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## **COMPLIANCE AND CONTINUITY REPORT**

The Contra Costa County Civil Grand Jury is impaneled annually to investigate city and county government, special districts and certain non-profit corporations to ensure that their functions are performed in a lawful, economical and efficient manner. Findings and recommendations developed from these investigations are contained in the reports signed by the Grand Jury Foreperson and the Grand Jury Judge. Responses to these reports must be made within certain time constraints and in accordance with specific formats pursuant to 933 and 933.05 of the California Penal Code. These responses to recommendations must include one of the following legally permitted options:

- The recommendation has been implemented.
- The recommendation has not yet been implemented, but will be implemented in the future.
- The recommendation requires further analysis.
- The recommendation will not be implemented because it is not warranted or is not reasonable.

The 2015-2016 Grand Jury reviewed 13 reports from the 2014-2015 Grand Jury. There were 31 letters, with copy of applicable report, mailed out to the different entities from whom responses were required. These 13 reports made a cumulative total of 78 recommendations to the various 31 recipients, of which 53 responses (68%) stated that the recommendation(s) have been or will shortly be implemented and 17 (22%) responses stated the recommendation required further analysis. For further explanation and clarification of subject responses to recommendations, refer to their full responses posted online. Responses to the 2014-2015 Grand Jury reports are posted on the Contra Costa County Grand Jury website in their entirety and can be viewed at:

<http://www.cc-courts.org/index.cfm?fuseaction=Page.ViewPage&pageId=7346>

The Grand Jury believes it is important for future Grand Juries to continue to review these responses and to be vigilant in seeing that recommendations that have been accepted have been carried out. In this manner, the commitment and hard work of past and future Grand Juries will result in positive changes for the citizens of Contra Costa County.

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## CONTRA COSTA COUNTY CIVIL GRAND JURY REPORT – 1502 UNDERUTILIZATION OF CALFRESH IN CONTRA COSTA COUNTY

***Recommendation #1: The County should organize an event to educate select city managers, economic development officers and local Chambers of Commerce Representatives about (a) the economic gains to be realized from increased CalFresh participation, and (b) how to sponsor their own local enrollment events, after identifying funds to do so.***

RESPONDENT	RESPONSES
Contra Costa County Board of Supervisors	The recommendation has not yet been implemented, but will be implemented in the future.

***Recommendation #2: The County should recruit representatives of local businesses, such as business associations and/or Chambers of Commerce, area farmers markets, and cities with high concentrations of prospective CalFresh recipients for membership in the CalFresh Partners Group.***

RESPONDENT	RESPONSES
Contra Costa County Board of Supervisors	The recommendation has not yet been implemented, but will be implemented in the future.

***Recommendation #3: The County should issue a press release announcing May as CalFresh month and emphasizing the economic gains for local businesses that result from increased CalFresh participation. In addition to other local newspapers, the press release should be sent to the Contra Costa County edition of the Chamber Link, the weekly newsletter of the Association of Chambers of Commerce, which reaches over 10,000 recipients in Contra Costa County.***

RESPONDENT	RESPONSES
Contra Costa County Board of Supervisors	The recommendation has not yet been implemented, but will be implemented in the future.

***Recommendation #4: The County should extend CalFresh enrollment outreach to schools, senior centers, and senior housing, either directly or through the CalFresh Partners Group, after identifying funds to do so.***

RESPONDENT	RESPONSES
Contra Costa County Board of Supervisors	The recommendation has not yet been implemented, but will be implemented in the future.

***Recommendation #5: After identifying the necessary funds, the County should return budgeted FTE staffing for EHSD to last year’s levels, and use County temps as necessary to meet and maintain that staffing level after determining the legality of doing so.***

RESPONDENT	RESPONSES
Contra Costa County Board of Supervisors	The recommendation requires further analysis.

***Recommendation #6: After identifying the necessary funds, the County should fast-track the current project to streamline the recruitment and hiring processes by Human Resources, after considering the various legal requirements governing the County’s recruitment and hiring.***

RESPONDENT	RESPONSES
Contra Costa County Board of Supervisors	The recommendation has been implemented.

***Recommendation #7: Within 60 days, the County should correct the signage at office locations with CalFresh information and application intake capability to include the hours of operation and notice of CalFresh (or “Food Stamps”) presence outside of the building, and directions to CalFresh information or service (preferably bilingual) inside the office if no greeter or knowledgeable receptionist is present.***

RESPONDENT	RESPONSES
Contra Costa County Board of Supervisors	The recommendation has not yet been implemented, but will be implemented in the future.

***Recommendation #8: The County through its Department of Information and Technology should (a) prioritize the resolution of firewall issues that currently prevent remote access of existing CalFresh applications; (b) support EHSD’s expansion of the text messaging system, “PROMPTLY” to CalFresh; (c) investigate feasibility of internet-based communication modes such as Skype for EHSD, (d) add a link to 511 to the CalFresh website, and (e) mention 511 in the menu options in the automated telephone answering system, after identifying funds to do so.***

RESPONDENT	RESPONSES
Contra Costa County Board of Supervisors	The recommendation has not yet been implemented, but will be implemented in the future.

***Recommendation #9: The County should schedule a series of meetings between those departments that administer need-based programs to explicitly encourage increased cross-program referrals.***

RESPONDENT	RESPONSES
Contra Costa County Board of Supervisors	The recommendation has not yet been implemented, but will be implemented in the future.

**CONTRA COSTA COUNTY CIVIL GRAND JURY REPORT – 1503  
TIME FOR A NEW LOOK AT PENSION COSTS**

**The County Could Save Nearly \$100 Million a Year through a Sensible  
and Fair Approach to Pension Reform**

***Recommendation #1: The County Board of Supervisors and the Board of Directors of CCCFPD should establish a task force to review all options available to reduce the burden of the County and CCCFPD’s pension obligations, including efforts to bring about a reform in California public pension law. The task force should:***

- ***Confirm with the County’s or CCCERS’s actuaries what level of potential savings in pension costs could be achieved through negotiations with employees hired before 2013 for reductions in pension benefits for future employment periods.***
- ***Review with qualified legal counsel what strategies are available to seek a change or clarification in California law to assure changes to future pension benefits for current employees are proper subjects of collective bargaining. Such strategies might include participation in a state ballot initiative, the filing of “friend of court” legal briefs, sponsoring clarifying language for the Meyers-Milias-Brown Act, or including changes to future pension benefits for current employees as a subject for collective bargaining negotiations.***
- ***Recommend what limits the Boards should establish as a matter of policy on any such reductions in future pension benefits for current employees, such as a minimum benefit tied to PEPRAs rates as set for in this report.***
- ***Recommend a policy for keeping the County’s and CCCFPD’s employee groups informed of the Boards’ intentions on any strategies for change so as to assure employees that any changes would be subject to collective bargaining and minimums set forth in the Boards’ minimum benefit policy.***
- ***Recommend a policy for keeping County citizens fully informed of the potential costs of any changes in pension benefits negotiated with the County’s and CCCFPD’s employee groups.***

RESPONDENT	RESPONSES
Contra Costa County Board of Supervisors	The recommendation will not be implemented because it is not warranted or is not reasonable.

***Recommendation #2: The task force should be formed within 90 days and be required to report back to the Boards with its recommendations within 90-120 days.***

RESPONDENT	RESPONSES
Contra Costa County Board of Supervisors	The recommendation will not be implemented because it is not warranted or is not reasonable.

***Recommendation #3: Establish a special web page on the County web site where citizens can easily track by means of a pension “dashboard” the costs and size of the County’s and CCCFPD pension obligations and the progress on its plans to reduce their costs.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Contra Costa County Board of Supervisors	The recommendation will not be implemented because it is not warranted or is not reasonable.

**CONTRA COSTA COUNTY CIVIL GRAND JURY REPORT – 1504  
 AVERTING BAY AREA RAPID TRANSIT DISTRICT STRIKES**

**Putting the Riders First**

***Recommendation #1: BART Board of Directors should adopt a negotiation method that is built on trust, communication and transparency.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
BART Board of Directors	The recommendation has been implemented.

***Recommendation #2: BART Board of Directors should immediately re-open negotiations with their labor unions to agree on the process for future negotiations.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
BART Board of Directors	The recommendation requires further analysis.

***Recommendation #3: BART Board of Directors should review and negotiate the use of an independent arbitrator during labor negotiations, who can decide any major financial and work rule issues pursuant to the baseball style arbitration process.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
BART Board of Directors	The recommendation requires further analysis.

***Recommendation #4: BART Board of Directors should monitor the implementation of the recommendations made in Agreement Dynamics Inc.'s report that it has chosen to adopt.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
BART Board of Directors	The recommendation has been implemented.

***Recommendation #5: Contra Costa County Board of Supervisors should adopt a plan to mitigate the effects of any future BART strikes on county residents.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Contra Costa County Board of Supervisors	The recommendation requires further analysis.

**CONTRA COSTA COUNTY CIVIL GRAND JURY REPORT – 1505  
RICHMOND HOUSING AUTHORITY**

**Managing the Agency**

***Recommendation #1: After identifying the space needs, and identifying and allocating the funding necessary to do so, RHA should move the Executive Director and staff, except the Finance Department, to the same work location.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Richmond Housing Authority Board of Commissioners	The recommendation has not yet been implemented, but will be implemented in the future.

***Recommendation #2: After identifying and allocating the funding necessary to do so, RHA should consider hiring an experienced front-line manager to supervise employees who work in its HCV program.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Richmond Housing Authority Board of Commissioners	The recommendation has not yet been implemented, but will be implemented in the future.

***Recommendation #3: After identifying and allocating the funding necessary to do so, RHA should develop and make available a written policy for staff to use in implementing the LIPH and HCV Programs.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Richmond Housing Authority Board of Commissioners	The recommendation has been implemented.

***Recommendation #4: After identifying and allocating the funding necessary to do so, RHA should develop and provide its staff with a Policy and Procedures manual concerning RHA’s policies, procedures, and expectations for staff performance.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Richmond Housing Authority Board of Commissioners	The recommendation has not yet been implemented, but will be implemented in the future.

***Recommendation #5: All employees should receive annual performance evaluations.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Richmond Housing Authority Board of Commissioners	The recommendation has not yet been implemented, but will be implemented in the future.

***Recommendation #6: After identifying and allocating the funding necessary to do so, all RHA employees should receive ongoing training in customer service and quality control procedures.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Richmond Housing Authority Board of Commissioners	The recommendation has not yet been implemented, but will be implemented in the future.

***Recommendation #7: RHA should establish and enforce standards for timely responses to customer complaints, including, but not limited to those complaints related to building maintenance and safety/security concerns.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Richmond Housing Authority Board of Commissioners	The recommendation has been implemented.

**CONTRA COSTA COUNTY CIVIL GRAND JURY REPORT – 1506  
OFFICE OF THE PUBLIC GUARDIAN**

**Caring for Those Who Can No Longer Care for Themselves**

***Recommendation #1: The Contra Costa County Public Administrator should update its Public Guardian Policy and Procedures Manual to comply with California law and California Judicial Council’s report on best practices by June 30, 2016.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Contra Costa County Board of Supervisors	The recommendation has not yet been implemented, but will be implemented in the future.

***Recommendation #2: To comply with California law, the Contra Costa County Public Guardian should accept all referrals for probate conservatees when there is an imminent threat to the person’s health or the safety of the person’s estate, regardless of whether the person is in or going to be placed in a supervised living arrangement.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Contra Costa County Board of Supervisors	The recommendation will not be implemented because it is not warranted or is not reasonable.

***Recommendation #3: To comply with California law, the Contra Costa County Public Guardian should begin an investigation within two business days after receiving a referral alleging that a person’s health is in imminent danger or that there is an imminent threat to the safety of a person’s estate.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Contra Costa County Board of Supervisors	The recommendation will not be implemented because it is not warranted or is not reasonable.

***Recommendation #4: To comply with California law, the Contra Costa County Public Guardian should establish a policy of keeping a probate conservatee in his or her own residence if that is the least restrictive living arrangement in which the conservatee can be safe.***

RESPONDENT	RESPONSES
Contra Costa County Board of Supervisors	The recommendation will not be implemented because it is not warranted or is not reasonable.

***Recommendation #5: To comply with California law, the Contra Costa Public Guardian should ensure that all deputy conservators meet certification requirements, as required by the State of California, by June 30, 2016.***

RESPONDENT	RESPONSES
Contra Costa County Board of Supervisors	The recommendation has not yet been implemented, but will be implemented in the future.

***Recommendation #6: The Board should consider separating LPS and probate public guardians.***

RESPONDENT	RESPONSES
Contra Costa County Board of Supervisors	The recommendation will not be implemented because it is not warranted or is not reasonable.

***Recommendation #7: The Board should consider placing the probate conservatorships with Adult Protective Services in the Employment and Human Service Department's Aging and Adult Services Unit.***

RESPONDENT	RESPONSES
Contra Costa County Board of Supervisors	The recommendation will not be implemented because it is not warranted or is not reasonable.

***Recommendation #8: The Contra Costa County Public Guardian should follow California Judicial Council's best practices by requiring deputy conservators to meet with each probate conservatee at least once a month and to keep a log of such visits.***

RESPONDENT	RESPONSES
Contra Costa County Board of Supervisors	The recommendation will not be implemented because it is not warranted or is not reasonable.

***Recommendation #9: The Contra Costa County Public Guardian should adopt a line item to its budget specifically for the needs of probate conservatees before the Public Guardian has access to their assets.***

RESPONDENT	RESPONSES
Contra Costa County Board of Supervisors	The recommendation will not be implemented because it is not warranted or is not reasonable.

**CONTRA COSTA COUNTY CIVIL GRAND JURY REPORT – 1507  
OPPORTUNITIES FOR CHANGE IN THE COUNTY HEALTH AND  
HUMAN SERVICES SYSTEM**

**Merging the Healthcare System with a Larger Private or Public System  
Merging the County Health and Human Services Departments**

<b><i>Recommendation #1: The County should consider merging or partnering the healthcare system with a larger private or public healthcare system that would provide administrative oversight, broader access to physician specialists, clinics and hospitals, and increased healthcare options.</i></b>	
<b>RESPONDENT</b>	<b>RESPONSES</b>
Contra Costa County Board of Supervisors	The recommendation requires further analysis.

<b><i>Recommendation #2: If the County is successful merging the healthcare system, the County should consider merging the two primary departments that would remain in Contra Costa Health Services- Pubic Health and Behavioral/Mental Health- with the Employment and Human Services Department, creating a Health and Human Services Department. The County should find funding to commission a report outlining the full benefits and detriments of merging EHSD with Public Health and Behavioral/Mental Health Services.</i></b>	
<b>RESPONDENT</b>	<b>RESPONSES</b>
Contra Costa County Board of Supervisors	The recommendation requires further analysis.

<b><i>Recommendation #3: If the County is successful merging the healthcare system, the county should consider merging CCHS’ Environmental Health and Hazardous Materials Program with the Department of Conservation and Development and merging Emergency Medical Services with the Contra Costa Fire Protection District.</i></b>	
<b>RESPONDENT</b>	<b>RESPONSES</b>
Contra Costa County Board of Supervisors	The recommendation requires further analysis.

**CONTRA COSTA COUNTY CIVIL GRAND JURY REPORT – 1508  
THE UNDERUTILIZATION OF THE MARSH CREEK DETENTION  
FACILITY**

**Overcrowding at the Martinez Detention Facility**

***Recommendation #1: The SO should consider ways to fund the restoration of MCDF Wings A and B.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
The Contra Costa County Sheriff's Office	The recommendation has not yet been implemented, but will be implemented in the future.

***Recommendation #2: The SO should consider providing medical staffing 24-hours a day, seven days a week and a pharmacy at the MCDF, and ways to fund such staffing and the pharmacy.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
The Contra Costa County Sheriff's Office	The recommendation has not yet been implemented, but will be implemented in the future.

***Recommendation #3: Once Recommendations 1-2 have been accomplished, the SO should consider broadening the classification of MCDF inmates so that the facility will be fully utilized.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
The Contra Costa County Sheriff's Office	The recommendation has not yet been implemented, but will be implemented in the future.

***Recommendation #4: If the State does not award SB 863 jail construction funds to the County, the SO should consider alternative plans and associated funding methods to reduce inmate occupancy at the Martinez Detention Facility.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
The Contra Costa County Sheriff's Office	The recommendation requires further analysis.

**CONTRA COSTA COUNTY CIVIL GRAND JURY REPORT – 1509  
THE BENEFITS OF THE CALIFORNIA CONNECTIONS TO  
SUCCESS ACT TO CONTRA COSTA COUNTY**

**Its impact on Foster Youth Who are Aging Out and Emancipated**

***Recommendation #1: Contra Costa County Children and Family Services should continue to pro-actively inform foster care youth about “AB’s 12’s” programs.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Contra Costa County Board of Supervisors	The recommendation has been implemented.

***Recommendation #2: Contra Costa County Children and Family Services Program should consider establishing more local housing options for aging out and emancipated youth, and identify funds to do so.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Contra Costa County Board of Supervisors	The recommendation has not yet been implemented, but will be implemented in the future.

***Recommendation #3: Contra Costa County Children and Family Services Program should continue to provide scholarship opportunities for youth so that they can have financial support while being trained or educated.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Contra Costa County Board of Supervisors	The recommendation has been implemented.

***Recommendation #4: The County should continue to support the dedicated and professional skills offered by the ILSP service providers.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Contra Costa County Board of Supervisors	The recommendation has been implemented.

***Recommendation #5: The County should maintain the Gold Mine database to monitor the progress and outcomes for County foster youth served by the County programs in order to help make future funding decisions about support services for foster youth.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Contra Costa County Board of Supervisors	The recommendation has been implemented.

# CONTRA COSTA COUNTY CIVIL GRAND JURY REPORT – 1510 COMMUNITY COURTS

## Unburdening the Traditional Court System

<b><i>Recommendation #1: The city should consider establishing a Community Court.</i></b>	
<b>RESPONDENT</b>	<b>RESPONSES</b>
City of Antioch	The recommendation will not be implemented because it is not warranted or is not reasonable.
City of Brentwood	The recommendation will not be implemented because it is not warranted or is not reasonable.
City of Clayton	The recommendation has been implemented.
Town of Danville	The recommendation has been implemented.
City of El Cerrito	The recommendation will not be implemented because it is not warranted or is not reasonable.
City of Hercules	The recommendation will not be implemented because it is not warranted or is not reasonable.
City of Lafayette	The recommendation has not yet been implemented, but will be implemented in the future.
City of Martinez	The recommendation has not yet been implemented, but will be implemented in the future.
Town of Moraga	The recommendation has not yet been implemented, but will be implemented in the future.
City of Oakley	The recommendation has not yet been implemented, but will be implemented in the future.
City of Orinda	The recommendation has not yet been implemented, but will be implemented in the future.
City of Pinole	The recommendation will not be implemented because it is not warranted or is not reasonable.

City of Pleasant Hill	The recommendation requires further analysis.
City of Richmond	The recommendation has not yet been implemented, but will be implemented in the future.
City of San Pablo	The recommendation will not be implemented because it is not warranted or is not reasonable.

**CONTRA COSTA COUNTY CIVIL GRAND JURY REPORT – 1511  
COUNTY TIMEKEEPING PRACTICES**

**Need for Accuracy in Recording Time and Remedies for Inaccuracy**

***Recommendation #1: The County should require timesheets or the system of time reporting to include a signed attestation of accuracy from the reporting employee and employee’s supervisor or manager.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Contra Costa County Board of Supervisors	The recommendation has been implemented.

***Recommendation #2: The County should require department supervisors or managers to periodically review attendance and time records to ensure both accuracy and completeness.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Contra Costa County Board of Supervisors	The recommendation has been implemented.

***Recommendation #3: The Auditor-Controller’s Office should consider codifying timekeeping and pay code procedures for each department, and identifying funds to do so.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Contra Costa County Auditor-Controller	The recommendation will not be implemented because it is not warranted or is not reasonable.

***Recommendation #4: The County should make timekeeping and pay code procedures promulgated by the Auditor-Controller’s Office, along with associated training, available to all payroll clerks and included in the new employee orientation.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Contra Costa County Board of Supervisors	The recommendation will not be implemented because it is not warranted or is not reasonable.

***Recommendation #5: The County should direct all departments to place salaried employees' schedules in the Time Schedule Collection Website as required in the March 6, 2014 bulletin from the office of the Auditor-Controller.***

RESPONDENT	RESPONSES
Contra Costa County Board of Supervisors	The recommendation has been implemented.

***Recommendation #6: The Auditor-Controller's Office should explore possible ways to reduce the number of pay codes to a more manageable level.***

RESPONDENT	RESPONSES
Contra Costa County Auditor-Controller	The recommendation has been implemented.

***Recommendation #7: The county should consider developing whistleblower procedures for employees reporting suspected timekeeping fraud, posting these procedures on the County's intranet, and identifying funds to carry out these activities.***

RESPONDENT	RESPONSES
Contra Costa County Board of Supervisors	The recommendation will not be implemented because it is not warranted or is not reasonable.

***Recommendation #8: The Auditor-Controller's Office should consider including timekeeping practices in operational audits and recommending corrective action for all timekeeping deficiencies identified and identifying funds to carry out these activities.***

RESPONDENT	RESPONSES
Contra Costa County Auditor-Controller	The recommendation will not be implemented because it is not warranted or is not reasonable.

***Recommendation #9: The County should adopt a semi-monthly pay cycle for all employees which will eliminate the need for an option to take a monthly advance.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Contra Costa County Board of Supervisors	The recommendation will not be implemented because it is not warranted or is not reasonable.

**CONTRA COSTA COUNTY CIVIL GRAND JURY REPORT – 1512  
THE RODEO-HERCULES FIRE DISTRICT CHIEF’S EMPLOYMENT  
AGREEMENT**

**A Question of Transparency**

***Recommendation #1: The RHFD Board should attempt to re-open negotiations with the chief concerning his current employment agreement with RHFD to allow for proper notice under the Brown Act.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
RHFD Board of Directors	The recommendation requires further analysis.

***Recommendation #2: The RHFD Board should properly identify all items on its agendas and include accurate descriptions of each agenda item.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
RHFD Board of Directors	The recommendation has been implemented.

***Recommendation #3: The RHFD Board should record each director’s vote on reportable actions from closed session in the meeting minutes of every Board meeting.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
RHFD Board of Directors	The recommendation has been implemented.

***Recommendation #4: The RHFD Board members should receive training on the Brown Act immediately upon taking office and no less than every two years afterward.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
RHFD Board of Directors	The recommendation has not yet been implemented, but will be implemented in the future.

