaporation by using mulches and good irrigation management and practices. At times, there is a need to push accumulated salts from previous irrigation episodes. This is accomplished by applying 10-15% extra water to leach salts beyond root zone. Salts will eventually make it back to the root zone and the cycle starts again. The same good manager would even try to economize on transpiration by growing well-adapted plants to local climates. However, plants need for transpiration is essential and remain almost unchangeable.

The other hand.

The proverbial "other hand" I mentioned earlier has to do with final destination of the produce grown on the farms, harvested, shipped to stores and bought by consumers. Fresh produce is 85-95% water. One has only to think of those mouth-watering watermelons or juicy plums. Other more fibrous products may have far less water content, such as dried pulses (10-15%). Meats contain between 60-70% water by weight.

Add to this water contained in these farm exports to cities, the water used to grow these crops and animals. This is the water we eat and try to account for in this write up.

Eating nothing but water.

The amount of water consumed via farm products has been investigated by different studies. John Letey and Davis Birkle tabulated the results and came up with an interesting scenario. They designed a daily menu for an average person that consumes 2,200 calories/day in three meals (The Amount of Water We Eat, by in Crop Water Use in California Water Plan Update 2005). They based their calculations on the assumption that irrigation systems are 70% efficient. Note that drip irrigation management principle assume an 80% and above efficiency. Efficiency is defined as beneficially used water by crops to total water applied. From their calculations it turns out that a single person consumes around 708 gallons of water per day, disguised as of food. 700 gallons! Impossible would be a first reaction. The point of the exercise is to show that in addition to water exported to cities in form of food, it also includes the water used to raise and produce that food. Consider the following examples: one cup of lettuce serving requires 2.9 gallons of water to grow. A handful of fresh broccoli (2.7 Oz) require almost 11 gallons before it

graces your table. Also consider that four ounces (4 Oz.) of chicken meat require 165 gals to raise (Water input in California food production, by Marcia Kreith, September 27, 1991).

In the example the two authors estimated that our representative city dweller consumes 130 gals of water for breakfast. He or she lunches on 275 gals of water, and dines on 220 gals. Our protagonist takes in a light snack to the tune of 83 gals of water.

Full circle.

The consumer in question uses between 100-125 gals of water per day for various needs around the house. Regional and local variation can span beyond this range. These include showers, baths, drinking water, garden water use, yard watering, toilet flushing. These feasts can amount to a grand total of 833 gals used per day.

By contrasting the water used for production of daily consume food (708 gals) to the total daily water use (833) an interesting number emerges: 85%. Eighty-five percent is the portion of water that is attributed to agriculture consumption.

It makes one pause to reflect on the yin and yang of life. It makes one appreciate the fact that large chunk of water our farms use, well, that ends up on our table in the cities in a more wholesome way. It contains proteins, amino acids, vitamins, minerals, antioxidants, and a whole lot more than just the plain water delivered to the farms. It looks as that water that went to the farms was not wasted, after all.

It's one of those things of what goes around comes around, much better improved... or something like it.

Water Content of Meat and Poultry

Product Name	Percentage Water	
	Raw	Cooked
Chicken fryer, whole	66%	60%
White meat chicken, with skin	69%	61%
Dark meat chicken, with skin	66%	59%
Ground beef, 85% lean	64%	60%
Ground beef, 73% lean	56%	55%
Beef, eye of round	73%	65%
Beef, whole brisket	71%	56%

Source: *Water in Meat and Poultry*-Aug, 2007. USDA

Average Daily Water Use Through Food by a Single Consumer

Meal	Water Use Gals	% of Daily Water Use
Breakfast	130	16%
Lunch	275	33%
Snacks	83	10%
Dinner	220	26%
Water Consumed via food	708	85%
Daily use	125	15%
Total use	833	100%

Source: *The Amount of Water We Eat, by in Crop Water Use in California Water Plan Update 2005*

* Water Calculators. Many sites provide information and help in assessing water use. Check the following sites:

<http://www.nwf.org/water/watercalculator.cfm>

<http://ga.water.usgs.gov/edu/sq3.html>

<http://www.hydroxycut.com/calculators/water.shtml> (water daily needs based on exercise level)

<http://www.csgnetwork.com/waterusagecalc.html> (good links site for different water used)

<http://www.bewaterwise.com/calculator.html> (southern Calif. Water wise)

http://www.valleywater.org/Water/Water_in_agriculture/index.shtm?gclid=CKzy49zqm5kCFQZlswod_gM8Dg (SCVWD drip irrigation site)



YOUR BUSINESS IS OUR BUSINESS

www.gilroy.org

November 30, 2015

To Whom It May Concern:

I am writing this letter on behalf of Erin Gil and asking you to consider appointing Erin to the Santa Clara Valley Water District Board of Directors for the District 1 seat formerly held by Dennis Kennedy.

With Erin's depth of knowledge and experience in the agricultural industry in South County, he is sure to represent the best interests of local farmers and residents alike. Because of his experience, he will be more than qualified to provide important information to other Water District Board members with regard to the issues facing South County.

Erin is a second generation Santa Clara County farmer, has worked in the business for nearly 30 years, is a past Board member and President of the California Landscape Contractors Association for San Francisco Bay, has been a Board member of the Santa Clara County Farm Bureau since 2012 and is currently it's President and is the current co-chair of the Landscape Advisory Committee for the Santa Clara Valley Water District.

Erin has a good working relationship with the cities of Gilroy and Morgan Hill and is in a good position to be the liaison between South County and the Santa Clara Valley Water District.

Your consideration of Erin Gil is greatly appreciated.

Sincerely,

Mark Turner
President/CEO



605 Tennant Ave., Suite H, Morgan Hill, CA 95037
(408) 776-1684
info@sccfarmbureau.org
www.sccfarmbureau.org

November 30, 2015

Gary Kremen, Chair
Board of Directors
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3686

Subject: Endorsement of Erin Gil for District I Vacancy

Dear Chair Kremen:

The Santa Clara County Farm Bureau Board of Directors strongly endorses Erin Gil's nomination for the District I vacancy on the SCVWD Board of Directors. Erin is an agricultural leader in Santa Clara County. Farming is an important part of Santa Clara County, not only historically, but it currently contributes over \$1.5 billion to the local economy. There are many other benefits of having agriculture in our county, such as land that is not developed can help recharge the aquifer. Erin has been a proponent of water conservation and new technology that provides water saving. He represents a segment in our county that would be good to have on the SCVWD Board of Directors.

We hope that you will appoint Erin to represent the District I.

Sincerely,

A handwritten signature in black ink, appearing to read "Jess Brown".

Jess Brown
Executive Director