**CONTRA COSTA COUNTY CIVIL GRAND JURY REPORT – 1513  
RALPH M. BROWN ACT**

**“The People of the State Do Not Yield Their Sovereignty to the  
Agencies Which Serve Them”**

***Recommendation #1: Rodeo-Hercules Fire District, Reclamation District 799, and WCCUSD should have annual training in the Brown Act for its board members and support staff.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Rodeo-Hercules Fire Protection District	The recommendation requires further analysis.
West Contra Costa Unified School District	The recommendation has not yet been implemented, but will be implemented in the future.
Reclamation District 799	The recommendation has not yet been implemented, but will be implemented in the future.

***Recommendation #2: Rodeo-Hercules Fire District should have annual training concerning how to draft agendas that comply with the Brown Act.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Rodeo-Hercules Fire Protection District	The recommendation will not be implemented because it is not warranted or is not reasonable.

***Recommendation #3: Rodeo-Hercules Fire District should consider maintaining a website of the District’s minutes and agendas, and identify funds to do so.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Rodeo-Hercules Fire Protection District	The recommendation requires further analysis.

***Recommendation #4: Rodeo-Hercules Fire District, Reclamation District 799, and WCCUSD should have a link for citizens to post concerns about possible Brown Act infractions, and identify funds to do so.***

RESPONDENT	RESPONSES
Rodeo-Hercules Fire Protection District	The recommendation requires further analysis.

***Recommendation #5: Rodeo-Hercules Fire District, Reclamation District 799, and WCCUSD should have a link to an organization such as The First Amendment Coalition (thefirstamendmentcoalition.org) for both Cure and Correct and Cease and Desist letters, with instructions, and identify funds to do so.***

RESPONDENT	RESPONSES
Rodeo-Hercules Fire Protection District	The recommendation will not be implemented because it is not warranted or is not reasonable.

***Recommendation #6: Rodeo-Hercules Fire District, Reclamation District 799, and WCCUSD Boards should consider voting to extend the review period for contracts involving large financial commitments.***

RESPONDENT	RESPONSES
Rodeo-Hercules Fire Protection District	The recommendation will not be implemented because it is not warranted or is not reasonable.

***Recommendation #7: Rodeo-Hercules Fire District, Reclamation District 799, and WCCUSD should have sufficient hard copies of supporting documents of items to be discussed in closed sessions before the closed sessions begin, and the ability to make and distribute sufficient copies if necessary.***

RESPONDENT	RESPONSES
Rodeo-Hercules Fire Protection District	The recommendation will not be implemented because it is not warranted or is not reasonable.

***Recommendation #8: Rodeo-Hercules Fire District should consider conducting its closed sessions prior to the beginning of an evening meeting rather than the end because members of the public are less likely to be present to comment at a late hour on matters reported out of a closed session.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
Rodeo-Hercules Fire Protection District	The recommendation requires further analysis.

**CONTRA COSTA COUNTY CIVIL GRAND JURY REPORT – 1514  
WEST CONTRA COSTA UNIFIED SCHOOL DISTRICT:**

**Bond Program & Citizens’ Bond Oversight Committee  
A Case Study in Stymied Oversight**

***Recommendation #1: The School Board should eliminate the following six member positions from CBOC at the expiration of their terms, to eliminate any concerns about conflicts of interest.***

- ***Five members, one recommended by each member of the Board of Education***
- ***One member representing the Contra Costa Building and Construction Trades Council***

<b>RESPONDENT</b>	<b>RESPONSES</b>
WCCUSD School Board of Education	The recommendation requires further analysis.

***Recommendation #2: The School Board should change the School Board discretionary category of “Public Employees Union Local 1” to that of an “at large” position from the general community in order to allow for a greater pool of qualified candidates to apply.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
WCCUSD School Board of Education	The recommendation requires further analysis.

***Recommendation #3: The School Board should create an independent selection committee to select new nominees for CBOC, comprised of the CBOC Chair and a designated appointee from CBOC, two members from the Board of Education, and School Superintendent or designee, for a committee of five. Selection should be based on merit and be a transparent process to ensure public confidence in this vital selection process.***

<b>RESPONDENT</b>	<b>RESPONSES</b>
WCCUSD School Board of Education	The recommendation requires further analysis.

***Recommendation #4: WCCUSD should provide CBOC members with complete, detailed and comprehensive financial data relating to the expenditure of bond revenues and items put to vote on the board agenda at least 7 days in advance of the board meetings, in order to permit meaningful and effective review and oversight.***

RESPONDENT	RESPONSES
WCCUSD School Board of Education	The recommendation has been implemented.

***Recommendation #5: WCCUSD should allow CBOC full access to the CBOC website.***

RESPONDENT	RESPONSES
WCCUSD School Board of Education	The recommendation has been implemented.

***Recommendation #6: WCCUSD should not change or add items to CBOC’s website without the permission of the CBOC Chair.***

RESPONDENT	RESPONSES
WCCUSD School Board of Education	The recommendation has been implemented.

***Recommendation #7: WCCUSD should provide CBOC with accurate, understandable and timely financial and non-financial reports concerning bond-funded projects as well as other relevant information requested on the bond construction program as least monthly.***

RESPONDENT	RESPONSES
WCCUSD School Board of Education	The recommendation has been implemented.

***Recommendation #8: WCCUSD should provide CBOC with a comprehensive master plan for the school construction projects within the next three months and as requested by CBOC.***

RESPONDENT	RESPONSES
WCCUSD School Board of Education	The recommendation has not yet been implemented, but will be implemented in the future.

**Recommendation #9: WCCUSD should provide timely and comprehensive training to all new CBOC members on a timely basis. The following training materials, at a minimum, should be provided to all new CBOC members within one week of their appointment:**

- (a) California League of Bond Oversight Committee recommended Best Practices**
- (b) San Diego County Taxpayers Association “Oversight Committee Best Practices” Guide**
- (c) California Coalition for Adequate School Housing “Proposition 39 - Best Practices Handbook”**
- (d) Little Hoover Commission 2009 Report “Bond Spending: Expanding and Enhancing Oversight”**
- (e) California League of Cities “A Guide to The Ralph M. Brown Act”**
- (f) State Controller’s Office 2011 Audit Report on the Los Angeles Community College District’s bond construction program**

<b>RESPONDENT</b>	<b>RESPONSES</b>
WCCUSD School Board of Education	The recommendation has been implemented.

**Recommendation #10: The School Board should follow all of its policies.**

<b>RESPONDENT</b>	<b>RESPONSES</b>
WCCUSD School Board of Education	The recommendation has been implemented.

**Recommendation #11: The School Board should ensure that the CBOC contains a member from each category required by California Education Code Section 15282.**

<b>RESPONDENT</b>	<b>RESPONSES</b>
WCCUSD School Board of Education	The recommendation has not yet been implemented, but will be implemented in the future.



**A REPORT BY  
THE 2015-2016 CONTRA COSTA COUNTY GRAND JURY**  
725 Court Street  
Martinez, California 94553


Report 1602

**Protecting Our Groundwater  
Resources**

**Who's Minding the Storage?**

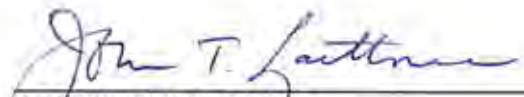
APPROVED BY THE GRAND JURY:

Date: May 10, 2016

  
\_\_\_\_\_  
MICHAEL SIMMONS  
GRAND JURY FOREPERSON

ACCEPTED FOR FILING:

Date: May 6, 2016

  
\_\_\_\_\_  
JOHN T. LAETTNER  
JUDGE OF THE SUPERIOR COURT

Contra Costa County Grand Jury Report 1602

## **Protecting Our Groundwater Resources**

### **Who's Minding the Storage?**

**TO: Board of Supervisors, County Assessor, and City Councils for the Cities of El Cerrito, Pittsburg, Richmond, and San Pablo**

#### **SUMMARY**

Due to a fourth consecutive year of drought in California (State), residents and governmental agencies are increasingly focusing on the fact that water is a critical and limited resource. The anticipated drought relief from this year's El Niño storms has not completely remedied the drought situation. Even as the State's reservoirs fill again, many parts of the State are still experiencing a groundwater deficit. The need to use this valuable resource more wisely is clear.

Water agencies within Contra Costa County (County) are starting to more closely monitor and conserve our groundwater. Groundwater is contained within an aquifer (an underground geological formation able to store and yield water). The Sustainable Groundwater Management Act of 2014 (SGMA) mandates formation of management agencies for groundwater basins identified as 'medium' and 'high' priority by the California Department of Water Resources (DWR). Three of the eight basins that are either within or partially extend into the County have this designation: Tracy Sub-Basin; Livermore Valley Basin; and East Bay Plain Basin. For all other groundwater basins, agency formation is optional under SGMA.

This report concerns the protection of groundwater basins in the County. It concludes that more can and should be done to monitor the groundwater supply in the County, including the over 2,500 domestic water and irrigation wells, and to preserve and enhance the quantity and quality of groundwater in the County.

The Grand Jury's recommendations include:

- Preparing and distributing cautionary health information about domestic water wells.

- Identifying and mapping the existing domestic and irrigation wells in the County to check their status and safety.
- Forming a Groundwater Advisory Council to include stakeholders: (i) to support and participate in agency formation under SGMA, (ii) to advise the Board of Supervisors on the status of the wells that currently exist in our County, and (iii) to make recommendations to enhance and protect our Groundwater resources.
- Directing the Contra Costa Water Agency to participate in the formation of groundwater sustainability agencies (for both the medium and low priority groundwater basins) and the development of sustainability plans.
- Directing the Environmental Health Division (EHD) and the Flood Control District to cooperatively pursue matching grants afforded by State Proposition 1 to assist Disadvantaged Communities (DACs) to maximize groundwater protection.

## **METHODOLOGY**

The Grand Jury conducted interviews, attended public meetings and technical presentations, and reviewed documents. More specifically, we interviewed, and/or obtained information from sixteen senior and junior level specialists from:

- Contra Costa Assessors Office
- Contra Costa Environmental Health Division
- Contra Costa Department of Public Works
- Contra Costa Flood Control District
- Contra Costa Department of Conservation and Development
- Contra Costa Water District (CCWD)
- Diablo Water District (DWD)
- East Bay Municipal Utilities District (EBMUD), and various cities within the County that produce all or part of their domestic water supply from groundwater sources

The Grand Jury attended meetings and witnessed technical presentations at or by:

- Contra Costa Water District (CCWD)
- East Bay Municipal Utilities District (EBMUD)
- San Francisco Bay Regional Water Quality Control Board
- Bay Area Integrated Regional Water Management
- East Contra Costa County Integrated Regional Water Management
- California Water Resources Control Board
- East County Water Management Association
- East Bay Leadership Council (Water Task Force)

- Contra Costa Local Agency Formation Committee (LAFCO)
- The Board of Supervisor's Transportation, Water, and Infrastructure Committee (TWIC)

The Grand Jury studied and reviewed documents relating to water wells and groundwater issues including:

- County ordinances related to domestic wells
- The Sustainable Groundwater Management Act (the new groundwater law)
- Various groundwater basin studies prepared by Luhdorff & Scalmanini, Norfleet Consultants, and DWR, including Bulletin 118
- Water-industry standards, Government and Non-Governmental Organization (NGO) documents related to groundwater, well drilling, and groundwater quality

## BACKGROUND

The population of California has more than doubled in the past 50 years. During this time, California has experienced three periods of drought: 1976-1977; 1987-1992; and the current drought, which started in 2012.

In 2020, the 20X2020 Water Conservation Law, which mandates a reduction of water consumption by 20% per capita from the base year (2005), will come into effect. The State is currently meeting that goal because of severe drought cutbacks, but historically consumption increases (bounces back) when a drought abates.

Groundwater has always been essential in California. Due to variable precipitation and droughts, California has relied on groundwater when surface water is scarce. According to a fact sheet prepared by DWR and other water experts:

- *More than eighty percent of Californians rely, in part, on groundwater for their drinking water.*
- *Many rural areas and small urban areas rely entirely on groundwater, as well as some larger cities, such as Fresno.*
- *Even in wet years, groundwater is over a third of the state's total annual water supply and increases up to sixty percent in dry years.*
- *Groundwater basins are one of the most cost-effective and environmentally friendly places to store water locally during wet years.*
- *Collectively, groundwater basins are the state's largest reservoirs – more than ten times the size of all its surface reservoirs combined.*

- *There are eight groundwater basins that either entirely or partially underlie the “footprint” of our County.*

## **DISCUSSION**

To better identify and understand this complex subject, the report has been divided into the following sections; groundwater, wells, concerns, and path forward.

### ***GROUNDWATER***

Groundwater is water that fills the pore spaces in the earth, the ground beneath your feet. By way of example, a ground water basin can be thought of as sand in a bathtub or marbles in a jar to which water is added. The coarser the material, (sand, pebbles, and gravel), the more space there is for water to be stored. This storage space is called an aquifer.

When the County was first settled, groundwater supply was sufficient for its population, but as the population grew, groundwater was impacted by the increased demands on it. This was exacerbated by periodic droughts and, in urban areas, by contamination from septic sources and diffusion of adjacent higher salinity water brought on by well over-drafting (the pumping of water from a groundwater basin or aquifer in excess of the supply flowing into the basin).

In the early part of the last century, surface waters captured and transported from the Sierra snowmelt and locally from the San Joaquin River, were tapped to provide a more reliable water source for the growing population. Nevertheless, for a significant number of families in exurban and rural areas of the County, groundwater remains an important source for both domestic and irrigation purposes. In East County, many disadvantaged communities (DACs) rely on groundwater for all or part of their water needs. Consequently, water quality issues in these areas have a greater impact in the absence of affordable water alternatives. (For more information about DACs in our County see Appendix 1)

#### **Groundwater Resources within Contra Costa County –**

The County’s footprint overlays all or parts of eight groundwater basins. The shaded areas in Figure 1 below indicate the groundwater basins. The northwest corner contains the northern end of the East Bay Plain Basin. Proceeding east across the northern edge are Arroyo del Hambre Valley, Ygnacio Valley, Clayton Valley, Pittsburg Plain, and the Tracy Sub-Basin. The San Ramon Valley and (an extension of) the Livermore Valley basins are in the southwest corner of the County. Compared to more agricultural Bay Area counties, the County has much smaller and in some cases lower quality basins.

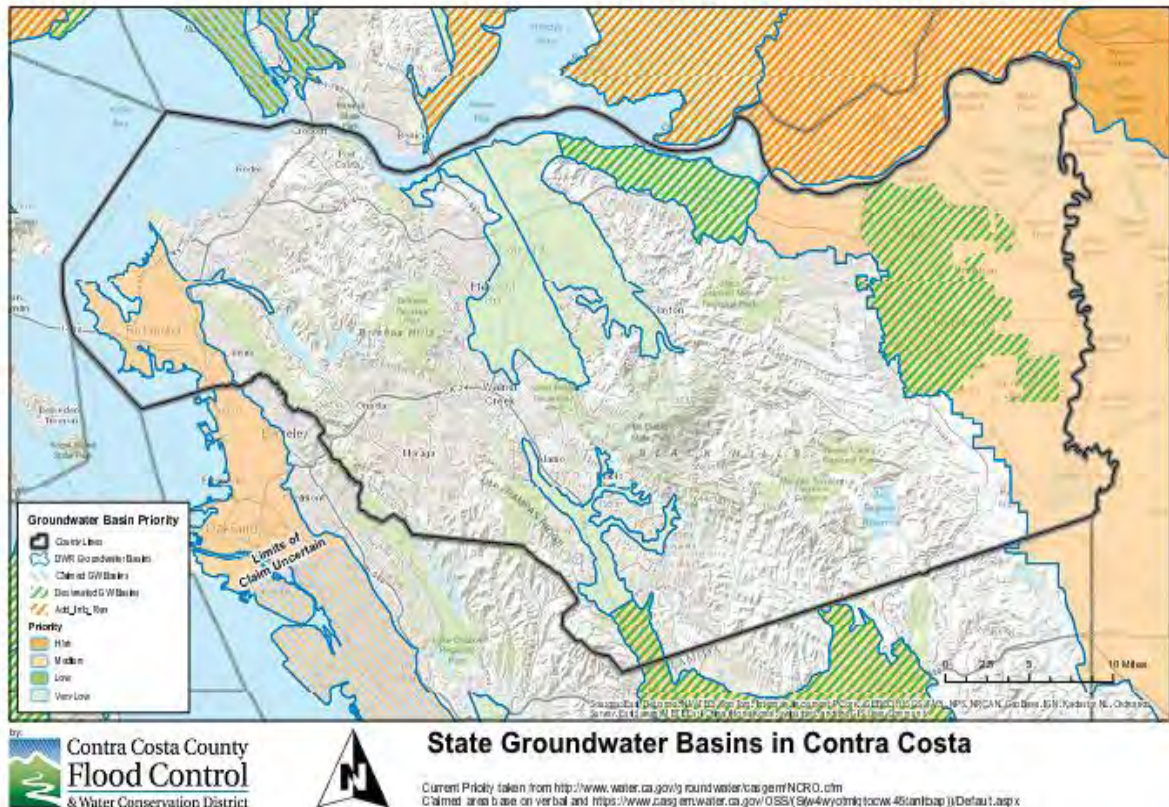


Figure 1- Groundwater Basins in Alameda and Contra Costa Counties

(Consult Table 3 in Appendix 4 for additional data obtained from DWR Bulletin 118.)

### Sustainable Groundwater Legislation –

Last year the Sonoma County Civil Grand Jury evaluated sustainable groundwater for its county. In their report, they provided the following summary of the SGMA:

*In November 2014, the State Legislature passed the Sustainable Groundwater Management Act (SGMA). It supersedes and strengthens previous legislation (AB 3030) that addressed groundwater management. It provides for the formation of Groundwater Sustainability Agencies (GSA's) to oversee each defined groundwater basin. It appropriated \$100 million toward the formation of GSA's. While only 'medium' and 'high' priority basins are required to form GSA's, the Act allows and encourages GSA formation for 'very low' and 'low' priority basins.*

Each GSA is responsible for assuring that groundwater monitoring wells reflect the true condition of the aquifer; pumping records are accurate; all necessary studies and modeling of groundwater basins have been identified and performed; and all decisions about how to achieve sustainability goals are properly validated.

While forming a GSA that is not legally mandated may appear to add an additional layer of bureaucracy, there are three potential advantages of doing so:

- (i) elucidation of how much available water exists within a defined basin;
- (ii) confirmation of how much water could be sustainably withdrawn on an annual basis or during an emergency and;
- (iii) agreement on who is entitled to withdraw from it.

For instance, if a basin confirmed to have unfilled space was intentionally charged with surplus water during wet years, basin users should agree on the rate at which the “water charger” may remove that water – for instance, a rate that would not negatively impact other basin users. It would also be important to agree that other users could not increase their withdrawal rates beyond their respective historical use. The GSA reaches, documents, and enforces these understandings and agreements

### **Planning for Groundwater Sustainability –**

To comply with the SGMA, each designated basin will need a detailed plan that addresses SGMA requirements. These requirements include:

- (i) a description of the basin’s parameters and characteristics;
- (ii) measurable objectives for achieving sustainability;
- (iii) a timeline and milestones for accomplishing the defined goals;
- (iv) provisions for monitoring and timely reporting of performance and;
- (v) verification that the plan aligns with general plans of the applicable city/cities and the County.

The Groundwater Sustainability Plan (GSP) has to consider all of the above criteria. To complete a GSP, the GSA will need to collect data on the current water extraction and recharge rates. It also needs to have studies conducted that better characterize the basin’s holding capacity, its ability to recharge, and its maximum extraction rate. SGMA provides authority for the GSA to obtain information about how much water is being extracted. Each GSA is also empowered to fund its own operations and enforce its own rules. However, stakeholders can opt out of SGMA requirements by demonstrating to the DWR that their basin is being managed sustainably.

### **Status of Groundwater Sustainability Agencies in the County –**

A GSA is currently being formed for the Tracy Sub-basin. Participants include Diablo Water District, CCWD, East Contra Costa Irrigation District, Byron-Bethany Irrigation District, the cities of Antioch and Brentwood, the Town of Discovery Bay, and the County Water Agency. The County is considering full membership in this GSA based on a recommendation by TWIC.

A GSA for the East Bay Plain basin, which is primarily within Alameda County but extends into the County, is being formed under the leadership of EBMUD. The team

working on formation of this GSA intends to work with the Contra Costa cities that overlie the basin and the County.

Previously, EBMUD had considered petitioning to sever the portion within the County from its “medium” priority status because it has limited storage capacity compared to the rest of the basin and the groundwater is degraded from salt-water intrusion in some areas. Nevertheless, the East Bay Plain basin contains producing wells, some of which are being used to water parks and public landscaping. In fact, as recently as 2009, a new well was drilled in El Cerrito. Also, the Richmond and El Cerrito General Plans acknowledge the potential benefits of using groundwater for emergencies such as an earthquake or an extended supply disruption.

Given that Richmond and San Pablo both had active municipal wells up into the 1930s that pumped over one million gallons per day, those cities might consider reassessing drilling new wells for irrigation and emergency use. According to a 1998 study produced by Norfleet Consultants, “Since [the over pumping and saltwater intrusion that occurred in the 1920-1930 era] groundwater levels have recovered and it is likely that they are now at 1880 levels or higher.”

The Pittsburg Plain basin is classified as “low” priority and therefore does not require the formation of a GSA. Even though municipal wells in the Pittsburg Plain basin are extracting over 2000 acre-feet/year, the basin has historically shown itself to be sustainable. It would be useful to determine the basin’s maximum capacity and suitability for enhanced storage. However, without stakeholder (municipal well owners) consensus that GSA formation would be beneficial, (and there has been none from municipal users) it would take the County’s or City of Pittsburg’s involvement to push agency formation forward.

The San Ramon Valley and the Ygnacio Valley basins are also classified as “low” priority. While there are slightly more than four hundred individual wells removing water from each basin, there have been no documented reports of permanent lowering of the water table. If the storage capacity of these basins were better understood, they might also be used for banking surplus water for future irrigation use. Again, GSA formation could be beneficial in establishing a mechanism for allowing such a banking plan to go forward.

### **Constraints on Use of Groundwater within Contra Costa County –**

Water quality in parts of basins within the County has been compromised by misuse. Water quality problems include saline intrusion, toxic plumes from prior industrial activity, and the risk of introduction of new contaminants from undocumented abandoned wells. The risks of recontamination discourage cleanup of the existing groundwater basins for use as underground reservoirs and particularly affect industrial areas such as Richmond and along the northern waterfront from Martinez to Antioch.

Even where chemical pollution is only a minor concern, the overall quality of naturally

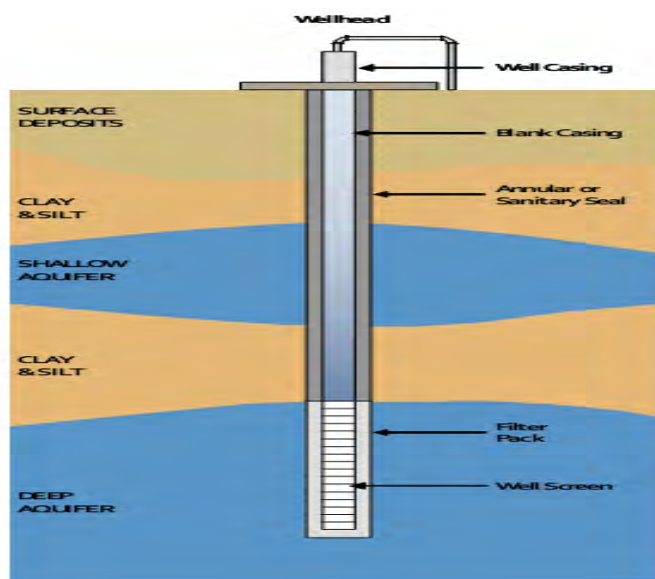
occurring water represents a problem for use and additional storage. High total dissolved solids (TDS), i.e. hardness and other naturally occurring elements and compounds (various salts, arsenic, boron, and hexavalent chromium), are issues that must be evaluated before moving forward.

The geological structure of the County's basins is inferior compared to the basins in the surrounding Bay Area counties and the large, highly permeable basins in Southern California. The latter contain thick layers of coarse sand and gravel that are ideal for water storage. Contra Costa's groundwater basins are smaller because the water-bearing layers are thinner, and often overlain with clay. The clay layers act as "aquitards" that inhibit natural recharging of the groundwater basins. However, despite these facts, significant amounts of water are currently being sustainably withdrawn to support domestic, industrial, and agricultural needs.

### **WELLS: ACCESSING GROUNDWATER IN CONTRA COSTA COUNTY**

#### **Wells and Well Drillers – (for description of different well types, see Appendix 2)**

Modern water wells have common features: a bore hole: a sleeve or liner called a "casing" that extends down the previously drilled hole to reach the aquifer; a sanitary seal that fills the annular space between the casing and the hole; a well pad on which the well head assembly rests; and the pump/motor/water conduit piping that extracts the water. Figure 2 shows a schematic representation.



*Figure 2 – Schematic Drawing Showing Completed Well (DWR)*

When a well is abandoned, it is required to be plugged with an approved material to a specified depth from the ground surface. Plugging is nothing more than removing the pump and internal piping and filling the space with the approved material.

## **Well Permitting and Inspection –**

In the mid-1980s the County passed ordinances that mandated permitting and inspection of all wells, including domestic and agricultural water wells. Since these ordinances were established to protect public health, enforcement was assigned to EHD, a branch of the County Health Department. EHD is responsible for permitting individual wells, inspecting well completions, and maintaining well records.

In order to drill wells in the County, each well drilling contractor must be bonded and possess a current (valid) state contractor's license. Both the County and the State maintain lists of licensed drillers.

EHD is responsible for monitoring and documenting one-hundred twenty small water service systems (those with up to one hundred ninety-nine service connections) that serve small communities, the public in commercial establishments, and remote regional parks.

EHD has no mandate to monitor individual households (single connection) or two related households sharing a well on the same parcel. A single test for contamination at well completion is all that is required. In comparison, most of the small systems the County monitors require routine bacteriological, chemical (including a more frequent test for nitrates), and radiological testing.

Although periodic testing and treatment of well water is recommended, private owners are not required to do so unless testing after well completion finds harmful bacteria in the water that was present prior to the drilling process.

Individuals using well water are at greater risk than those using municipal water, since the well water requires minimal testing, while municipal water is tested several times a day. According to Joan Brunkard, PhD. of the Centers for Disease Control and Prevention, the lack of testing impedes researchers trying to understand the scope and severity of disease outbreaks that could be linked to contamination from septic systems.

## **Well Documentation –**

The EHD records each well completion (sealing of the well to prevent future contamination from surface or near surface water) and documents that the water source meets State water quality requirements. Each completed well record is filed in a folder. Folders are ordered by street address. Since 2002, well records have been electronically entered into a database for easier access. Older records are slowly being entered into this database as resources become available. There is no current deadline for all older records to be electronically entered. EHD staff does not know how many operational or abandoned well records are in their paper files. There may be many wells for which the County may not have documentation because EHD well records only go back to the mid-1980s.

Those undocumented wells and abandoned wells that have a breach in the casing or well head can be a potential health risk to nearby wells that are properly sealed. These compromised wells provide a “short cut” for contaminants from the earth’s surface to travel to deeper water bearing zones from which drinking water is extracted. Figure 3 illustrates an entry point for contaminants.



A cracked well casing may allow surface water and contaminants into your well. One of the most common water quality issues associated with a cracked well casing is the presence of coliform bacteria. Other chemicals can also be introduced into the well through the cracked casing. Consult a water quality professional, such as a licensed well driller, to repair or replace the cracked casing.

*Figure 3 – Entry Point for Contaminated Water to Reach the Aquifer (DWR)*

As part of the well permitting process EHD notifies the County Assessor’s Office when wells are put into service. The Assessor’s Office shows or notes the presence of wells in the parcel files that it maintains. Such records can only be accessed manually (one at a time), which makes it difficult to identify all wells in the County since there are roughly 360,000 such records.

DWR maintains the well log records for drilling contractors going back to the early 1950s. These records document the date completed; the well type (domestic water, irrigation, monitoring, etc.); the well depth; the street address (in most cases); and, most importantly, geographic coordinates (latitude and longitude).

According to DWR’s website, “In June 2015, Senate Bill 83 amended California Water Code §13752....to allow public access to Well Completion Reports. However, the law requires the DWR to comply with *The Information Practices Act of 1977*, redacting personal information from the Well Completion Reports before making them public. Since there are about 800,000 reports on file with the Department, it requires a significant effort to redact the personal data from all reports. DWR is in the process of redacting the personal information with the goal of making all Well Completion Reports available online at no charge within the next year.”

There are over 17,000 wells in the County, although the majority are either monitoring wells or test wells. Test wells are usually plugged soon after completion. Domestic water and irrigation wells account for over 2500 of the total number of wells. The DWR data are organized on an Excel spreadsheet, so the active well locations can be converted into the County Geographic Information System (GIS) as a discrete overlay.

This “water well overlay” can identify the location of known water wells, as well as help confirm the status of old wells. It can also assist in locating possible abandoned wells so that they can be inspected to verify that they are correctly sealed.

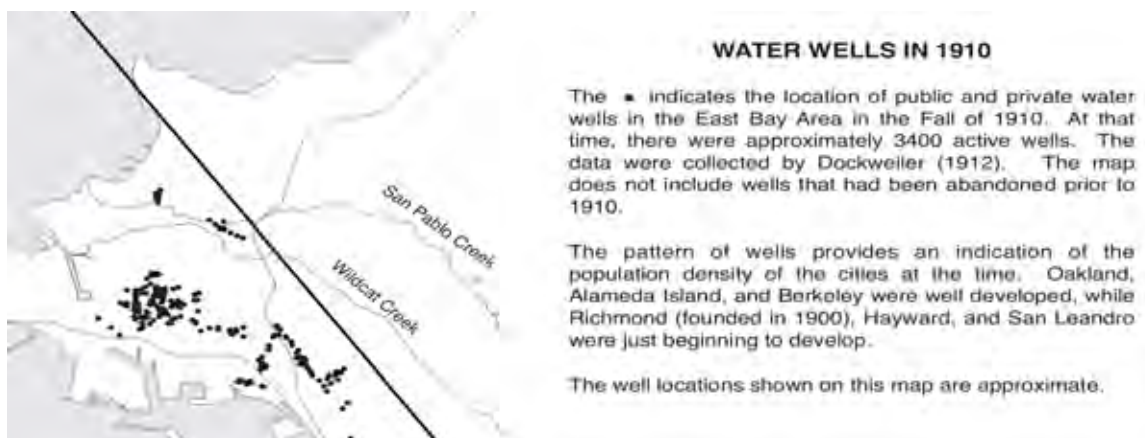
The distribution of domestic water and irrigation wells by associated groundwater basin is summarized in Table 2 in Appendix 2.

Performing a review of historical maps, United States Geographical Service (USGS) topographic maps, and old fire insurance maps (known as Sanborn Maps) also could aid in locating old wells to determine if they have been correctly abandoned.

The 1999 East Bay Plain Beneficial Use Study, prepared using data collected by Norfleet Consultants, identified the locations of wells dating back to at least 1910 in West County. Figure 4 shows the part of the data relating to West County. The black diagonal line represents the location of the Hayward Fault.

The 1999 Report recommended undertaking well abandonment programs by appropriate county agencies in areas where groundwater resources are at risk.

The 1999 Report also noted that EBMUD’s backflow preventer installation records are a good indication that backyard wells existed at those addresses. EBMUD records show that over 600 backflow preventers were installed in El Cerrito, Richmond and San Pablo. It is uncertain whether similar records are kept by other water districts within the County, which could be used to verify the existence of wells in areas served by the districts.



*Figure 4*  
1910 Map showing existing public and private well in the Richmond Area  
(From 1998 Report Prepared by Norfleet Consultants)

The original information collected by Dockweiler over 100 years ago was largely performed by door-to-door canvassers. It has long since been lost, but could be regathered.

## **CONCERNS**

### **Groundwater Availability –**

As California endures its fourth year of drought, there have been media reports of wells going dry and families being forced to haul water. These reports concern the Tassajara Valley in the southern part of the County where a defined groundwater basin does not supply the wells. Historically there have been problems during drought years in the area west of Briones Regional Park and along Marsh Creek Road. Last year EHD attempted to survey domestic well owners about seasonal or drought-related problems, but only received a limited response. The reason for the low response is not known but suggests that there is not a widespread issue with wells in other parts of the County.

As the drought persists, some drillers' backlogs have increased and a few have extended their workweek to 6 days to meet demand. While this might suggest an increase in construction of domestic or irrigation wells, EHD records for the County do not show this to be the case. There has only been a modest increase in well construction over the past 5 years and many of the new wells were associated with new building construction. EHD data shows that only 258 well permits were issued in the past 5 years. The peak year was 2014 when 84 permits were issued.

### **Groundwater Quality –**

DWR states that unused and abandoned wells can provide a pathway for contamination to reach aquifers used as drinking water sources. "The risk of groundwater contamination increases when other wells are operating, since pumping can draw poor quality water down the abandoned well and into the drinking water aquifer."

The lack of any testing or reporting requirement places families that are reliant on groundwater from their wells for domestic purposes at a greater risk compared to families using municipal water, who have their water tested dozens of times each day. The absence of testing is also an obstacle for researchers who are trying to understand the scope and severity of disease outbreaks that could be linked to faulty septic systems. The predominance of these issues falls within DACs.

Groundwater in the County can be high in total dissolved solids, commonly termed "hardness," and other contaminants such as arsenic, boron, chloride, hexavalent chromium and nitrates that must be filtered out or blended with higher quality water before distribution. Sometimes the limit (maximum permissible amount) on these "impurities" is driven by public health concerns. For example, the Beacon West community well on Bethel Island was recently found to contain arsenic levels more than double the current State Primary Drinking Water Standards. Previously controlled by the Department of Public Health, the maintenance of these standards now comes under the State Water Resources Control Board. Low interest loans from the State Revolving Fund were obtained in order for the community to drill a new, deeper well to reach higher quality water. Other times the "limits" are aesthetic: taste, color, odor and

usability without in-home water softening.

While lower quality groundwater is unsuitable for many uses, it may be used for irrigation. Where such water is available, it could be blended into recycled water distribution systems in summer months.

The County's stated water-related goals and policies in its current General Plan include:

- *To employ alternative drainage system improvements which rely on increased capacity to lessen or eliminate the need for structural modifications to water courses, whenever economically possible*
- *Preserve watersheds and groundwater recharge areas....*
- *Preserve and enhance the quality of surface and groundwater resources*
- *Provide development standards in recharge areas to maintain and protect the quality of groundwater supply*
- *Develop a program that fosters the participation of public agencies, private organizations, and individuals in the development of watershed management practices....*

These goals and policies confirm the County's interest in protecting its groundwater resource and in encouraging the broadest participation of its citizens in reaching those goals.

### **THE PATH FORWARD**

While the groundwater basins within the County are not as large or productive as those in surrounding counties, these basins can contribute to the local water supply. When issues related to basin capacity, sustainable withdrawal rate, recharge, and water quality are resolved; the basins can make an important contribution during times of peak demand, extended drought or emergencies.

Thousands of domestic water and irrigation wells are known to exist throughout the County. Historical records indicate that thousands more, which cannot be fully accounted for, may have been improperly abandoned or left to deteriorate. This represents a potential public health risk that needs to be addressed.

## FINDINGS

- F1. With the exception of Community and non-Community wells, the County is not required to provide oversight of individually owned wells; aside from permitting well construction and inspecting wells upon completion.
- F2. Improperly maintained wells or wells that are located too close to surface contaminants or failing septic systems risk contamination, which also may lead to the contamination of neighboring wells.
- F3. Improperly abandoned wells or undocumented wells can threaten groundwater quality because improper construction or maintenance may result in breaches in these wells that permit ground contaminants to reach potable water in lower water bearing strata.
- F4. The lack of a comprehensive and readily accessible County database of wells hinders the ability to track wells to assure they are either properly maintained or correctly abandoned.
- F5. EHD and the County Assessor can access DWR well log data, water district backflow preventer installation records, and related historical data that tie well locations to specific property parcels.
- F6. Residents of the County who live in disadvantaged communities are more likely to have their sole potable water source come from domestic wells, which have fewer checks on water quality than municipal water sources derived from surface water. County Flood Control and EHD have the data to assess those most at risk. With this information they would be able to develop projects eligible for Proposition 1 matching grants, i.e., projects that could enhance water quality and reduce risk of well contamination during flood conditions.
- F7. A “Groundwater Advisory Council” may coordinate stakeholders to help achieve the water-related goals and policies articulated in the County General Plan, as well as raise public awareness about groundwater issues in the County.
- F8. There is insufficient data to confirm either a maximum sustainable withdrawal rate or storage capacity for any of the groundwater basins within the County.
- F9. The County can choose to support the formation of GSAs for “low” and “very low” risk basins, even though not required by the SMGA.
- F10. GSAs can be helpful in elucidating how much available groundwater exists within a defined basin; how much water can be sustainably withdrawn on an annual basis or during an emergency and in helping stakeholders reach agreement about who is entitled to withdraw from a groundwater basin.

- F11. Three GSA agencies are in the early stages of formation: one for the East Bay Plain, one that incorporates the “thumb” of the Livermore Valley Basin, and one for the Tracy Sub-Basin.
- F12. Approximately \$100 million has been allocated by Proposition 1 (2014) to support GSAs in developing sustainability plans.
- F13. Based on historical records and more recent hydrological studies, the City could access more groundwater for landscape watering and emergency purposes.
- F14. To help establish the Pittsburg Plain basin’s sustainable yield and storage capacity, the City of Pittsburg could initiate formation of a GSA for this basin.

### **RECOMMENDATIONS:**

- R1. As funds are identified or become available, the Board of Supervisors should consider directing EHD to update their website alerting domestic well owners about the risks of not periodically checking the water quality of their potable water wells, and preparing an informational brochure containing the same cautionary information.
- R2. As funds are identified or become available, the Board of Supervisors should consider directing appropriate County departments to review the well records and databases of DWR, water districts, and the County to document well locations, develop a county-wide database, and map the locations as an overlay on the County GIS.
- R3. As funds are identified or become available, the County Assessor should consider verifying that the assessed value of each parcel reflects the presence or absence of wells by reviewing assembled well data and, where discrepancies between records are identified, confirming whether a well exists and its status, active or abandoned.
- R4. As funds are identified or become available, the Board of Supervisors should consider directing EHD and the County Flood Control District to jointly review proposed flood control projects to determine how to design or modify the projects to protect local wells, and the groundwater below, in DACs.
- R5. The Board of Supervisors should consider establishing a Groundwater Advisory Council to further promote public awareness about groundwater conservation and protection.
- R6. The Board of Supervisors should consider directing the County Water Agency to become involved in the formation of GSAs in the County and to periodically report to the Board on the status of each GSA.

- R7. The Board of Supervisors should encourage each water district whose sphere of Influence overlays “low” and “very low” priority groundwater basin in the County to form a GSA to analyze its groundwater basin and determine its potential for expansion and exploitation.
- R8. As funds are identified or become available, the City should consider consulting hydrological specialists to provide advice about the best locations for accessing groundwater for landscape irrigation and emergency purposes.
- R9. As funds are identified or become available, the City of Pittsburg should consider forming a GSA for the “low priority” Pittsburg Plain groundwater basin in order to establish its practical sustainable yield and maximum storage capacity.

## REQUIRED RESPONSES

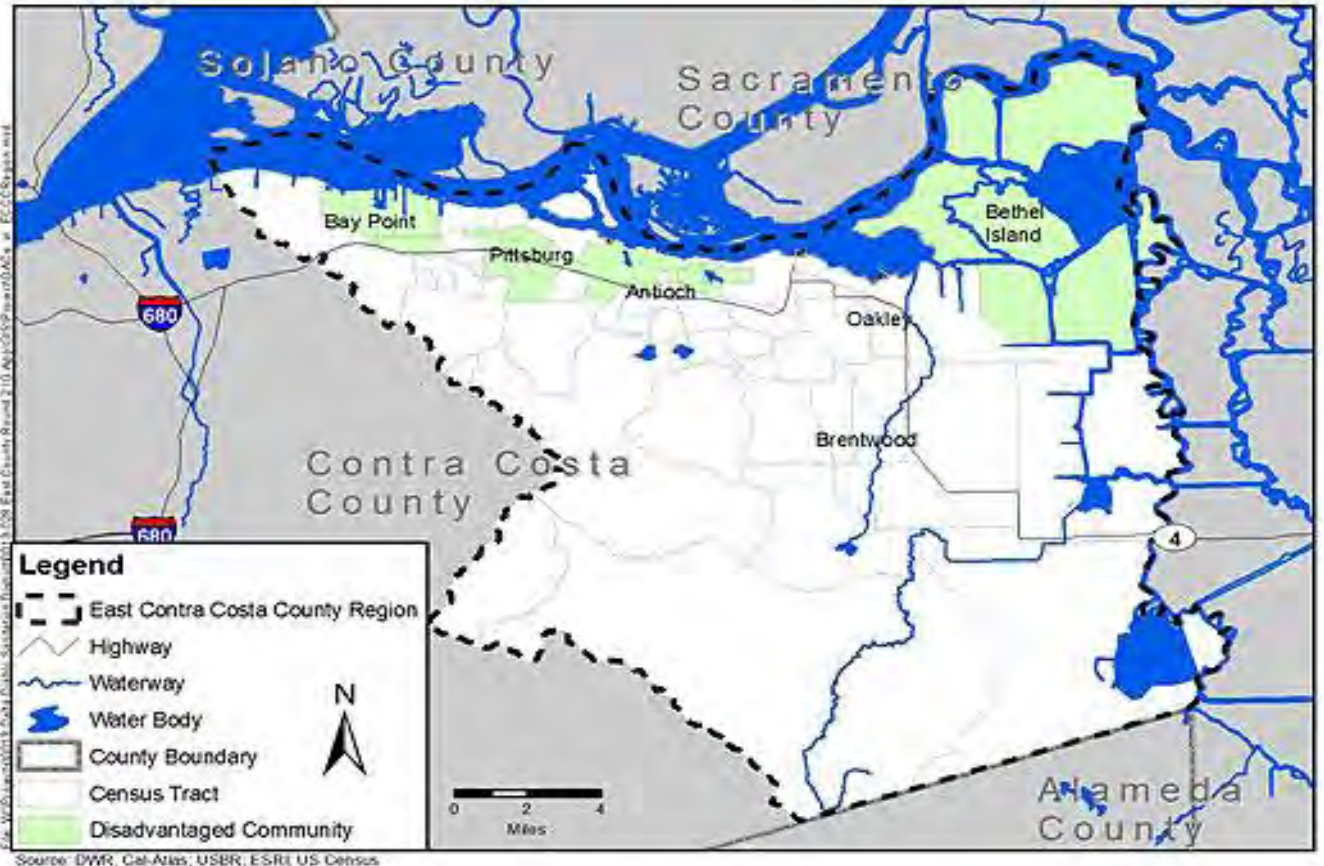
	<u>Findings</u>	<u>Recommendations</u>
Contra Costa County Board of Supervisors	1-12	1-2, 4-7
Contra Costa County Assessor	5	3
El Cerrito City Council	13	8
Richmond City Council	13	8
San Pablo City Council	13	8
Pittsburg City Council	14	9

These responses must be provided in the format and by the date set forth in the cover letter that accompanies this report. An electronic copy of these responses in the form of a Word document should be sent by e-mail to [epant@contracosta.courts.ca.gov](mailto:epant@contracosta.courts.ca.gov) and a hard (paper) copy should be sent to:

Civil Grand Jury – Foreperson  
 725 Court Street  
 P.O. Box 431  
 Martinez, CA 94553-0091

# APPENDIX 1

## Disadvantaged Communities in Contra Costa County

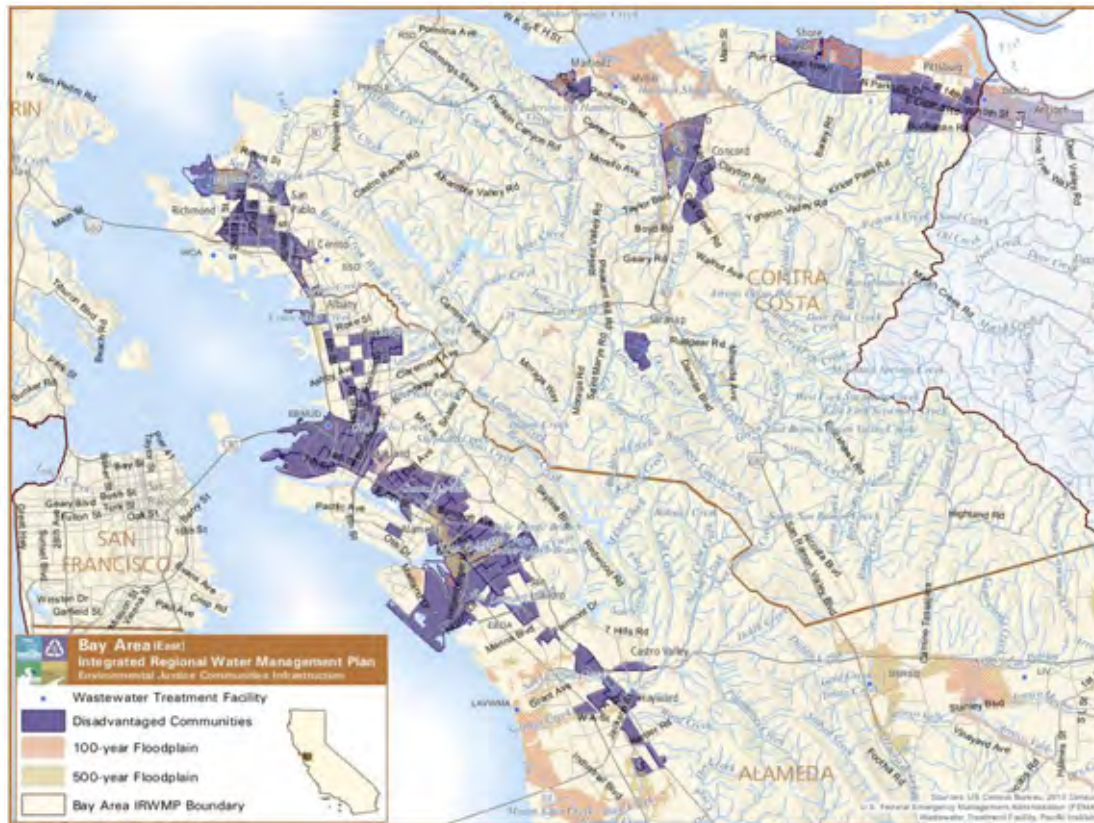


*Map of Disadvantaged Communities (DACs) in the East County Region*

The map shown above was taken from the East Contra Costa County Integrated Regional Water Management Plan (ECCCIWMP) website. The website describes DACs as follows:

According to the 2012 Proposition 84 and 1E Guidelines, a 'disadvantaged community' (DAC) is defined by the State of California as a community with an annual median household income (MHI) that is less than 80 percent of the statewide MHI (Public Resources Code (PRC), 75005(g)).

A community with an MHI of \$48,706 or less is considered a DAC. Under past grant funding applications, approximately 19% of the Region's area qualifies as DAC, while 23% of its population lives within a DAC. As of the 2015 IRWM Plan update, this number had dropped to 19% of the region's population qualified as DAC, reflecting some recovery from the recent economic downturn.



DACs in West and North County *Regions*  
*(The map also shows portions of Alameda County)*

### Critical Water Supply and Water Quality Needs of DACs in the Region –

Many water supply and water quality issues facing DACs in the Region relate to requirements to maintain drinking water quality that meets applicable standards, the threat of damage from flooding, and a strong reliance on Delta supplies. Increase costs of supplies or treatment have disproportionately adverse effects on DACs, whose limited resources may threaten their access to drinking water if costs grow too high. Bethel Island, which is entirely DAC, relies on groundwater for its drinking water. This groundwater has high levels of arsenic, and projects are currently being developed to address this issue. [Note: At least one of these projects has now been completed.]

### Issues of special concern to DACs in the Region include:

- Improved water supply reliability/reduced reliance on Delta supplies
- Water quality of groundwater supplies used to supplement Delta supplies
- Infrastructure renovations necessary to assure continued reliability of the minimum quality and quantity of water
- Affordability programs to offset the rising costs of water service
- Flood and stormwater management projects designed to protect disadvantaged communities from flooding impacts

## APPENDIX 2

### Smaller Community Wells –

EHD monitors the water quality reports required to be submitted for smaller community wells (up to 199 individual connections) and periodically visit the sites to verify their condition. Monitoring of larger water systems is the responsibility of the State. There are approximately thirty community water systems that EHD oversees. In addition, there are over ninety other smaller water systems, including commercial establishments, churches, parks, and much smaller “State Small Water Systems,” that the State delegated to EHD for oversight. In some cases these systems required disinfection and filtration systems. Table 1 summarizes both community and municipal wells within the County.

#### Water Systems in Contra Costa County

Table 1

Type of System	Number of Systems	Approximate Population Served
<b>Community</b>		
Very Large (>100,000)	3	550,000
Large (10,001 – 100,000)	6	222,925
Medium (3,301 – 10,000)	0	0
Small (501 – 3,300)	0	0
Very Small (>15 connections, 0-500)	31	4,643
State Small (5-14 connections)	14	200
Local Small (2-4 connections)	27	150
<b>Non-Community</b>		
Non-Transient	15	3,650
Transient	51	4,057

*Source: Presentation by EHD to LAFCO – January 2016*

## Municipal Wells –

Several cities and communities, including Bay Point, Bethel Island, Brentwood, Discovery Bay, Oakley (Diablo Water), and Pittsburg, rely on groundwater for all or a portion of their potable (i.e., drinkable) water. When good quality surface water is available, it is blended with the well water to improve overall water quality.

## Domestic and Agricultural Irrigation Wells –

The DWR data for domestic and irrigation wells summarized in the Appendix does not include information on annual extraction rates. A rough estimate could be performed based on the well casing size, the acreage associated with the well or wells, and the type of crop grown. East Contra Costa Irrigation District (ECCID) normally uses their pre-1914 surface water “right” in lieu of pumping groundwater. In dry years it has a contract with CCWD to sell its surface water, and use groundwater for the crops that would normally get surface water irrigation. Table 2 sets forth the number and type of well for a specific groundwater basin within the County.

Well Location vs. Groundwater Basin

Table 2

Ground-water Basin	Tracy Sub-Basin	Pittsburg Plain	Clayton Valley	Ygnacio Valley	Arroyo Del Hambre Valley	San Ramon Valley	East Bay Plain	Other
Domestic Wells	1152	18	89	264	0	171	8	194
Irrigation Wells	111	21	18	199	2	232	9	284

## APPENDIX 3

### **Notes from DWR Bulletin 118 –**

#### *Arroyo del Hambre Valley, Clayton Valley, Pittsburg Plain, Tracy (Sub), and Ygnacio Valley Basins*

Within the CCWD service area, groundwater use is limited (CCWD 2011). The use of existing CCWD wells at the Mallard Well Fields is limited because of the threat of contamination from adjacent industrial areas. The City of Pittsburg operates two municipal wells from the Pittsburg Plain Groundwater Basin (Pittsburg 2011). The City of Martinez operates up to two wells in the Arroyo del Hambre Valley Groundwater Basin to provide irrigation water to a municipal park (Martinez 2011). In Bay Point, the Golden State Water Company operates three municipal wells.

#### *San Ramon Valley Groundwater Basin*

Groundwater use is limited within the San Ramon Valley Groundwater Basin located in southern Contra Costa County. Local wells are used for small agricultural activities and landscape irrigation by individual landowners.

#### *Livermore Valley Groundwater Basin*

In the Livermore Valley Groundwater Basin, Zone 7 Water Agency administers oversight of the groundwater basins used for water supply and provides water to California Water Service Company, Dublin San Ramon Services District, City of Livermore, and City of Pleasanton. Zone 7 Water Agency only withdraws groundwater that has been recharged using surface water supplies (Zone 7 2010). The California Water Service Company, Dublin San Ramon Services District, and City of Pleasanton also withdraw groundwater (California Water Service Company 2011h; DSRSD 2011; City of Livermore 2011; City of Pleasanton 2011).

Zone 7 Water Agency manages the groundwater levels and quality in the Livermore Valley Groundwater Basin to maintain groundwater levels that would avoid subsidence and provide emergency reserves for the worst credible drought (DWR 2006q, 2013d).

Zone 7 Water Agency artificially recharges the Livermore Valley Groundwater Basin with local surface water supplies and SWP water by releasing the surface waters into the Arroyo Mocho and Arroyo Valle (Zone 7 2005, 2010). The infiltrated water is then pumped from the groundwater basin for various uses, mostly during the summer and during drought periods when local surface water supplies are diminished and the available SWP water supplies are less than the entitlement value Zone 7 Water Agency, City of Livermore, City of Pleasanton, Dublin San Ramon Services District, and California Water Service Company are permitted to withdraw groundwater from this sub-basin.

In 2009, the Zone 7 Water Agency began operation of the Mocho Groundwater Demineralization Plant (Zone 7 2010). This plant is a wellhead treatment plant that produces potable water using reverse osmosis to remove TDS and hardness from the Main Basin.

## APPENDIX 4

### Summary of Groundwater Basins in Contra Costa County

Information extracted from California DWR Bulletin 118 Data

Table 3

Basin Name <i>NI = No Information</i>	Pittsburg Plain	Clayton Valley	Ygnacio Valley	San Ramon Valley+'thumb' of Livermore Valley	East Bay Plain within Contra Costa County	Arroyo del Hambre Valley	Tracy Sub-basin within Contra Costa County
Basin Number	2-4	2-5	2-6	2-7	2-9.4	2-31	5-22.15
Surface Area (Acres)	11,600	17,840	15,500	10,620 (est.)	7,000 (est.)	790	115,000 (est.)
Storage Capacity/ Groundwater in Storage	NI	NI	NI	NI	NI	NI	NI
Water Bearing Formations	NI	> 700 feet	> 700 feet	NI	NI	NI	NI
Groundwater Level Trends	NI	1976-1977 1987-1992 Dropped and Recovered	1976-1977 1987-1992 Dropped and Recovered	1976-1977 1987-1992 Dropped and Recovered	NI	NI	NI
Groundwater Quality	450-5737 mg/L 1821 mg/L Avg.	328-864 mg/L	NI	NI for SRV 450 mg/L Avg. for Livermore Valley	364-1420 mg/L	NI	210-7800 mg/L Higher salinity wells nearer Delta
Last Update	2004	2004	2004	2004	2004	2004	2006



A REPORT BY  
THE 2015-2016 CONTRA COSTA COUNTY GRAND JURY  
725 Court Street  
Martinez, California 94553


Report 1603

# Pension Reform

If Not Now, When?

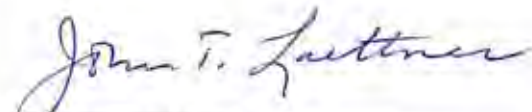
APPROVED BY THE GRAND JURY:

Date: May 10, 2016

  
\_\_\_\_\_  
MICHAEL SIMMONS  
GRAND JURY FOREPERSON

ACCEPTED FOR FILING:

Date: May 6, 2016

  
\_\_\_\_\_  
JOHN T. LAETTNER  
JUDGE OF THE SUPERIOR COURT

Contra Costa County Grand Jury Report 1603

**Pension Reform**

**If Not Now, When?**

**TO: BOARD OF SUPERVISORS**

**SUMMARY**

Contra Costa County carries extremely large pension liabilities, which may get worse due to uncertainties in the financial markets. Because of a long-standing California legal precedent, pension benefits to be earned in future periods are not negotiable, while wages and other benefits are subject to negotiation during the collective bargaining process. This grand jury recommends that the County seek a change or clarification of this legal precedent in light of subsequent legislation, thereby clearing the way for fair and sensible pension reform through collective bargaining.

Absent such reform, the County faces serious financial risks, as pension liabilities appear to be on a relentless upward path. The likely consequences of increasing pension costs are service cutbacks and staff layoffs. It is even conceivable, should the pension cost problem reach crisis proportions, that the County would have to consider bankruptcy reorganization, with all the arbitrary and unfair consequences that could flow from such an action. For these reasons this grand jury believes the time to act on pension reform is now.

A Glossary of useful terms for issues discussed in this report can be found in the Appendix. Each term included in the glossary is set in *italics* the first time it appears in this report.

**BACKGROUND**

*Defined benefit* pension plans (such as the County's) are financed by means of funds invested on behalf of the individual members of the plans. Both individual members and their employers make contributions to the funds each year, ideally in amounts sufficient to pay for the pension benefits earned during that year. In addition to annual contributions to the pension funds, the funds' *investment returns* are retained and

reinvested for the benefit of the members and finance a major portion of the pension benefits. For example, the County's pension fund projects that investment returns on the fund's assets will cover more than 50% of the ultimate costs of the County's pensions. For defined benefit plans to work as designed it is critical that the annual contributions from members and employers plus investment earnings be sufficient to cover the projected future costs of the pensions. When these financial underpinnings to a pension fund fall short, the fund charges the public employer for the amount of the shortfall. These shortfalls, known as *unfunded actuarial accrued liabilities (UAALs)* have become significant debts for public jurisdictions throughout California—including the County—that offer defined benefit pension plans to their employees.

The Stanford Institute for Economic Research estimates that, as of year-end 2013, California public pension systems as a whole were short \$281.5 Billion of what they require to assure the pensions will be paid when they fall due. This estimated shortfall amounts to about \$22,210 for each household in California, without including the unfunded liabilities of one the largest pension funds, the California State Teachers Retirement System (CALSTRS). Paying down these unfunded pension liabilities is a major reason why pension costs have absorbed increasing percentages of county, city and state budgets over the last 15 years.

The state of California has taken some important steps to address these costs. In 2012, the governor signed into law the *PEPRA* (Public Employees' Pension Reform Act) reform bill, which made significant reductions in pension benefits to be earned by public employees hired after January 1, 2013. However, PEPRA made only modest changes in pension benefits earned by employees hired before that date. That was contrary to the recommendation of the state's Little Hoover Commission, which had warned in a 2011 report that limiting pension reform to new employees was not a sufficient remedy for the pension problem:

"The problem, however, cannot be solved without addressing the pension liabilities of current employees. The state and local governments need the authority to restructure future, unearned retirement benefits for their employees. The Legislature should pass legislation giving this explicit authority to state and local government agencies. While this legislation may entail the courts having to revisit prior court decisions, failure to seek this authority will prevent the Legislature from having the tools it needs to address the magnitude of the pension shortfall facing state and local governments." (Emphasis added.)

In fact, overall pension costs have continued to rise since the enactment of PEPRA, though at a somewhat lower rate as more employees who were hired after January 1, 2013 enter the system. Thus, pension boards and public employers have continued to deal with rising pension liabilities by means of increasing pension contributions from members and their employers. For example, CALPERS, the state's largest pension plan, has announced plans to increase the contributions required by its members and their employers. The Contra Costa County Employees' Retirement Association

(CCCERA), the entity that manages the County's pension fund, effectively increased member and employer contributions in 2014 when it reduced the *assumed investment rate* on its pension fund assets from 7.75% to 7.25%. Member and employer contribution rates increase whenever the assumed rate of return on the pension fund is decreased, because actuaries must then assume that a smaller portion of the required funding for pension obligations will be covered by investment returns.

There are limited options for reducing pension-funding shortfalls:

1. Increasing contributions to the pension fund;
2. Reducing pension benefits;
3. Increasing investment returns on the assets of the pension fund.

The first two options have adverse financial impacts on one or more groups, which explains why pension reform is a difficult and contentious issue. Higher contributions from public employers come at a cost: they must be funded either by higher taxes or reduced public services; e.g., library or park cutbacks, reduced police patrols, longer medical and fire response times. Higher contributions from members mean lower take-home pay. Reductions in pension benefits adversely affect employees who view the pension benefit as an important element of their compensation for services rendered.

It is not surprising, then, that governments and plan members have often turned to higher investment returns as an apparently painless "magic bullet" to close the funding gap. Assuming a high rate of return on fund assets does not come at a cost to any group—at least initially—and does not require any reduction in benefits. However, employers and plan administrators have often made the unwarranted assumption that high investment returns will continue indefinitely. When returns inevitably fall below such unrealistic assumptions, the impact on pension liabilities is severe. In California the public employer (e.g., the County) is solely responsible for making up the shortfall.

The grand jury believes that funding for the pension liabilities the County and other districts have undertaken needs to be addressed realistically, without rosy assumptions about investment returns. Difficult as they may be, these issues must be addressed through adequate contributions to the pension funds, and by negotiations with labor groups over the levels of pension benefits to be earned in the future.

## **DISCUSSION**

### The County's Huge Pension Liability

The County has reported in its Recommended Budget for fiscal year 2016-2017 that it carried an unfunded pension liability of \$1.155 Billion as of December 31, 2014. This figure also includes the unfunded pension liability of the Contra Costa County Fire Protection District (ConFire), which the County routinely includes in its pension liability reports. The unfunded pension liability is also known as the unfunded actuarial accrued

liability or (UAAL). It represents the amount of money the County has yet to set aside in order to cover employee pension benefits already earned that the County will be required to pay in the future. It also represents the amount by which the CCCERA pension fund is not fully funded with respect to the County's pension liabilities.

The money the County should set aside today to cover future pension benefit payments is actually much less than what the ultimate payouts will be, since any money contributed to the CCCERA pension fund should increase in value over time from investment returns. By the same token, the contributions held back from the pension fund do not accumulate any investment earnings that could reduce the UAAL. Unless the short-funded CCCERA pension fund can generate investment returns that exceed the 7.25% assumed annual rate, the County will have to make up the UAAL gap in the future by means of increased contributions to the pension fund. The County and ConFire also have outstanding over \$329 Million in pension obligation bonds (POBs) that were issued in earlier years for the purpose of raising funds to contribute to CCCERA in order to reduce the County's UAAL obligations. Without the funds raised from the POBs, the County's pension UAAL would be substantially larger.

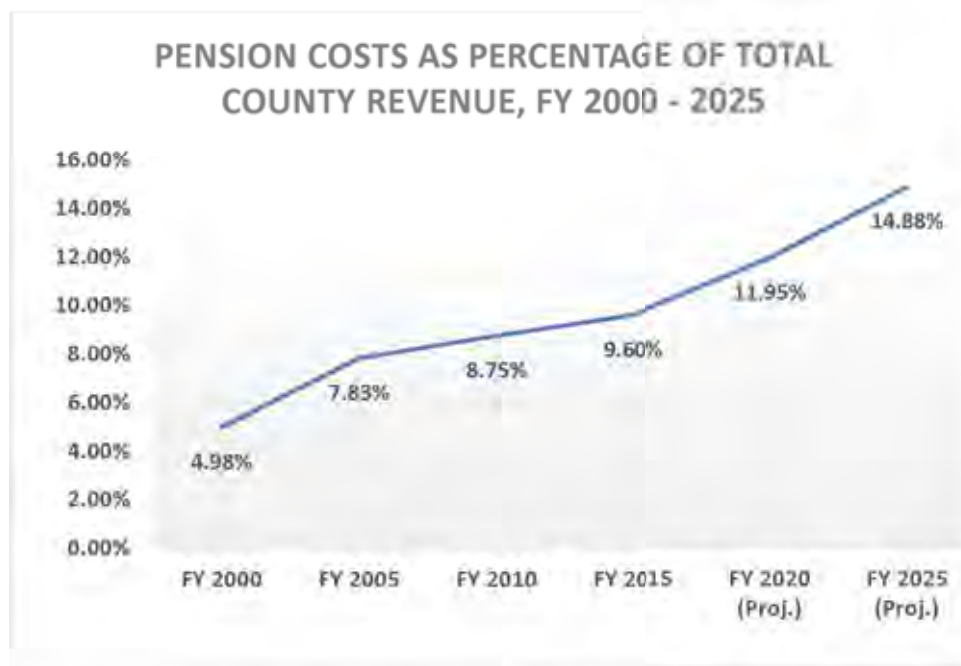
The \$1.155 Billion unfunded liability figure is based on an *assumed investment rate of 7.25%* per year. CCCERA has assumed it will earn this rate of return each year on its pension fund, compounded over the entire period the County's employees are working or receiving pension benefits. However, many financial analysts question whether the 7.25% annual return assumption in today's investment environment is realistic. Private employers typically assume a much lower rate when calculating their liability in a defined benefit pension plan. AT&T, for example, discloses in its 2014 Annual Report that it assumes a compound rate of return on its pension fund assets of 5.75% per year. In CCCERA's own case, its actuary discloses in the latest actuarial report that the CCCERA pension fund has over the ten-year period ended December 31, 2014 earned an average annual return of 6.58%, rather than its currently assumed rate of 7.25%.

The County's comprehensive annual financial report (CAFR) for the fiscal period ended June 30, 2015 contains a vivid illustration of the importance of the assumed investment rate in calculating the size of the County's unfunded pension liability. The CAFR reports its net unfunded pension liability to CCCERA as \$925 Million instead of \$1.115 Billion, due to certain timing differences. However, the CAFR also discloses that the unfunded pension liability would increase to \$1.8 Billion in the event this liability was calculated using an assumed investment rate of 6.25% per year. Thus, in an inherently uncertain financial environment, a change of only one percent per annum in the rate of return would nearly double the size of the County's unfunded pension liability!

The County's \$1.155 Billion unfunded pension liability well exceeds the \$539 Million it spent on public protection services in its 2015 fiscal year as well as the \$445 Million it spent on public assistance during that year. However, the unfunded pension liability is not due immediately. Under the *UAAL amortization policy* adopted by CCCERA, the County is permitted to treat the unfunded liability as a long-term debt payable over a

period of 18 years.

The County's annual pension costs consist of its employer contributions to the "normal costs" of the pension benefits earned each year plus its amortized payment on the UAAL. The annual pension costs are a large and growing percentage of the County's total budget. During the 15-year period from fiscal year 2000 through fiscal year 2015, the County's revenues grew from \$1.347 Billion to \$3.217 Billion, a compound annual growth rate of 5.97% per year. By comparison, during this same period the County's pension costs (again, including those of ConFire) grew from \$67.06 Million to \$308.9 Million, a compound annual growth rate of 10.72% per year. Pension costs now amount to 9.6% of total County Revenues as compared to 4.98% 15 years ago. If these trends continue, pension costs will amount to approximately 11.95% of County revenues in five years, and 14.88% of revenues in 10 years, as illustrated in the chart below.



Another way to see the growth in pension costs is to compare two illustrations the County has prepared in the past five years showing the amount of pension costs incurred for every dollar of salary paid its employees. Here was the breakdown in 2010:

---

## In Contra Costa, for every dollar being spent on salary...

---



... we spend 40 cents on pension



... and ANOTHER 41 cents on other benefits

Contra Costa County – May 18, 2010 – Page 42

Here is the breakdown today:

**for every dollar being spent on permanent salary ...**



**... we spend 53 cents on pension**



**... and ANOTHER 51 cents on other benefits**

These figures and charts show the County already faces an enormous financial challenge in managing its unfunded pension liabilities. Unfortunately, the 2015 declines in the stock markets mean that the challenge is about to get larger. At a special CCCERA Board meeting on February 25, 2016, the Board's advisers reported that the return on the pension fund for the year 2015 was 1.9%, the lowest return since the Great Recession year of 2008. The 1.9% figure is well short of the 7.25% target return by 5.35 percentage points. The latest CCCERA actuarial report advises that for each percentage point the actual return falls below the 7.25% target return, the County will be required to contribute 9.9% of its CCCERA salary base to make up the funding deficit. Based on the County's current payroll of \$572 Million included in the CCCERA pension plan, this lower than target investment return for 2015 will likely increase the County's unfunded pension liability by over \$300 Million.

CCCERA follows a five-year "*asset smoothing policy*" for recognizing annual investment returns above or below the 7.25% target return. Thus, CCCERA's actuaries will phase in the 2015 investment return shortfall over five years and will offset it against the remaining above-target gains from 2012 and 2013 that are likewise being phased in over five years. Further, because of its UAAL amortization policy CCCERA will allow the County to pay off the 2015 phased-in shortfall over 18 years. Nevertheless, if not offset by above-target gains from other years, the additional annual cost of the 2015 deficit alone to the County could, based on CCCERA's latest actuarial report, amount to over \$21 Million per year for 18 years.

This cost estimate makes no allowance for increases in the pension liability that may arise from abnormal pay raises following current contract negotiations between the County and its labor organizations. As recently reported in the press, the County has agreed to pay increases starting July 1, 2016 of 5% per year over the next three years to its deputy sheriffs, with an additional one time 2.5% increase for sheriffs with over five years of service. That rate of increase exceeds the 4.75% assumed rate of salary increase for a safety member with five or more years of service the CCCERA actuaries currently use in calculating future pension costs.

### The Peculiar California Pension Rule

Because of the large increases in its pension liabilities that can arise from investment returns falling below the assumed 7.25% annual rate of return, the County is constantly at risk of debt increases that arise for reasons outside its direct control. Further, unlike all other elements of employee compensation, the County cannot manage its pension liabilities by negotiating reduced pension benefits at the collective bargaining table. That means the County is left with layoffs, service cutbacks, cuts in salary or health benefits, or tax increases as the remaining tools available to meet pension liabilities, which the County is legally obligated to pay.

Why is the amount of the pension benefit to be earned excluded from collective bargaining? The reason for this peculiar state of affairs is rooted in a series of legal

cases that began before public employees had collective bargaining rights. The first of the cases dealt with an instance of seemingly bad behavior by a city council in Long Beach, California. In the 1947 case of Kern vs. Long Beach, the city council decided to terminate a pension program for its employees just 32 days before one of its employees was due to begin receiving his pension after 20 years of city service. Not surprisingly, the California Supreme Court frowned on such apparently unfair treatment of a long-time city employee. The Court held that once a pension system was in place the employee in question was entitled to a reasonable pension for the time he or she served the city. That might well have ended matters, but the City of Long Beach proved to be a repeat offender when it later sought to impose higher costs and reduced benefits on the members of its pension plan. In the 1955 case of Allen vs. City of Long Beach, the California Supreme Court held that once an employee was enrolled in the city's pension plan, the city was not only barred from terminating pension benefits as an element of compensation for such employees, but was also prohibited from imposing any alterations in its pension plan which result in a disadvantage for employees unless accompanied by "comparable new advantages."

The 1955 decision, while likely reflecting some exasperation by the Court over what appeared to be another instance of bad behavior by the City of Long Beach, resulted in a highly inflexible legal precedent. Known as the "*California Rule*", it bars a public employer in California from ever reducing the level of pension benefits—even those yet to be earned in future periods—below those that existed on the first day of the employee's term of service.

This precedent has remained part of California law despite numerous important changes protecting the rights of public employees that have occurred in other parts of the California legal framework since 1955. The most important of these changes is the Meyers-Milias-Brown Act of 1968. That Act guarantees the right of public employees to engage in collective bargaining over the terms and conditions of their employment. Public employers have a corresponding obligation to bargain in good faith with their employees. A state agency, the Public Employment Relations Board (PERB), can impose penalties on public employers that engage in unfair labor practices or fail to engage in good faith bargaining.

### The California Rule Should be Challenged

The California Rule thus stands as a peculiar exception to the standard practice of negotiating all salary and benefits for public employees at the collective bargaining table. We believe there are two important reasons to challenge the Rule's exclusion of pension benefits from collective bargaining. The first is cost savings. As Report 1503 of the 2014-2015 Grand Jury (Report 1503) pointed out, doing no more than adjusting the amount of the pension benefit all County employees earn in future years to the PEPRA levels earned by employees hired after January 1, 2013 could save the County over \$95 Million a year. The second is fairness. Fairness to County employees is a key consideration in any pension reform proposal. Pursuing pension reform at the

bargaining table assures employees the following protections:

- Changes in pension benefits would only affect the benefits to be earned in future years. Pension benefits earned in previous pay periods would not be affected.
- Changes would be subject to good faith bargaining obligations on the part of the County and negotiated by labor representatives accountable to the employee groups.
- Changes could be negotiated in a way that pays particular attention to the interests of different groups of employees. For example, pension benefit reductions (and corresponding lower pension contributions deducted from a paycheck) could be limited to tiers of employees with fewer years of service. Such employees may have a greater interest in securing higher take-home pay rather than higher pension benefits that will only be paid many years distant.

### The Policy Decision on Pension Reform Rests with the Board of Supervisors

The Board of Supervisors should seriously consider adopting a policy to seek judicial clarification or reform of the California Rule on pensions in light of California law that now guarantees collective bargaining for public employees. The Board is the designated authority within the County to make the required political, financial and value judgments required to go forward with such a policy. We set forth later in this report some specific ideas on how the Board might proceed to mount a legal challenge to the California Rule without putting the County's financial position at risk pending the outcome of the challenge. In its policy deliberations, we believe the Board should review carefully the following questions:

1. Is it right that the California Rule should allow pension costs to crowd out other budget priorities?
2. Is it right that the cost of pension benefits earned by County employees today should be paid by the County over 18 years, thereby assuring that a significant part of those costs will be passed on to taxpayers who are now students in junior and senior high school?
3. Is it right that the cost of pension benefits, already a huge unfunded debt, may at some point so stress the County's resources that a severe and draconian financial restructuring could become necessary, imposing hardships on retirees, employees, and County citizens?

The Crowding-Out Problem. The County faces severe budget constraints. Previous grand jury reports have cited various projects and services that have been deferred or cut back due to budget issues, including maintenance and upkeep of County facilities, plans for an improved and modernized crisis operations center, funding unmet needs in the foster care system, and building facilities for rehabilitation programs in the County jail system. Budget issues also affect employee pay. This year much attention has

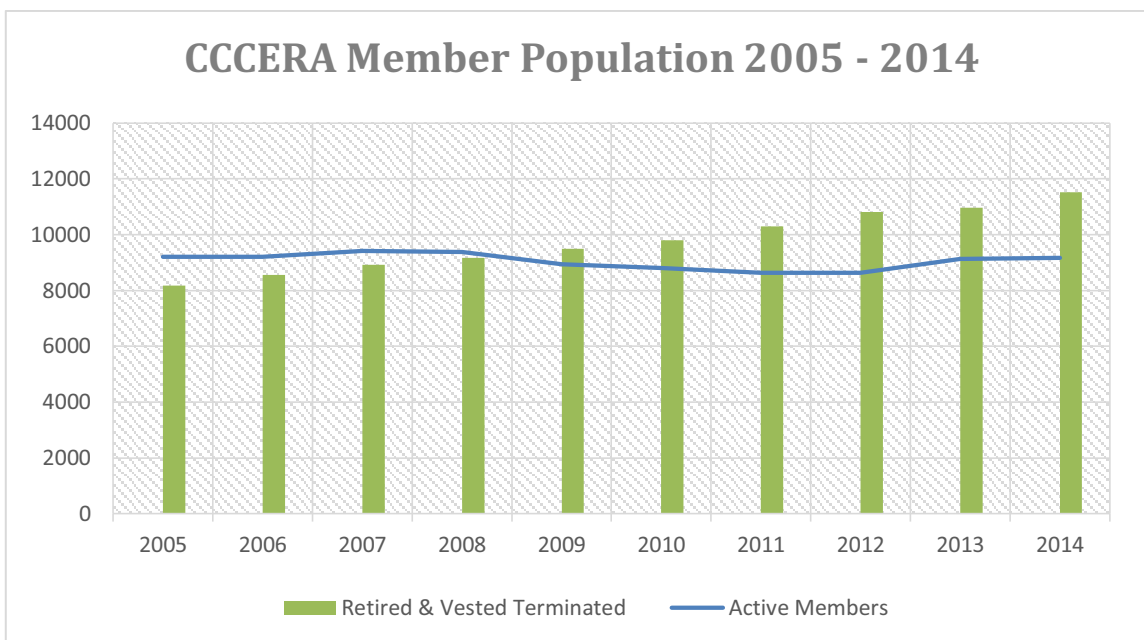
focused on the challenges the County faces in retaining an experienced pool of deputy sheriffs to maintain an adequate level of public safety services in the County. Below average pay of the County's deputy sheriffs as compared to neighboring jurisdictions seems to be at the core of the retention problem. In general, the County's employees have only had modest pay raises at best since the onset of the financial crisis in 2008 – 2009. The root of these problems is a shortage of available funds. As noted in Grand Jury Report 1503, a large pool of funds could be made available for all of these purposes (nearly \$100 Million annually in that Report's estimate) if the County were able to negotiate the level of future pension benefits to be earned by all employees down to the same level as that for its PEPRA employees.

Passing on Today's Costs to the Next Generation. A large part of the County's annual pension cost is its cost (a) to reduce the UAALs generated by investment return shortfalls in the CCCERA pension fund and (b) to cover payments on long-term pension obligation bonds (POBs) that were issued in earlier years (e.g., 2003 in the case of the longest outstanding POBs) to reduce those UAALs. The UAALs are the funds still needed to cover the County's future pension obligations for services already performed. As noted above, the County is permitted to pay down its UAALs over an amortization period of 18 years.

The 18-year UAAL amortization period, combined with the use of long-term pension obligation bonds to cover unfunded pension liabilities, has troubling consequences. These pension debts cover the costs of services rendered in the past. This means that the taxpayers who pay off these debts for services rendered are not the same taxpayers who received the services. It is as if a homeowner were being asked to pay part of the cost of a gardener who had mowed the lawn ten years ago before the homeowner even bought the house. Put another way, the 18-year amortization of UAAL debt and the long-term final maturity dates for the POBs mean that young children in the County are being tabbed to pay costs for services their parents or grandparents received. That seems unfair as well as unsound, and it is unique in terms of how we generally believe wage and salary payments should be assessed. The costs should be assessed on those who received the benefit and were in a position to review the quality and type of service they received.

Potential Hardships for Employees and Retirees. Most County employees likely do not consider the risk of the County failing to pay their pensions as something to worry about. The common viewpoint is that governmental jurisdictions never go away and they have taxing power to assure that all their obligations can be met. It then becomes convenient to assume high rates of return on the pension fund ("we will earn enough on our investments to cover all the costs") or to treat the unfunded pension liability like a long-term mortgage that can be paid off over many years. However, the pension liability problem cannot be postponed forever. The County has already seen the high cost of its pension obligations crowding out budget allocations for other services and needs, including employee salary levels. Further, as the chart below shows, the membership

of CCCERA is now composed of more retirees and vested but non-contributing members than active members, and this ratio has increased every year since 2005.



As CCCERA membership matures, relatively fewer contributing members will be supporting an ever-increasing number of retirees. That means the County will be facing greater risks from changes in the investment returns on the CCCERA pension fund because the total active payroll relative to the pension liabilities will become smaller over time. Furthermore, the County faces the risk of an even sharper drop in the supporting payroll in the event one of the pension reform measures currently being promoted for the 2018 ballot becomes law. Either of those measures (discussed in more detail later in this report) would require voter approval before employees hired after January 1, 2019 could become members of the CCCERA plan under its current terms. If the entry of new employees into CCCERA were cut off, the financial contributions from active members would drop substantially. In that event the County could face substantially higher risks of increased pension costs if investment returns on the pension fund fell below the assumed annual growth rate of 7.25%.

These financial and demographic risks should be weighed carefully in the Board's policy deliberations. Rising pension costs have been a major factor in driving cities into bankruptcy. In California, this has happened to Vallejo, San Bernardino, and Stockton. If the size of the County's pension debt were to become unmanageable, the County could be forced to restructure its debts, including its pension liabilities, through bankruptcy.

The powers of a bankruptcy court are extensive. Its powers extend to restructuring pension benefits in ways that could appear arbitrary and unfair to those affected by the

bankruptcy. The court may reduce not only future unearned pension benefits but also already-earned pension benefits. Thus, the legal protection provided to pensions by the California Rule is not absolute even if it were to remain unchanged. In the Stockton Bankruptcy case decision of February, 2015, the judge emphasized that he had the power to alter pension benefits as part of his authority to confirm a fair and just reorganization plan for the city. With specific reference to the California Rule (which he referred to as the “Vested Rights Doctrine”), he had this to say:

“. . . the Contracts Clauses of the Federal and State Constitutions, as implemented by California's judge-made “Vested Rights Doctrine,” do not preclude contract rejection or modification in bankruptcy.”

Accordingly, the Board’s policy deliberations on seeking reform now of the California Rule through a linkage to collective bargaining should seriously consider the risks to employees and retirees should a bankruptcy filing ever become necessary. A restructuring of pension benefits in bankruptcy could impose far greater hardships on employees than what they would experience from a change to the California Rule that preserved collective bargaining protections.

The grand jury does not see bankruptcy or financial insolvency as a near-term risk for the County at this time. However, we believe the County should so manage its financial obligations that the risk of a bankruptcy, with all of its attendant hardships and inequities, will never have to be considered.

### The Pivotal Role of Collective Bargaining Since 1968

Tying pension reform to collective bargaining stands on firm legal ground. Collective bargaining has now become fully embedded in the legal fabric of California as the essential means for negotiating the terms of employment between public employers and their employees. The courts have not, however, yet taken up a case seeking to reconcile the system of collective bargaining with the implied “contract” for pension benefits that was established in the 1955 Allen case. There is, nevertheless, strong evidence to suggest the 1968 Meyers-Milias-Brown Act was intended to cover all items of compensation and benefits to be earned by public employees, including pension benefits. The Act itself states that collective bargaining established for public employees “...shall include all matters relating to employment conditions and employer-employee relations, including, but not limited to, wages, hours, and other terms and conditions of employment.”

In a 1998 case, Public Employees Association vs. City of Fontana, a California appellate court explained the strong policy in the law favoring collective bargaining as follows: otherwise, the “employer [would be required] to negotiate over working conditions with any number of employees, thereby defeating the Act’s goals of ensuring stability in labor management relations and the right of employees to join and be represented by an employee organization.” More recently, a December 29, 2015 ruling by the Public

Employment Relations Board (PERB) found that the City of San Diego had violated the terms of the Meyers-Milias-Brown Act by failing to negotiate with the employee unions over the Mayor's plan to bring a pension reform proposal to San Diego voters by means of a ballot initiative. The PERB decision included this statement:

“The City does not dispute that pension benefits are generally a negotiable subject and, aside from its argument that the Mayor's pension reform proposal was brought as a citizens' initiative, which we reject, it has offered no other reason why PERB should disregard long-standing private and public-sector precedent treating pension benefits as negotiable.” (Emphasis added.)

### Preferable Methods to Seek Reform of the California Rule

The California Rule arose originally from a lawsuit filed against a local jurisdiction—the City of Long Beach. Reform of the Rule could likewise arise from a legal challenge filed by a California local jurisdiction, such as the County. Should the Board of Supervisors choose to challenge the California Rule in court, it would no doubt prefer a method that offered both a good prospect of success and that did not subject the County's financial position to substantial risk in the event the challenge was not successful. With those twin objectives in view, here are some legal options the Board might consider with their legal counsel:

1. Advancing the reform argument through amicus curiae legal briefs filed in other pending cases
2. Support for a pension reform initiative or legislation that links pension reform to collective bargaining procedures
3. Bargaining with one or more of its employee unions for changes in future pension benefit rates, subject to the condition that a court first rules that such benefits are covered by the collective bargaining law
4. Moving for a declaratory judgment after any of its labor groups have expressed opposition to negotiating on future pension benefits

Amicus Briefs. An *amicus curiae* or “friend of the court” brief enables an entity not a party to the case to make legal arguments to the court in order to apprise the court of broader public or other interests that may be at stake in the case. The County, as a member of the California State Association of Counties (CSAC), has already participated in one amicus brief relating to pension reform. CSAC filed an amicus brief in a 2014 case supporting a plaintiff's effort to block a pension reform initiative in Ventura County that sought to replace the county's defined benefit pension plan with a *defined contribution plan*. Should an appropriate case arise, the County either on its own initiative or through CSAC, could file an amicus brief urging the court to reform the California Rule so as to recognize the authority of labor organization representatives to negotiate the rates of pension benefits to be earned in future employment periods.

Initiative or Legislative Reform. The initiative process would offer an avenue for reform in the manner recommended in this report if it sought to tie pension reform to the collective bargaining system. There are currently two reform initiatives announced for the 2018 California ballot sponsored by former San Jose Mayor Chuck Reed and former San Diego Councilman Carl DeMaio. However, these initiatives do not include provisions intended to tie pension reform to collective bargaining. Rather, they would require voter approval before any employees hired after January 1, 2019 could be enrolled in a defined benefit pension plan similar to the County's current plans. They would not take any steps on pension reform for employees hired before that date.

Should a local legislator at the County's request sponsor legislation to amend the Meyer-Milias-Brown Act to make explicit that unearned pension benefits are subject to collective bargaining, an avenue could open for a straightforward legal test of the California Rule. The amendment, if passed by the legislature and signed by the governor, would likely be challenged in court by an interested labor group, and the County would have an opportunity to take part in the legal case as an amicus or interested party depending on the circumstance. In either case, the County would be participating simply as a legal participant and would not have its financial position at material risk before the case was decided.

Labor Agreements with Contingent Terms. There is precedent in the County for negotiating a term of a labor agreement related to pension benefits that is contingent on a change in the law. In a number of previous labor agreements, starting with a 2006 memorandum of understanding with the Deputy Sheriffs Association (DSA), the County agreed to a term that would have permitted employees to elect a lower rate of pension benefits to be earned over the course of the agreement. The attraction for the employee would have been a corresponding reduction in his or her required contributions to the pension fund, resulting in higher take-home pay. The term was contingent on certain changes occurring in the law, including state legislation and a private letter ruling from the IRS.

In like fashion, the County could negotiate reductions in the rates of pension benefits to be earned in the future contingent on a court first having ruled that such reductions were proper subjects of collective bargaining. This approach would require two conditions to move forward: agreement by the labor bargaining unit and a legal challenge filed against the agreement by some group or organization seeking to uphold the California Rule.

Declaratory Judgment. Should none of the labor groups choose to cooperate in a challenge to the California Rule, California law provides another alternative for the legal challenge without undue risk to the County. A *declaratory judgment action* is a legal action designed to resolve a legal question before one or both parties to a dispute have taken steps that may have damaging consequences in an uncertain legal situation. The California Code of Civil Procedure provides for such legal actions "... in cases of actual controversy relating to the legal rights and duties of the respective parties ...."

To take advantage of the declaratory judgment alternative, the County would have to show that a “case or controversy” exists with one of its labor organizations on the issue whether pension benefit rates are subject to collective bargaining. Such a case could arise if the Board declared a policy or set forth a demand that in an upcoming bargaining session labor representatives should be prepared to negotiate the rates of pension benefits to be earned along with wage rates and other benefits. Should the bargaining unit refuse to negotiate on future pension rates because of the California Rule, an “actual controversy” over legal rights and duties might exist that meets the requirements for a declaratory judgment.

There are likely other opportunities that could arise for the County to seek legal reform of the California Rule by means of an action for a declaratory judgment. The benefit of a declaratory judgment action is the opportunity it presents to mount a challenge to the California Rule without forcing the County to take action that could be very expensive to reverse or undo.

### Conclusion

Fair and sensible pension reform remains an urgent priority for the County. The costs of its pension obligations continue to rise despite the PEPRA reforms of 2013. The largest liabilities on the County’s most recent financial statement relate to pensions: its net pension liability of \$925 Million and its outstanding pension obligation bonds of \$329 Million. Despite the size of this obligation the County has only limited options to manage it. The size of the liability will depend each year on the investment results of the CCCERA pension fund. Because of legal precedent in California that has not yet been challenged, the County has not negotiated with its labor organizations over the rates of future pension benefits to be earned. Such benefits should in our judgment be included in collective bargaining negotiations. To do so, the Board should seriously consider various avenues to challenge the California Rule in court. Such a change would be supported by sound legal arguments and could yield the County, if successful, an important tool to move forward on pension reform through collective bargaining.

## FINDINGS

- F1. The County's largest outstanding debts relate to its pension liabilities. The unfunded pension liabilities of the County (including ConFire) as calculated by the CCCERA actuaries in September 2015 total \$1.155 Billion. In addition to this UAAL figure, the County (again including ConFire) has outstanding \$329 Million of long-term pension obligation bonds.
- F2. The County's unfunded pension liability will increase in any year in which the rate of return on the CCCERA pension fund does not reach at least 7.25%.
- F3. According to the most recent CCCERA actuarial report, for every 1% drop below the CCCERA assumed rate of return of 7.25% the County's unfunded pension liability will increase by a figure equal to 9.9% of the County payroll of employees enrolled in the CCCERA pension plan. Based on its current payroll of over \$572 Million that means the reported return of 1.9% achieved by the CCCERA pension fund in 2015 could result in an increased County UAAL of over \$300 Million before actuarial five-year smoothing adjustments are made.
- F4. Unlike all other elements of compensation that it negotiates with the labor organizations, the County does not negotiate the rate of pension benefits employees will earn in future salary periods.
- F5. The reason the County does not negotiate such pension benefits is due to a long-standing legal precedent in California, known as the California Rule, which holds that public employees are covered by an implied contract on their first day of service guaranteeing that the level of pension benefits they earn each year may not be decreased in future years unless replaced by benefits comparable in value for the employee.
- F6. The California Rule is based on a case that was decided before public employees had the right to organize and engage in collective bargaining in California.
- F7. The County has not taken steps to challenge or seek legal clarification of the California Rule in a California court.
- F8. Negotiating the terms of future pension benefits to be earned could result in substantial cost savings for the County if permitted by a court ruling.
- F9. There are legal avenues open to the County to seek judicial clarification or reform of the rule without subjecting the County to major financial risks if the challenge proves unsuccessful.

## RECOMMENDATIONS

R1. The Board of Supervisors should seriously consider adopting a policy of seeking judicial clarification or reform of the California Rule.

R2. The Supervisors should consider empaneling a task force, a study group, or an internal committee to examine options for challenging the California Rule that would weigh the following considerations:

- Potential cost savings for the County;
- Potential resources to be freed up for other priorities such as service enhancements and other wage and benefit improvements;
- Opportunities to participate as an amicus curiae in existing legal cases;
- Opportunities for challenging the California Rule through legal proceedings such as a declaratory relief action that would not expose the County's financial position to undue risk in the event of an adverse result; and
- Whether the County should undertake the legal challenge alone or in cooperation with other jurisdictions or organizations with a common interest in the issue, such as the California State Association of Counties (CSAC).

R3. The Supervisors should consider issuing a formal statement on their policy toward seeking reform of the California Rule, with an explanation of how they propose to manage their unfunded pension liability in the event no steps are taken to reform or adjust the California Rule.

R4. The Supervisors should consider securing a legal opinion from outside counsel experienced in the field of pension and collective bargaining law on the merits of a legal challenge to the California Rule based on the argument that the Rule should now be modified based on California's collective bargaining system for public employees.

## APPENDIX

### **Glossary of Terms**

**Actuarial Accrued Liability.** This is the total amount of funding the pension fund should have on hand in order to assure that there will be sufficient funds available in the future to pay the pension benefits that have been earned by employees on the date the liability calculation is made. The actuaries calculate this liability based on certain actuarial assumptions about mortality rates, retirement rates, turnover rates, and investment returns the actuaries assume will be earned by the pension fund on a compounded basis over the long term.

**Actuarial Value of Assets.** This value refers to the market value of assets in the pension fund after adjusting for any investment gains or losses using the fund's asset smoothing policy.

**Amicus Curiae.** This term (literally translated as friend of the court) refers to an entity or organization that is not a party to a particular lawsuit but that is permitted by the court to advise it in respect to some matter of law that directly affects the case in question.

**Asset Smoothing Policy.** This policy refers to the practice of stretching out the recognition of annual market gains or losses on a defined benefit pension fund, as compared to the assumed investment return for the fund, over a period of years. CCCERA follows a five-year smoothing policy. For example, if the CCCERA fund falls short of its assumed investment rate of 7.25% by five percentage points, the fund would recognize that loss at a rate of 1% a year over a period of five years.

**Asset Volatility Ratio.** This ratio is equal to the market value of the assets in the pension fund divided by the total projected payroll used for calculating contributions to the pension fund. In the case of CCCERA that ratio is currently 9.9, meaning that for every percentage point by which its pension fund falls below its assumed investment rate, the UAAL will increase by 9.9% of projected payroll.

**Assumed Investment Rate of 7.25%.** This is the assumed rate of investment return on its pension fund that CCCERA uses for calculating the *normal cost* of the pension benefits earned by County employees each year. It is also the rate CCCERA uses to discount to present value the future cost of the pension benefits to be paid. The assumed investment rate is a compound annual growth rate, not simply an average annual rate. That is, in order to keep pace, in any year in which CCCERA does not earn its assumed rate of 7.25% it must make up the shortfall in a following year (either through additional earnings or employer contributions) in addition to the assumed annual rate of 7.25% for the following year.

**California Rule.** This term refers to a legal precedent established by a California Supreme Court decision in 1955. It held that California public employees are subject to an implied pension contract from their first day of employment forward. The pension contract provides that the rate of pension benefits to be earned in future years may never be decreased unless replaced by a benefit comparable in value for the employee. The practical effect of this precedent is that public employers in California do not negotiate pension benefit rates with their employees, in contrast to negotiations that take place over all other wages and benefits to be earned.

**CCCERA** – the Contra Costa County Employees’ Retirement Association. This is the entity that administers pension benefits and runs the pension fund to which the County makes contributions to pay for pension benefits earned by its employees. CCCERA is organized under a law passed in 1937 that authorized California counties to set up defined benefit pension plans for their employees.

**COLA** – a cost of living adjustment. This is an enhancement to a pension benefit based on increases in the applicable cost of living index, subject to certain caps, usually 2% or 3% per year.

**Declaratory Judgment Action.** This is a legal action designed to enable parties to resolve a legal dispute before either party has taken steps that may cause or incur a liability that could lead to damages or other remedies awarded by a court.

**Defined Benefit Plan.** This is a pension plan that provides for a stated benefit to be paid to participants during their retirement years. Generally, the benefit is defined by a formula. For example, 3% of base salary for each year of services, so that an employee with 25 years of service at age 55 could retire under that formula with a beginning pension equal to 75% of his or her base salary. Pension benefits are usually enhanced by cost of living adjustments, also called *COLAs*. Payment of the defined benefit is guaranteed by the employer.

**Defined Contribution Plan.** This is a retirement plan under which the employer makes defined contributions into a retirement fund for the benefit of its employees. The amount of the ultimate benefits paid out in retirement is dependent on the investment results in the retirement fund and is not guaranteed by the employer.

**Investment Return.** This is the rate of earnings on the pension fund from dividends, interest, and capital gains, computed as a percentage of the average value of the fund.

**Normal Cost.** This is the amount of contributions to a defined benefit pension fund required each year to fund the pension benefits earned by employees during that year of service. The figure is calculated by actuaries and is based on certain actuarial assumptions about mortality rates, retirement rates, turnover rates, and investment returns the actuaries assume will be earned by the pension fund on a compounded basis over the long term.

**PEPRA** – The Public Employee Pension Reform Act. This Act, passed in 2012, established a new level of pension benefits for all state and other public employees in California who were hired on or after January 1, 2013. The new pension benefit levels were lower than those prevailing for existing employees, leading to a two-tiered level of benefits for employees based on their respective dates of hire.

**Unfunded Actuarial Accrued Liability (UAAL).** This is defined as the extent to which the *Actuarial Accrued Liability* of the pension plan exceeds the *Actuarial Value of the Assets* in the pension fund supporting the plan.

**UAAL Amortization Policy.** This policy stipulates the amount of the payments that must be made to the pension fund each year by the employer to pay down the UAAL in equal installments. In the case of CCCERA, the UAAL pay down period is 18 years, meaning that 1/18 of each year's net UAAL is charged to the employer each year as an additional pension cost payable to CCCERA.

## **SOURCES AND REFERENCE MATERIALS**

For purposes of this report the Grand Jury interviewed, met with, or sought records from 15 different County, city, special district, state, CCCERA, and employee or research organization officials or representatives who had responsibility for certain aspects of pension benefit issues. We reviewed a number of relevant reports and articles, including the following:

1. The County Comprehensive Annual Financial Report for its fiscal year ended June 30, 2015.
2. The CCCERA Actuarial Valuation and Review as of December 31, 2014, prepared by its actuary, Segal Consulting.
3. Letter dated September 2, 2015 from Segal Consulting to the Deputy Chief Executive Officer of CCCERA setting forth the Unfunded Actuarial Accrued Liability by Employers based on the December 31, 2014 Actuarial Valuation.
4. Agenda for Special Meeting of CCCERA Board Members dated February 25, 2016.
5. Letter dated March 2, 2016 from Segal Consulting to the Chief Executive Officer of CCCERA setting forth the actuary's latest five-year projection of Employer Contribution Rate Changes Based on Estimated 2.4% Gross Market Value Investment Return for 2015.
6. Little Hoover Commission, report entitled Public Pensions for Retirement Security, published in February, 2011.
7. The online materials regarding unfunded pension liabilities provided by The Stanford Institute for Economic Research. The relevant materials can be found at [pensiontracker.org](http://pensiontracker.org).
8. The Annual Report of AT&T for calendar year 2014, pages 65-67.

We also reviewed a number of California reported legal cases on pension or employee benefit issues, including those cited in the text of our report. These are the full case citations for the cases mentioned in our report:

1. Kern vs. City of Long Beach, 29 Cal.2d 848 (1947).
2. Allen vs. City of Long Beach, 45 Cal.2d 128 (1955).
3. San Bernardino Public Employees Association v. City of Fontana, 67 Cal. App. 4th 1215 (1998). The quotation included in the text is found at page 1220 of the reported case decision.
4. In re City of Stockton, California, Debtor; US Bankruptcy Court, Eastern District of California; 526 B.R. 35 (Bankr E.D. Cal. 2015). The quotation in the text is from page 39 of the reported decision.
5. City of San Diego (2015) PERB Decision No. 2464-M.
6. The chart on page 11 of the Report is compiled from data found on page one of the CCCERA Actuarial Report prepared by Segal Consulting and referred to above.

The text of the Meyers-Milias-Brown Act can be found at California Government Code, sections 3500 – 3511.

California Code of Civil Procedure Section 1060 provides the statutory authority for declaratory judgment actions in California.

## REQUIRED RESPONSES

	<u>Findings</u>	<u>Recommendations</u>
Board of Supervisors	1 - 9	1 - 4

These responses must be provided in the format and by the date set forth in the cover letter that accompanies this report. An electronic copy of these responses in the form of a Word document should be sent by e-mail to [epant@contracosta.courts.ca.gov](mailto:epant@contracosta.courts.ca.gov) and a hard (paper) copy should be sent to:

Civil Grand Jury – Foreperson

725 Court Street

P.O. Box 431

Martinez, CA 94553-0091



**A REPORT BY  
THE 2015-2016 CONTRA COSTA COUNTY GRAND JURY**  
725 Court Street  
Martinez, California 94553

Report 1604

**Are Our Schools in Compliance with the  
“EpiPen” Law, SB 1266?**

It Could be a Matter of “Life or Death”

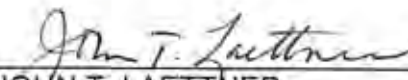
APPROVED BY THE GRAND JURY:

Date: 5/31/16

  
\_\_\_\_\_  
MICHAEL SIMMONS  
GRAND JURY FOREPERSON

ACCEPTED FOR FILING:

Date: 5/31/16

  
\_\_\_\_\_  
JOHN T. LAETTNER  
JUDGE OF THE SUPERIOR COURT

Contra Costa County Grand Jury Report 1604

**Are Our Schools in Compliance with the “EpiPen” Law, SB 1266?**

**It Could be a Matter of “Life or Death”**

**TO: Contra Costa County Superintendent of Schools , Contra Costa County Office of Education; District School Boards for Acalanes Union High, Antioch Unified, Brentwood Union, Byron Union, Canyon, John Swett Unified, Knightsen Elementary, Lafayette, Liberty Union High, Martinez Unified, Moraga, Mt. Diablo Unified, Oakley Union Elementary, Orinda Union, Pittsburg Unified, San Ramon Valley Unified, Walnut Creek, and West Contra Costa Unified**

## **SUMMARY**

Effective January 1, 2015, California law Senate Bill (SB) 1266 requires all public schools to stock epinephrine auto-injectors (Pens). Schools must provide Pens to school nurses or trained personnel who have volunteered to administer them to students who are suffering, or reasonably believed to be suffering from, a severe allergic reaction.

This report concerns implementation of this law by public schools in the County and their compliance with it. Most but not all schools are in compliance, although not all schools responded to the investigation.

Recommended actions include:

- Annual verification of K-12 public schools compliance under SB 1266
- Determining the practical and legal issues related to Pen use at offsite school events
- Determining the practical and legal issues related to Pen use at pre-schools under the direction of Contra Costa Office of Education

## **METHODOLOGY**

The Grand Jury:

- Conducted a mail survey of Contra Costa’s eighteen public school districts (K-

12)--243 schools in all. Contra Costa County Office of Education schools (i.e., juvenile detention facilities) and charter schools were not included in the survey.

- Conducted telephone interviews with BioRidge Pharma, the order processor for Pens
- Reviewed the California School Nurses Organization (CSNO) website
- Conducted on-site school visits

## **CONFLICT DISCLAIMER OF INTEREST**

One or more Grand Jurors recused themselves due to a possible conflict of interest and did not participate in the investigation, preparation, or approval of this report.

## **BACKGROUND**

Sending a child off to school each morning requires daily preparation – a computer with today's homework, permission slips, gym shoes, lunch and most importantly, for a child with severe allergies, allergy medication.

Anaphylactic shock is a severe allergic reaction. A recent law, SB 1266, defines anaphylactic shock as a potentially life-threatening hypersensitivity to a substance. A severe allergic reaction can restrict airways in the lungs, severely lower blood pressure, and cause suffocation by swelling of the tongue or throat. Food is the most common allergen. Other common allergens (or triggers) include biting or stinging insects, medications, and latex. At times, the trigger is unknown.

According to Food Allergy Research & Education (FARE), a national nonprofit organization, anaphylaxis affects one in every thirteen children under eighteen or an average of two children in every classroom. The Center for Disease Control and Prevention (CDC) reports this number to be one in every twenty-five children and says that about one in every four students that have a severe and potentially life-threatening reaction at school had no previously known food allergy. The CDC reports that food allergies are on the rise. A study released in 2013, revealed that food allergies among children:

- Are the leading cause of anaphylaxis outside the hospital setting;
- Increased approximately fifty percent between 1997 and 2011;
- Resulted in 300,000 ambulatory-care visits a year among children under eighteen; and
- Cost nearly twenty-five billion dollars per year.

Epinephrine (adrenaline) is a medication that can reverse anaphylactic shock. It is administered as a shot using an auto-injector, often referred to as a "Pen". According to the National Food Allergy Association guidelines, epinephrine is the first-line of treatment for life-threatening allergic reactions. A delay of minutes in administering epinephrine can result in death. Hospitals admit about 9,500 children each year for some form of food allergy.

To assist public schools in responding to instances of anaphylactic shock, the California legislature passed SB 1266, which adds section 4119.2 to the Business and Professions and Education Code and section 49414 to the Education Code. The new law requires school districts, county offices of education and charter schools to provide Pens to school nurses and other personnel trained in the use of such Pens.

Additionally, each private elementary and secondary school in the State may voluntarily determine whether to make emergency Pens and trained personnel available at its school.

## **DISCUSSION**

SB 1266, which became effective January 1, 2015, requires, rather than simply allows, California public schools, county offices of education and charter schools to stock Pens. Schools must provide Pens to school nurses or trained personnel who have volunteered to administer them to students who are suffering, or reasonably believed to be suffering from, an anaphylaxis reaction.

In the County, there are approximately 180,000 students at K-12 public schools, special education classes offered the local education agency, charter schools, and Horizon schools. Over 1,200 of these students have their own epinephrine injectors kept in their school's emergency medical cabinet. However, there likely are many more who have an allergy, but that allergy is unknown to their parents or caregivers. While the estimates vary of those students with allergies unknown to their parents or caregivers, a reasonable range for such students in the County is somewhere between 6,000 students (based on the CDC's number of one in twenty-five experiencing an allergic reaction) to 12,650 students (based on FARE estimates of one student in thirteen).

### **SB 1266 and What It Means**

SB 1266 requires all California public schools, the county office of education and charter schools to:

- stock epinephrine auto injectors in case of student emergency; and
- train school nurses or at least one volunteer to administer Pens to students who are suffering or reasonably believed to be suffering from an emergency anaphylaxis reaction.

The law also requires the Superintendent of Public Instruction to establish minimum standards of training for the administration of epinephrine auto-injectors. The standards must be based on commonly accepted standards and the Superintendent must review the adequacy of the standards at least once every five years.

Public schools, county offices of education and charter schools must keep and maintain prescriptions up-to-date for Pens. As of November, all of Contra Costa public school districts had a prescription for Pens on file.

The law's only concerns Pen use at a public school or county office of education school. The California School Nurses Organization's (CSNO) website, as revised March 2015, states:

*"The law does not address field trips or other off site school activities. CSNO recommends that school nurses work with their districts to develop policies and procedures that address activities outside of the school site, considering school nurse staffing and other challenges with regards to evenings and weekends."*

Additionally, early childhood education centers, identified, as California Preschool Instructional Network by the Contra Costa Board of Education, are not required to stock Pens. FARE research estimates that nearly six million or eight percent of children (nationally) have food allergies – young children are most affected. Casual exposure to allergens presents a greater risk to young children who frequently put their hands in their mouths. Depending on the amount of contact and the location of the contact, these reactions are occasionally more serious. Failure to promptly treat food anaphylaxis with epinephrine is a risk factor for fatalities.

### **Training of Staff and Volunteers**

Each school may designate one or more school volunteers be trained to administer Pens. Volunteers must receive an initial training as well as annual refreshers. SB 1266 establishes that training shall include all of the following:

- Techniques for recognizing symptoms of anaphylaxis.
- Standards and procedures for the storage, restocking, and emergency use of epinephrine auto-injectors.
- Emergency follow-up procedures, including calling the emergency 911 telephone number and contacting, if possible, the pupil's parent and physician.
- Recommendations on the necessity of instruction and certification in cardiopulmonary resuscitation
- Instruction on how to determine whether to use an adult epinephrine auto-injector or a junior epinephrine auto-injector, which shall include consideration of a pupil's grade level or age as a guideline of equivalency for the appropriate pupil weight determination. Additionally, the training must be consistent with the most recent Voluntary Guidelines for Managing Food Allergies in Schools and Early Care and Education Programs published by the Federal Centers for Disease Control (CDC) and Prevention. The current CDC guidelines recommend:
  - Accommodations or services needed for the allergic child to be safely included in activities like allergen-free classrooms and allergy-friendly seating arrangements.
  - Provision of instructions for treatment of allergic reaction posted in the cafeteria, establishment of designated allergy-friendly seating during meals (open to any child eating foods free of identified allergens), rapid access to epinephrine auto-injectors in cases of food allergy emergency, and training in use for staff.

The law also states:

*"A school district, county office of education or charter school shall ensure that each employee who volunteers will be provided defense and indemnification by the school district, county office of education or charter school for any and all civil liability. The school district, county office of education or charter school must also notify each volunteer that the volunteer is being provided with defense and indemnification for any and all civil liability associated with administering epinephrine auto-injectors."*

### **Procurement and Funding of Pens**

Schools receive two boxes of Pens at no charge once per calendar year from Mylan Specialty, the manufacturer. Schools that have used the Pen for an emergency may receive replenishment Pens from Mylan Specialty at no cost if they complete a replenishment form detailing the incident resulting in Pen use. If the Pen expires, schools may order more at a discount. The Pen has a shelf life of twelve to eighteen months.

CSNO recommends that school nurses work with school districts to develop and implement documentation procedures ensuring proper care, follow-up, and the replenishment of medications in a timely manner. Additionally, CSNO suggests the information to be reported to the CSNO website at:

<http://www.csno.org/step-up-and-be-counted.html>

### **Survey of Schools to Monitor Compliance**

The Grand Jury mailed surveys in November 2015 to Contra Costa's K-12 public school in eighteen districts, 243 schools in all. The Grand Jury evaluated the following four responses from each school to determine compliance with the law:

- How many regular EpiPens® are on hand for emergency use at your school?
- How many EpiPen Jr® are on hand for emergency use at your school?
- How many trained volunteers or nurses can administer EpiPen® at your school?
- Does your school have a prescription for EpiPens® on file?

The following schools were not in compliance with SB 1266 as of March 2016:

Antioch Unified School District

Mission Elementary

Live Oak

Kimball Elementary

Antioch High

Prospect High Alternative

Bridges

Fremont Elementary

Belshaw Elementary

## Bidwell Continuation High

The Grand Jury had insufficient information to complete its evaluation of the following schools as of March 2016:

### West Contra Costa Unified School District

El Cerrito High

Dover Elementary

Richmond High

Korematusu Middle

Downer Elementary

Ellerhorst Elementary

## FINDINGS

- F1. Mylan Specialty Division supplies Pens at no cost to public schools in the district.
- F2. Mylan Specialty Division will replace Pens at public schools in the district that have expired at a discounted cost.
- F3. FARE and CDC statistical information project a range of 4 percent to 7.7 percent of students (7,200 to 13,850 out of the estimated 180,000 students in Contra Costa County's eighteen school districts) that may have an allergy that is unknown to parents and undiagnosed.
- F4. Over 1,200 students in Contra Costa County's eighteen school districts have Pens with their names located in the school emergency medicine cabinet.
- F5. SB 1266 does not clearly address the use of Pens at off-campus school activities or events.
- F6. SB 1266 does not cover California Preschool Instructional Network centers.
- F7. SB 1266 does not require follow up procedures for reporting the use of a Pen.
- F8. After more than a year, one or more schools in the Antioch School District are not in full compliances with SB 1266.
- F9. It is unknown whether all of the schools in the West Contra Costa School District are in compliance with SB 1266.

## RECOMMENDATIONS

- R1. The West Contra Costa Unified School District should contact those schools within their district and verify the schools are in compliance with SB 1266
- R2. The Antioch Unified School District should contact those schools found not to be in compliance with SB 1266 and ensure they become compliant by the beginning of the 2016-2017 School year.

- R3. Each of the School District Boards should direct the School District Superintendent to contact all schools in their district at the start of each school calendar year to confirm that they are compliant with the requirements of SB 1266.
- R4. Each of the School District Boards should direct their School District Superintendent to report to the Board at the start of each school calendar year that the School District is compliant with the requirements of SB 1266.
- R5. The Contra Costa County Superintendent of Schools should contact his or her schools at the start of each school year to confirm that the schools are compliant with the requirements of SB 1266.
- R6. Contra Costa County Superintendent of Schools should consider reporting to the Board of the Contra Costa Office of Education at the beginning of each school calendar year the status of compliance of the County to SB 1266.
- R7. The Contra Costa Office of Education should consider recommending to the California Preschool Instructional Network that preschools within its network first evaluate the practical and legal considerations of administering Pens to students and, if permissible, follow the mandate set forth in SB 1266 as closely as reasonably possible.
- R8. The School Districts should consider the practical and legal issues of supplying Pens for field trips and other off-site school events, and working with school nurses to develop policies and procedures for their use at these events.
- R9. The Contra Costa Office of Education should consider the practical and legal issues of supplying Pens for field trips and other off-site school events, and working with school nurses to develop policies and procedures for their use at these events.
- R10. The School Districts should consider working with school nurses to develop policies and procedures for reporting the use of Pens.
- R11. The Contra Costa Office of Education should consider working with the Contra Costa Superintendent of Schools and school nurses to develop policies and procedures for reporting use of the Pens.
- R12. The School Districts should consider helping parents understand the risks of anaphylaxis and the protocols in place for emergency administration of epinephrine. The School Districts should consider "identifying funds" to carry out these activities.
- R13. The Contra Costa Office of Education should consider helping parents understand the risks of anaphylaxis and the protocols in place for emergency administration of epinephrine. The Contra Costa Office of Education should consider "identifying funds" to carry out these activities.

## REQUIRED RESPONSES

	<u>Findings</u>	<u>Recommendations</u>
Contra Costa Office of Education Board	F3 – F7	R7, R9, R11, R13
Contra Costa County Superintendent of Schools	F1 – F7	R5, R6, R11
Acalanes Union High School Board	F1 – F3, F5, F7	R3, R4, R8, R10, R12
Antioch Unified School Board	F1 – F3, F5, F7, F8	R2 – R4, R8, R10, R12
Brentwood Union School Board	F1 – F3, F5, F7	R3, R4, R8, R10, R12
Byron Union School Board	F1 – F3, F5, F7	R3, R4, R8, R10, R12
Canyon School Board	F1 – F3, F5, F7	R3, R4, R8, R10, R12
John Swett Unified School Board	F1 – F3, F5, F7	R3, R4, R8, R10, R12
Knightsen Elementary School Board	F1 – F3, F5, F7	R3, R4, R8, R10, R12
Lafayette School Board	F1 – F3, F5, F7	R3, R4, R8, R10, R12
Liberty Union High School Board	F1 – F3, F5, F7	R3, R4, R8, R10, R12
Martinez Unified School Board	F1 – F3, F5, F7	R3, R4, R8, R10, R12
Moraga School Board	F1 – F3, F5, F7	R3, R4, R8, R10, R12
Mt. Diablo Unified School Board	F1 – F3, F5, F7	R3, R4, R8, R10, R12
Oakley Union Elementary School Board	F1 – F3, F5, F7	R3, R4, R8, R10, R12
Orinda Union School Board	F1 – F3, F5, F7	R3, R4, R8, R10, R12
Pittsburg Unified School Board	F1 – F3, F5, F7	R3, R4, R8, R10, R12
San Ramon Valley Unified School Board	F1 – F3, F5, F7	R3, R4, R8, R10, R12
Walnut Creek School Board	F1 – F3, F5, F7	R3, R4, R8, R10, R12
West Contra Costa Unified School Board	F1 – F3, F5, F7, F9	R1, R3, R4, R8, R10, R12

These responses must be provided in the format and by the date set forth in the cover letter that accompanies this report. An electronic copy of these responses in the form of a Word document should be sent by e-mail to [epant@contracosta.courts.ca.gov](mailto:epant@contracosta.courts.ca.gov) and a hard (paper) copy should be sent to:

Civil Grand Jury – Foreperson

725 Court Street

P.O. Box 431

Martinez, CA 94553-0091



**A REPORT BY  
THE 2015-2016 CONTRA COSTA COUNTY GRAND JURY**  
725 Court Street  
Martinez, California 94553


Report 1605

## **Caring for the Victims**

**Commercial Sexual Exploitation of Children in Contra Costa County**


APPROVED BY THE GRAND JURY:

Date: May 10, 2016

  
\_\_\_\_\_  
MICHAEL SIMMONS  
GRAND JURY FOREPERSON

ACCEPTED FOR FILING:

Date: May 6, 2016

  
\_\_\_\_\_  
JOHN T. LAETTNER  
JUDGE OF THE SUPERIOR COURT

Contra Costa County Grand Jury Report 1605

# Caring for the Victims

## Commercial Sexual Exploitation of Children in Contra Costa County

**TO: Contra Costa County Board of Supervisors  
Contra Costa County Sheriff  
The City Councils for the following cities: Antioch, Brentwood,  
Clayton, Concord, Danville, El Cerrito, Hercules, Lafayette,  
Martinez, Moraga, Oakley, Orinda, Pinole, Pittsburg, Pleasant  
Hill, Richmond, San Ramon, San Pablo, Walnut Creek**

### SUMMARY

Human trafficking is a nationwide problem. In Contra Costa County, law enforcement and other agencies identified at least 108 victims of human trafficking from June 2014 through June 2015; of those cases, thirty-nine involved minors exploited for sex.

The County organized its official response to the problem of human trafficking by organizing a “Coalition of Zero Tolerance for Human Trafficking Summit” in January 2015. The Coalition set up a broad framework for understanding and dealing with human trafficking, which began with training two hundred employees of the Employment & Human Services Department (EHSD) and its interagency partners (County agencies and non-government organizations). EHSD assigned the more difficult problem of caring for commercial sexual exploitation of children (CSEC) to Children and Family Services (CFS), a bureau of EHSD.

CFS started work on a protocol to establish a comprehensive system of care for victims of CSEC, a system that did not previously exist in the County (the “CSEC Protocol”). By October 2015, the CSEC Protocol was complete and submitted to the California State Department of Social Services. However, by March 2016, more than a year after the Coalition Summit, the CSEC Protocol was yet to be fully communicated throughout the County, much less implemented. Many of the interagency partners who are to assist in implementing the Protocol (particularly the police departments of the cities, victim advocates in the District Attorney’s (DA) Office and Juvenile Hall) were unaware of their

part in the Protocol and the role of the other agencies.

Until the Protocol is fully implemented, Contra Costa County still does not have a comprehensive system of care for victims of CSEC.

## **METHODOLOGY**

In its 7-month investigation, the Grand Jury:

- Reviewed the pertinent legal statutes on human trafficking and CSEC, both California and Federal,
- Researched State and County documents and reports on the issue,
- Joined meetings of the Coalition for Zero Tolerance for Human Trafficking and the CSEC Steering Committee,
- Visited Juvenile Hall, the Family Justice Center and Calli House for discussions,
- Interviewed representatives and social workers at the Employment & Human Services (EHS) Department, including the Children & Family Services (CFS) bureau,
- Interviewed Probation Department personnel,
- Interviewed police officers from several cities, who worked directly on sex crimes, drugs, domestic violence and human trafficking,
- Interviewed personnel from non-governmental organizations (NGOs) dealing with sexual violence and CSEC victims,
- Interviewed victim advocates from various agencies.

## BACKGROUND

Human trafficking exists in Contra Costa County as it does throughout the United States. It is today's version of slavery. Its victims are exploited due to their lack of resources and sophistication, and treated as commodities rather than as human beings.

Human trafficking exists in four forms:

- Labor trafficking,
- Adult sex trafficking,
- Commercial sexual exploitation of children (CSEC),
- Domestic servitude.

The citizens of Contra Costa County are living with this form of slavery hidden in their midst.

In 2012, California Attorney General Kamala Harris released her report - "The State of Human Trafficking in California" (the AG Report). In the AG Report, Ms. Harris states that human trafficking as a criminal business enterprise (\$32 billion globally) is second only to the drug trade in annual revenues. The AG Report's most important recommendation is that government agencies and the community should take a victim-centered approach in dealing with this crime.

Perhaps the most appalling category of human trafficking is the sexual exploitation of children. Children sexually exploited for commercial reasons cannot legally consent to sex and, therefore, are not willing prostitutes. Victims of CSEC are initiated into sexual slavery between 12 to 14 years old on average. The majority of these children are American citizens according to the County Coalition's Human Trafficking summit report. Typically, they are victims of physical abuse, sexual assault, and psychological and emotional manipulation by adults, i.e., the pimps and the johns. The trauma, stemming from months or years of sexual abuse and emotional manipulation is complex and extensive. For this reason, the County Coalition against Human Trafficking suggests County personnel (law enforcement and social workers) who interact with the CSEC children should be trauma-informed, i.e., properly trained and aware of the complex trauma that the children have undergone.

This Grand Jury report concentrates on the County's efforts to identify, rescue and care for these children and to restore to them a life that is safe, secure and productive.

## DISCUSSION

Prior to the AG Report and the first County summit meeting in January 2015, the County had no formal plan or protocol to address CSEC.

County agencies began to develop that protocol by focusing on the applicable law. Section 236.1 of the California Penal Code addresses human trafficking (including CSEC). With respect to CSEC victims, it provides:

- *“Any person who causes, induces, or persuades a person who is a minor to engage in a commercial sex act is guilty of human trafficking.”*
- *“Consent by a victim of human trafficking who is a minor at the time of commission of the offense is not a defense to a criminal prosecution under this section.”*

The following two provisions on CSEC are set forth in the Welfare and Institutions Code:

- Section 300. *“... a child who is sexually trafficked as described in 236.1 of the Penal Code or who receives food and shelter in exchange for, or who is paid to perform sexual acts described in Section 236.1 or 11165.1 of the Penal Code, and whose parent or guardian failed to, or was unable to, protect the child... is within the jurisdiction of the juvenile court which may adjudge that person to be a **dependent child of the court** .... These children shall be known as commercially sexually exploited children.”* (Emphasis added.)
- Section 300.2 *“... the purpose of the provisions of this chapter relating to dependent children is to provide maximum safety and protection for children who are currently being physically, sexually, or emotionally abused, being neglected, or being exploited, and to ensure the safety, protection, and physical and emotional well-being of [such] children.”*

In January 2015, three years after the AG Report, the Contra Costa County District Attorney called for a summit on human trafficking. Chaired by a senior manager from EHSD, a multi-disciplinary coalition was formed called the Coalition for Zero Tolerance for Human Trafficking.

In June 2015, the Coalition Chair issued a memo to the Board of Supervisors stating that a comprehensive system of care for victims of CSEC does not exist in Contra Costa County. The memo also said that the best practice for care of victims of CSEC might be the Family Justice Centers in Richmond and Concord. These are multiservice centers – “one-stop-shops” – for victims of domestic violence.

Under state law, EHSD is designated as the lead agency for setting up a system of care for the victims of human trafficking in Contra Costa County. In March 2015, the Coalition tasked CFS, a division of EHSD, with organizing a CSEC Steering Committee.

The Committee was to prepare an interagency protocol (the “CSEC Protocol”) for the care of victims of CSEC in Contra Costa County.

In developing a protocol, the Committee acted in accordance with Welfare and Institutions (WIC) Code sections 16524.6– 16524.11, These WIC sections provide, in part:

- 16524.6 “...in order to adequately serve children who have been sexually exploited, it is necessary that counties develop and utilize a multidisciplinary approach to case management, service planning and provision of services.”
- 16524.6 “... that counties develop and utilize interagency protocols to ensure services are provided as needed to this population.”
- 16524.7. (a) (1) “There is hereby established the Commercially Sexually Exploited Children Program. This program shall be administered by the State Department of Social Services.”
- 16524.7. (a) (2) “The department, in consultation with the County Welfare Directors of California, shall develop an allocation methodology to distribute funding for the program. Funds allocated shall be utilized to cover expenditures related to the costs of implementing the program, prevention and intervention services, and training related to children who are victims of commercial sexual exploitation.”
- 16524.7. (a) (4) “Funds provided to the counties electing to participate in the program shall be used for prevention activities, intervention activities and services to children who are victims, or at risk of becoming victims, of commercial sexual exploitation.”
- 16524.7. (a) (4) (D) [A key mandate to the funding allocation is] “hiring county staff trained and specialized to work with children who are victims of commercial sexual exploitation to support victims and their caregivers, and to provide case management interagency and cross-departmental response.” (Emphasis added.)

In October 2015, the CSEC Steering Committee was renamed CSEC Protocol Oversight Committee. The Committee submitted the “Interagency Protocol for Serving Commercially Sexually Exploited Children in Contra Costa County” (the “CSEC Protocol”) to the State Department of Social Services. This move allowed the County to participate in California’s CSEC Program, thereby qualifying for funds to support victims of CSEC.

The State Department of Social Services initially released \$25,000 to the County for CSEC planning. In early 2016, the State then released \$277,628 as a Tier II grant for training and actual services for victims of CSEC. The State also earmarked \$82,107 as “Augmentation for Federal CSEC activities.”

The CSEC Protocol sets up the framework for collaboration and coordination among County agencies, cities and NGOs providing rescue, protection and care for victims of CSEC.

The Protocol states, in part:

- *“This Protocol has been created and adopted by the CSEC Protocol Oversight Committee.”*
- *“Contra Costa County Children & Family Services (CFS) will be responsible for providing leadership and staff support for the CSEC Protocol Oversight Committee.”*
- *“[The Committee, led by CFS,] will implement and oversee the Interagency Protocol.”*
- *“Additionally, the [interagency] partners will create protocols (within their own agencies or NGOs) to aid in the identification, assessment and delivery of services to CSEC youth in the community.”*
- *Mental Health, under County Health Department should “perform assessment of a CSEC victim’s mental health and recommend services.”*

The Protocol also contains a flow chart that shows the coordinated response for a victim of CSEC from the community, law enforcement and CFS. At all of the major decision points, referrals to CFS and hotline calls to CFS are the key initial action points. In essence, CFS is the proposed hub and navigator for care of victims of CSEC.

To date, over 200 CFS personnel have received basic training, a starting point for training staff to care for victims of CSEC. Additional training is necessary for the specialization of certain personnel to act as the “navigators” for the victims of CSEC within Child Welfare. This carries out the mandate of Section 16524.7 of the Welfare & Institutions Code, which requires *“hiring county staff trained and specialized to work with children who are victims of commercial sexual exploitation.”* (Emphasis added.)

Because Contra Costa County lacks foster parents with specialized training to handle victims of CSEC, social workers often must place these children in foster homes outside of the County. Although a concern and a cause of additional expense to the County, the benefit may be that it puts more distance between the victim of CSEC and his or her exploiters.

Training for law enforcement personnel (police officers and deputy sheriffs) in interviewing victims of CSEC needs to be more victim-centered and trauma-informed. Many officers do not have even basic CSEC training, only a short briefing on the

subject. This lack of training may contribute to the unwillingness of a majority of suspected victims of CSEC to name their pimp exploiters or to accept needed social services and mental health appraisal/therapy. These youths are usually distrustful of police. Estimates of cooperation by victims of CSEC are uniformly low. Such estimates run from a high of 2 out of 10, to 2 out of 100, with one estimate of “zero cooperation.” The non-cooperation behavior may also be due to the coercion and manipulation practiced by the children’s exploiters.

Perhaps indicative of the lack of CSEC training for law enforcement first responders, the DA’s Office has prosecuted fewer cases of CSEC pimps in 2015 than it has in previous years.

The current typical referral practice among law enforcement personnel (city police, the DA’s Office and Juvenile Hall) who encounter CSEC youth is to call in Community Violence Solutions (CVS), a non-government organization (NGO) specializing in domestic violence, sexual assault and trafficking victims. Although well regarded in its area of expertise, CVS has limited resources. Whether future referrals to CVS will continue remains unknown, since the new Protocol proposes that the hub of care for victims of CSEC should be CFS, not CVS.

Law enforcement also calls in the victim advocates from the DA’s Office. These advocates navigate victim assistance for the law enforcement community. Victim advocates respond first by keeping the victims of CSEC safe, usually within Juvenile Hall, and providing them with therapy, using non-Health Department therapists, who are paid for by victim compensation funds.

As a pragmatic measure, law enforcement sometimes books suspected victims of CSEC into Juvenile Hall under various statutes in the Welfare and Institutions Code dealing with crimes committed by youth. Such bookings allow authorities to keep victims of CSEC under protective custody, away from their exploiters. It also provides Probation and CVS time to assess the situation and to give these youth access to therapy and social services. However, Juvenile Hall rarely consults CFS social workers in these situations. Due to this lack of consultation with CFS, a non-criminal hold order for the child is seldom requested. Placing the child in Juvenile Hall on a criminal charge runs the risk of exposing the child to criminal behavior. Once in Juvenile Hall, most victims of CSEC are uncooperative and ultimately released back to their next of kin where they will likely walk back to their exploiters. Return of these children to an unsafe situation conflicts with the mandate of Section 300 of the Welfare & Institutions Code, which is *“to provide maximum safety and protection to children who are currently being physically, sexually, or emotionally abused.”*

Calli House, part of the Contra Costa Health Department’s Homeless Youth Services, is another facility, separate from Juvenile Hall and CVS, which is available for CSEC support services. Calli House provides temporary health, therapy and housing assistance to runaway minors in the County. Occasionally, upon request by CVS or CFS, it takes in suspected victims of CSEC who are not booked into Juvenile Hall. CFS

does not have an equivalent county-funded temporary housing facility for victims of CSEC.

The County lacks a centralized database covering all CSEC arrests, referrals and pending cases. Such data would be extremely valuable both in assisting law enforcement in tracking down the exploiters, as well as providing a broader and more complete picture of the victims of CSEC and treatment options with the highest chances of success. Some city police departments share CSEC data with the FBI and the DA's Office. Juvenile Hall shares resident data with CVS when called in to assist on suspected victims of CSEC. The DA's Office shares CSEC data with CVS, when utilizing the Children Interview Center for forensic interviews with suspected victims. CFS has its own CSEC data for its child welfare cases. However, such departmentalized data tracking is no substitute for a comprehensive and centralized database open to all agencies within the County.

## FINDINGS

- F1 A comprehensive system of care for victims of CSEC still has not been fully implemented in Contra Costa County.
- F2 The County is now 15 months into developing and implementing this comprehensive system of care for victims of CSEC that it began developing in January 2015.
- F3 A CSEC Protocol, which provides a comprehensive system of care for victims of CSEC, was prepared under the leadership of CFS.
- F4 The CSEC Protocol provides the framework for cooperation and coordination among the County, its cities and NGOs.
- F5 The State Department of Social Services has released Contra Costa County's allocations of CSEC monies under the Commercially Sexually Exploited Children Program administered by the State Department of Social Services.
- F6 Many social workers in CFS, law enforcement, officers in Juvenile Hall and victim advocates in the DA's Office are not implementing the CSEC Protocol because they have not seen it.
- F7. CFS, the leader of the Oversight Committee, has not followed up with its interagency partners that have signed off on the Protocol, but have not submitted their own CSEC department plan/protocols to the Oversight Committee.
- F8 CFS lacks personnel who can act as the hub of all CSEC referrals from law enforcement by assessing the health, psychiatric and physical needs of victims of CSEC and who can navigate these services for them.
- F9. Suspected CSEC victims are being arrested and booked into Juvenile Hall for their own safety pursuant to various statutes under the Welfare & Institutions Code, relating to infractions and crimes committed by youth, while the County assesses the appropriate health and social services to provide.
- F10. The County has not provided funding to CFS for temporary housing facility for victims of CSEC.
- F11. No single database covering all CSEC-related arrests, referrals and pending cases exists in the County.
- F12. Due to the lack of a single database in the County covering all CSEC-related arrests, referrals and pending cases, the County does not know the number of victims of CSEC and where they are located.

- F13. County personnel and law enforcement dealing with victims of CSEC are well-meaning, compassionate and dedicated people trying to make the best of a very difficult situation.
- F14. Most County personnel and law enforcement dealing with victims of CSEC lack in-depth CSEC training, necessary facilities for temporarily accommodating the victims and a clear-cut plan of action, which lays out how to rescue, protect and serve the victims of CSEC in a manner that is caring and trauma-informed.

## **RECOMMENDATIONS**

- R1 The Board of Supervisors should review the Interagency Protocol for Serving Commercially Sexually Exploited Children in Contra Costa County finalized in October 2015.
- R2 The Board of Supervisors, City Councils and Sheriff's Department should consider recommending that all CSEC interagency partners, as listed in the CSEC Protocol, in Contra Costa County adopt their own CSEC protocols and submit them to CFS for approval.
- R3 The Board of Supervisors should consider directing CFS, as the lead implementing bureau, to follow up on the required plans and protocols from the interagency partners, as listed in the CSEC Protocol, implementing the CSEC Protocol.
- R4 The Board of Supervisors should consider directing CFS to expand its CSEC Response Flow Chart to include all critical steps to be taken for the welfare of the child victim, including mental health evaluation by the Health Department and child Welfare hold requests by the social workers.
- R5 The Board of Supervisors should consider directing CFS to train or hire specialized CSEC personnel who will serve as points of primary referral and assist in navigating the services provided to victims of CSEC utilizing funds provided by the State Department of Social Services.
- R6 The Board of Supervisors should consider directing CFS to follow the model of the Family Justice Centers in assisting victims of CSEC navigate the multitude of available services.
- R7 The Board of Supervisors should consider seeking funds to acquire or lease a physical facility to temporarily house victims of CSEC, which would allow suspected victims of CSEC to be placed in a legal, non-criminal temporary hold, rather than having law enforcement book the child into Juvenile Hall with a criminal charge.
- R8 If the County secures funding to construct or lease a CFS physical facility, the Board of Supervisors should consider housing specialized CSEC navigators at the facility, similar to the model used by the Calli House.

R9 The Board of Supervisors, City Councils, and Sheriff's Department should consider recommending that all first responders (usually law enforcement) refer suspected victims of CSEC to specialized and dedicated CSEC personnel, to be established within CFS.

R10 The Board of Supervisors should direct CFS to formulate CSEC training programs, containing different emphases for different County departments, interacting with victims of CSEC.

R11 City Councils and Sheriff's Department should direct law enforcement to avail themselves of CSEC training programs formulated by CFS.

## REQUIRED RESPONSES

	<u>Findings</u>	<u>Recommendations</u>
Contra Costa County Board of Supervisors	F1-14	R1-10
Contra Costa County Sheriff's Department	F6, F7, F9, F11-F14	R2, R9, R11
City of Antioch	F6, F7, F9, F11-F14	R2, R9, R11
City of Brentwood	F6, F7, F9, F11-F14	R2, R9, R11
City of Clayton	F6, F7, F9, F11-F14	R2, R9, R11
City of Concord	F6, F7, F9, F11-F14	R2, R9, R11
City of Danville	F6, F7, F9, F11-F14	R2, R9, R11
City of El Cerrito	F6, F7, F9, F11-F14	R2, R9, R11
City of Hercules	F6, F7, F9, F11-F14	R2, R9, R11
City of Lafayette	F6, F7, F9, F11-F14	R2, R9, R11
City of Martinez	F6, F7, F9, F11-F14	R2, R9, R11
City of Moraga	F6, F7, F9, F11-F14	R2, R9, R11
City of Oakley	F6, F7, F9, F11-F14	R2, R9, R11
City of Orinda	F6, F7, F9, F11-F14	R2, R9, R11
City of Pinole	F6, F7, F9, F11-F14	R2, R9, R11
City of Pleasant Hill	F6, F7, F9, F11-F14	R2, R9, R11

City of Pittsburg	F6, F7, F9, F11-F14	R2, R9, R11
City of Richmond	F6, F7, F9, F11-F14	R2, R9, R11
City of San Pablo	F6, F7, F9, F11-F14	R2, R9, R11
City of San Ramon	F6, F7, F9, F11-F14	R2, R9, R11
City of Walnut Creek	F6, F7, F9, F11-F14	R2, R9, R11

These responses must be provided in the format and by the date set forth in the cover letter that accompanies this report. An electronic copy of these responses in the form of a Word document should be sent by e-mail to [epant@contracosta.courts.ca.gov](mailto:epant@contracosta.courts.ca.gov) and a hard (paper) copy should be sent to:

Civil Grand Jury – Foreperson

725 Court Street

P.O. Box 431

Martinez, CA 94553-0091



**A REPORT BY  
THE 2015-2016 CONTRA COSTA COUNTY GRAND JURY**  
725 Court Street  
Martinez, California 94553

Report 1606

# Reclaiming our Water

More Complicated than it Might Appear

APPROVED BY THE GRAND JURY:

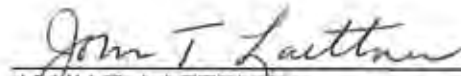
Date: May 24, 2016



MICHAEL SIMMONS  
GRAND JURY FOREPERSON

ACCEPTED FOR FILING:

Date: May 20, 2016



JOHN T. LAETTNER  
JUDGE OF THE SUPERIOR COURT

Contact: Michael Simmons  
Foreperson  
925-957-5638

Contra Costa County Grand Jury Report 1606

## **Reclaiming our Water**

**More Complicated than it Might Appear**

**TO: Contra Costa County Board of Supervisors; City Councils of the Cities of Concord, San Ramon, and Walnut Creek; Boards of Directors for Central Contra Costa Sanitary District, Contra Costa Water District, Dublin San Ramon Services District, and East Bay Municipal Utilities District**

### **SUMMARY**

The recent drought has raised public awareness about the idea of using more recycled wastewater for irrigation and industrial purposes. The Grand Jury launched an inquiry into what obstacles were preventing water recycling from occurring on a broader scale.

While the recent El Niño storms provided some respite from the current drought, it is too soon to know if this is the end of this drought cycle or just a short pause to the start of a much longer mega-drought.<sup>1</sup> In either event, recycled and recovered water are key factors in achieving sustainable solutions to the water problems within Contra Costa County (County).

More can be done to maximize the use of recycled and reclaimed water in the County, but the infrastructure is not in place and any increase in supply must be carefully balanced with customer demand. Other obstacles in pursuing such a plan include: infrastructure cost, quality of the recycled water, identifying willing customers, facilitating water and wastewater utility cooperation, and potential legal challenges under California's Proposition 218.<sup>2</sup> Another challenge lies in the comparative cost of

<sup>1</sup> *The West Without Water – B. Lynn Ingram and Frances Malamud-Roam (2013) and studies done for Contra Costa Water District note that tree ring and other historic evidence (such as changes in Delta salinity levels) suggest California experienced several hundred-year-long droughts in the past 1000 years.*

<sup>2</sup> (<http://www.californiataxdata.com/pdf/proposition218.pdf>)

desalinization plants. In Southern California brackish water desalination costs around \$1600/acre-foot, and sea water desalination costs around \$2400/acre-foot. By comparison, Central Valley Project water, which is used in this County, costs around \$600/acre-foot at the point it is delivered to the treatment plant.

We learned that little is being done to increase capture of stormwater for reuse. Additionally, opportunities exist for supplying recycled water to industrial users, and “wheeling” the previously supplied fresh water to other customers in the County.

This report makes recommendations that address these findings. They include:

- Facilitating (possibly through a Task Force) the formation of a Joint Powers Authority (JPA) to: (i) integrate efforts to use recycled wastewater, (ii) capture stormwater, and (iii) revisit desalination options to supplement the County's water needs
- Promoting siting of desalination demonstration plants by making unused or under-used County land available for lease
- Promoting public awareness, education and involvement by forming a Water Reuse Advisory Council that includes citizen stakeholders and technology experts to advise the Board of Supervisors
- Adopting ordinances that promulgate recycling and recovery of water on a county-wide basis, with appropriate rules for planned communities and large commercial buildings
- Emphasizing capture and reuse of stormwater where possible in all new County flood control projects
- Promoting on-site capture and reuse of stormwater wherever practical
- Facilitating the use of satellite wastewater treatment plants, where appropriate



**Los Vaqueros Reservoir (CCWD)**

## **GLOSSARY OF TERMS AND ACRONYMS**

**Acre-feet per year (afy)**–1 acre-foot = 325,851 gallons or 1233.5 cubic meters  
**Million gallons per day (mgd)**–1 million gallons per day = 1121 afy  
**Brackish Water**– saline water with TDS between 1,000 to 10,000 parts per million  
**California Department of Water Resources (DWR)**  
**Central Valley Project**– irrigation project managed by U.S. Bureau of Reclamation  
**Clean Water Act**– federal law governing pollution of surface water  
**Desalination**– removal of salts and dissolved solids from saltwater (brackish or sea)  
**Direct Potable Reuse (DPR)**–wastewater cleaned sufficiently for direct reuse  
**Humidification Dehumidification (HDH)**–alternative desalination technology  
**Indirect Potable Reuse (IPR)**–term for wastewater cleaned sufficiently for indirect reuse  
**Integrated Regional Water Management Plan (IRWMP)**  
**Joint Powers Authority (JPA)**–two or more government agencies that have agreed to work together on projects of common interest  
**Local Agency Formation Commission (LAFCO)**–its charter is to encourage orderly and efficient provision of services, including water, sewer and flood control  
**Megawatt-hour (MWh)**–a unit of electrical consumption or usage  
**National Pollutant Discharge Elimination System (NPDES)**  
**Reverse Osmosis (RO)**–membrane separation desalination technique  
**Potable Water**–water safe enough to drink and cook with, i.e., free from harmful pathogens and contaminants  
**Solar Desalination (SD)**–alternative desalination technology using heat and/or photovoltaic energy from the sun  
**State Water Project (SWP)**–irrigation project managed by State of California  
**Tertiary Treatment**–advanced treatment (following secondary treatment) that produces higher quality water with essentially all suspended matter removed, and (usually) some reduction in nutrient content  
**Title 22 Recycled Water**–treated wastewater suitable for industrial or agricultural reuse, but not potable quality  
**Total Dissolved Solids (TDS)**–dissolved salt or mineral constituents in water  
**Wheeling**–allowing someone else’s water to be moved (either notionally or actually) through your transmission system into the users system; usually for a fee

## BACKGROUND

But for the drought, much less attention would have been paid to California's Water Action Plan (known as the 20x2020 Plan). This plan calls for a permanent 20 percent reduction in water use. The Plan uses 2005 as its base year, and will "consider recycling as a means to achieve [the reduction]." It emphasizes that "it is essential for California to expand the use of recycled water." The published plans for both Contra Costa Water District (CCWD) and East Bay Municipal Utilities District (EBMUD) also propose increases in water recycling.

As the drought continued through the summer and fall of 2015, news accounts brought the public's attention to the potential for treating more wastewater to the "tertiary level" and recycling (redirecting) it for industrial and irrigation needs. Some wastewater districts serving Contra Costa are already providing recycled wastewater to industrial, commercial, and municipal users, but further use of this resource is being slowed by a combination of financial and anticipated legal obstacles.

This inquiry focuses on opportunities for expanding water recycling and recovery of our existing local water resources. It also explores how obstacles to these goals may be overcome.

As a drought or regional water shortage progresses, there is a hierarchy of choices to be made. These include:

1. *Conservation* – It is the easiest and least costly to quickly implement.
2. *Recycling of wastewater* – It is the next least costly and disruptive. Wastewater is close to the users' service area, but requires further treatment to make it useable and a distribution infrastructure to deliver it to customers.
3. *Stormwater* – It is only intermittently available but infrastructure must also exist for its capture, storage, and distribution. The reliability and practicality of this resource is both site and climate specific. It was, however, an integral factor in helping Australia through its 10 year-long drought.
4. *Desalination* – It is usually the most expensive, environmentally disruptive, and energy intensive.

In the most severe situations, all four approaches are required.

### **What the Experts Are Saying –**

At the January 2016 Water 2.0 Conference in Sacramento, John Laird, State Secretary of Natural Resources, made some pointed observations:

- California's population is expected to grow by 25 percent over the next generation thus increasing the demand for water.
- Our water infrastructure was designed for a climate that no longer exists.

- We need to build an infrastructure that will match the new climate reality.
- Water conservation works only if you have a reliable underlying water supply.
- While the public wants to believe that if you invest more you will get more of what you invest in (water), the reality may be that you are only protecting the limited supply you currently have (or possibly even less than you currently have).
- Given the facts above, the public needs to be kept informed so that they understand the reality and are on-board when decisions are made.

At the same conference, Felicia Marcus, the Chair of the State Water Resources Control Board, commented that:

- Low interest (1 percent) state revolving-fund loans are available for recycled water and stormwater projects.
- Recycling and stormwater capture projects are also eligible for Proposition 1 matching dollars.
- The Water Board's internal priorities are: permit streamlining (to speed the approval process for new projects), groundwater recharge regulations, and indirect potable reuse regulations.

These comments suggest that the State's regulators are reacting to both long-term and short-term water supply issues by encouraging local entities to take action. However, responsible local entities may not yet be ready to take these suggested steps.

#### **History of Water Reuse–**

In some areas of the country wastewater is already being purified and disinfected up to potable quality for reuse.<sup>3</sup> The California Department of Water Resources (DWR) is currently drafting state-wide rules under which tertiary treated recycled water can be further purified before reintroduction (either indirectly or directly) into potable water systems. Definitive rules for "potable reuse" in California must be issued by the end of 2016.

California was once at the forefront of water recycling. In 1962, the Montebello Forebay Groundwater Recharge Project, a groundwater recharge project using recycled water, was inaugurated in Los Angeles County. More recently the Chino Desalter Authority came on line. That project, using collected stormwater to recharge the aquifer, extracts groundwater that was previously contaminated with nitrates, purifies it using Reverse

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<sup>3</sup> *Wichita Falls and El Paso (TX) are both involved in Direct Potable Reuse (DPR) projects.*

Osmosis (RO) technology, and sells the potable product to retail customers in nearby communities.

According to Laura Martin of *wateronline.com*, California has more groundwater recharge Indirect Potable Reuse (IPR) projects than any other state. The DWR has reviewed and approved each of these projects. Locally there are two RO plants in Alameda County and one in Santa Clara County that treat groundwater to potable quality. In 2008-2009, several Bay Area water districts cooperated in an experimental RO Plant at Mallard Slough to verify costs and feasibility of desalinating brackish river water. The plant demonstrated its feasibility but was later removed because it was not economically viable. Although the calculated cost of the potable water was roughly \$1000/acre-foot, it could not compete with \$600/acre-foot Central Valley Project water.

Twenty years ago, EBMUD and Dublin San Ramon Services District (DSRSD) formed a Joint Powers Authority (JPA) to distribute recycled water to supplement the water supply during the dry summer months. The partnership built a tertiary treatment plant and a "trunk line" to distribute the recycled water. DSRSD personnel operate the plant, and together with EBMUD share in the JPA's operating expenses. They distribute the recycled water primarily to commercial water customers who use the recycled water for irrigation (in lieu of less available potable water). Both EBMUD and DSRSD benefit through this partnership: DSRSD reduces the amount of wastewater it would otherwise have to pump into the San Francisco Bay, and EBMUD benefits from not having to supply more valuable drinking water for irrigation purposes.

## **DISCUSSION**

### ***Water Recyclers and Existing Customers –***

Statewide, urban water agencies currently recycle about a third of potentially recyclable water – 300,000 acre-feet per year (afy) of 900,000 afy. In Contra Costa County, seven wastewater treatment plants are producing recyclable water (Title 22 quality) suitable for use outside their plants for industrial and irrigation purposes. The majority of this water is supplied to two power plants in Pittsburg and an oil refinery in Richmond. Golf courses, public parks, public school landscaping, and median strips use almost all of the balance. Dust suppression at concrete batch plants and public filling stations also use the remaining small fraction. Table 1 summarizes the suppliers and the recycled amounts. Currently, almost 25 percent of wastewater is recycled during the peak summer months. This is slightly lower than the state-wide average; however, all this water is non-potable quality – thus is underutilized during winter months, when it is not needed for irrigation.

**Table 1 – Suppliers and Users of Recycled Water in Contra Costa County**  
(Most to least)

Treatment Plant	Effluent Treated, (Average Dry Weather Flow), mgd	Outside Plant Use, mgd	Comments Million Gallons per Day = mgd
Central San (CCCSD)	30	2.9 (available) 0.6 (used)	0.6 mgd committed to Zones 1 &2 plus Fill Station
Delta Diablo	12.8	7.3	During hottest summer days 100% to Calpine, purple pipe irrigation, and public "Fill Station"
West County SD	6.5	5.8	Essentially 100% of capacity is spoken for by Chevron
City of Richmond	6.03	0	Discharged to the Bay; effluent is too salty for recycling
Pinole/Hercules	3.5	0	Discharged to Bay
City of Brentwood	3.2	0.5	Purple pipe to golf courses and parks; also "Fill Station"
Ironhouse SD	2.26	1.0	Ag application; the rest goes into river
Discovery Bay CSD	1.8	0.6	Local irrigation
Dublin San Ramon SD	1.6 (from Contra Costa)	1.5 (returned to Contra Costa)	Purple pipe to golf courses and parks; also "Fill Stations"
Mt. View SD	1.25	0	100% is being fed into a marsh for wildlife habitat
Rodeo SD	1.14	0.01	Minor amount for in-plant landscape
Crockett CSD	0.93	0	Discharged to Bay
Byron SD	0.1	0	Discharged to Marsh Creek
<b>TOTALS</b>	<b>71.11</b>	<b>17.31</b>	<b>Average = 24.3%*</b>

\* This is the annual average. The percent recycled increases in hot summer months and decreases in winter months.

***Potential Recyclers and Potential Customers –***

There are 13 wastewater treatment plants serving the County. Also, there are several industrial sites that treat and then discharge their internally generated wastewater

directly into the Delta or the Bay. If some of this discharged water was further treated, it could be reused at the industrial sites instead of discharged. This would lower these sites' demand for higher quality outside water. However, it is unclear if this plan is currently economically viable.

Central Contra Costa Sanitary District (CCCSD) has the greatest potential capacity to recycle water. Even so, its ability to process Title 22 quality water for export is currently limited to roughly 3 mgd. To increase its capacity CCCSD would need to construct additional filtration units and related infrastructure. Industrial customers (Shell Martinez, and Tesoro Golden Eagle refineries) would be potential users of any such recycled water. Apart from industrial users, CCCSD is expanding its system for distributing recycled water to local golf courses. Table 2 summarizes the players, potential quantities available for reuse, and the potential needs. There are other smaller projects that would use on-site or satellite treatment plants to "harvest" a portion of the wastewater stream for golf course irrigation, before sending the balance on to the main treatment plant. Cost would be borne by the user.

**Table 2 – Potential or Planned Recycled Water Projects**

<b>Treatment Plant</b>	<b>Customer/Project</b>	<b>Quantity Required, mgd</b>	<b>Timeline and/or Comments</b>
CCCSD	Shell Martinez (cooling, process and boiler make-up water)	10	2020 and beyond – insufficient treatment capacity currently exists to supply full demand
CCCSD	Tesoro Avon (cooling, process and boiler make-up water)	10	2020 and beyond – insufficient treatment capacity currently exists to supply full demand
CCCSD	Concord Naval Weapons Station Redevelopment (residential and commercial)	2.5	2020 and beyond – treatment capacity currently exists to supply full demand
EBMUD (partner/w Pinole and/or Rodeo SD)	Phillips 66 Rodeo	2.8 (Phase 1) 0.9 (Phase 2)	Purchase agreement would have to be negotiated and a dedicated treatment plant built.
DSRSD-EBMUD	San Ramon Valley, Phase 2	0.43	Expansion of system to Bishop Ranch – 2017

The County is below the statewide average of 33 percent recycled water use. To reach "average", customers in the County must use an additional 6.2 mgd of recycled water. (The County's 2005-2020 General Plan includes a policy to "encourage the construction

of wastewater disposal systems designed to reclaim and re-use treated wastewater..."). DSRSD and EBMUD will start construction in 2017 on Phase 2 of the San Ramon Valley Recycled Water Project, which will add 3.6 miles of recycled water pipeline to connect Bishop Ranch Business Park to the distribution system. However, the project is only expected to add 0.43 mgd of recycled water usage.

#### ***The Water Suppliers –***

EBMUD has two dams on the Mokelumne River plus several local reservoirs in the County. It also has an option to buy water from Yolo County during drought years and an intake structure (Freeport) on the Sacramento River to route that water to its existing aqueducts. Additionally, EBMUD is studying "groundwater banking" with San Joaquin County water authorities. This involves intentionally flooding farm land during the winter months to increase percolation into the aquifer for later use. EBMUD plans to increase its use of recycled water by 20 mgd over the next 25 years.

CCWD has rights to use up to 195,000 afy of Central Valley Project (CVP) water.

The "rights" are administered by the U.S. Bureau of Reclamation and can be reduced or curtailed in drought years. In addition, CCWD has a drought year agreement with East Contra Costa Irrigation District (ECCID) to option its 1914 senior surface water rights. It also has Los Vaqueros Reservoir (current capacity 160,000 acre-feet) to help buffer the impact of multiyear droughts. CCWD recently completed a "wheeling" agreement with EBMUD, which allows it to take its CVP water at the Freeport intake structure when capacity is available, rather than from its existing facilities on the San Joaquin River.

CCWD's 10 Year Capital Improvement Plan mentions recycling, but lacks details about specific projects. The page in the Plan that mentions recycling states that any recycling project will *be equally funded by grants and untreated water rates*. Approximately ten percent of CCWD's current water demands are met with recycled water supplied by others under various Memoranda of Understanding. CCWD plays no direct role in supplying the recycled water to customers.

DSRSD gets its water from Alameda County Zone 7 Water District. The wholesale price of \$1300/acre-foot is passed directly through to DSRSD's customers as part of the total water bill. It also treats wastewater to Title 22 quality and distributes it via its recycled water pipeline to larger users. DSRSD is entirely dependent on Zone 7 for its fresh water supply, and Zone 7 is heavily reliant on the State Water Project (Lake Oroville) for its water.

The remaining water purveyors in the County rely on water from CCWD in whole or in part or rely exclusively on groundwater wells to meet their customers' needs. The major water suppliers in the greater Bay Area are becoming more connected through the use of inter-ties and agreements to wheel water to meet emergency situations or when conveyance capacity is available.

### **Where the County Government Fits in –**

The County's General Plan contains a broad principle (under section 8-di) that encourages that wastewater disposal systems be designed to reclaim and reuse treated wastewater. Beyond that, there is no explanation in the Plan on the actions the County will take.

The County interfaces with the various water and wastewater districts through the Board of Supervisors' Transportation, Water and Infrastructure Committee (TWIC). Contra Costa LAFCO, an independent agency with countywide jurisdiction, also interacts with these districts. Both receive periodic reports from the districts on their plans and activities. LAFCO has the additional responsibility of managing boundary issues and periodically assessing the financial stability of each district. The County and LAFCO have not assigned personnel to act as a watchdog or play a facilitator role in the areas of recycled or reused water.

### **Obstacles to Overcome for Recycled Water Projects –**

Before any recycled water project can be implemented, issues related to cost, operations, water quality, customer base, regulatory and legal compliance, financing and timing must be addressed. Additional obstacles are the need to obtain consent from the water supplier and the perception on the part of the water suppliers that their water rights and allocations might be impaired.

### **Projects Worth Pursuing –**

RMC Water and Environment recently completed a recycled water study for CCCSD.<sup>4</sup> Among other options, the study considered adding 20 mgd tertiary treatment and ammonia removal capacity. Under this option, a 42-inch diameter pipeline would connect the Shell and Tesoro oil refineries to supply cleaned wastewater for cooling towers and for refinery process water. As a result, an equivalent quantity of CCWD fresh water would be "freed up" for other uses. The estimated cost to add capacity and treat the recycled water is \$820/acre-foot ( $\pm$  30%). While this figure is higher than the \$650/acre-foot CCWD currently charges wholesale customers for raw canal water, it is anticipated that some customers would be willing to pay more for a secure supply.

With the expansion of its Los Vaqueros Reservoir, CCWD will be able to "bank" some of the newly available water and offer it to other regional water districts, like DSRSD. DSRSD and their water supplier, Alameda County Zone 7, both need additional water to support a growing customer base. After the expansion is completed, CCWD could potentially wheel the water via the proposed Transfer-Bethany-Pipeline to the South Bay Aqueduct, which connects to Alameda Zone 7's system. The responsible parties would need to negotiate the terms of such a project, including its financing, the water

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<sup>4</sup> CCCSD's *RECYCLED WATER WHOLESALE OPPORTUNITIES – March 2016 – prepared by RMC Water and Environment*

recipients, the price per acre-foot, and operation and ownership of the equipment and infrastructure. One mechanism to move such a project forward would be for the parties to enter into a JPA.

Other potential projects are small scale IPR projects. For example, DSRSD is studying injection and recovery wells as a means of fully utilizing its current recycled water capacity. CCCSD also has a capacity surplus of Title 22 quality water. That water could be treated to IPR quality and used for an injection and recovery well demonstration project with CCWD.

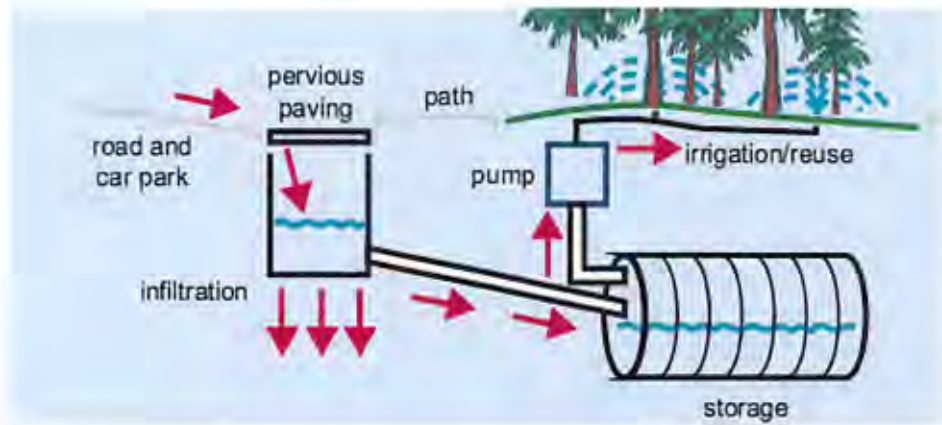
#### **Stormwater Capture and Reuse –**

The National Resources Defense Council (NRDC) recently graded California “D” in stormwater capture and reuse. Southern California, however, is aiming to increase its efforts in this area, with an ultimate goal of meeting at least ten percent of its total water needs from this source. According to the NRDC “capturing urban stormwater runoff in Southern California and the SF Bay Area could increase the water supply by as much as 630,000 afy while reducing a leading cause of surface water pollution.” The City and County of San Francisco is also actively addressing capture and reuse of urban runoff. They recently passed ordinances mandating that new commercial buildings over a certain size must recover both gray water and stormwater for reuse on premises. This approach is most likely to yield significant benefits in high-density urban areas.

The Public Policy Institute of California lobbied for reforms to State Propositions 218, 26, and 13 to exempt water-related projects from the two-thirds majority vote requirement for new assessments, fees, charges or special taxes. The court in *Griffith v. Pajaro Valley* (2013) found that fees charged by water agencies, including flood control districts, for projects related to water or sewer services are exempt from the two-thirds majority voting requirement under Proposition 218. Thus, fees can be assessed for projects relating to capture and reuse without a two-thirds majority vote. As this remains a contentious issue, flood control districts are reluctant to go forward with capture and reuse projects until case law has been further established.

The Watershed Atlas of Contra Costa identifies 16 specific watersheds comprising roughly 513,280 acres. Assuming that future rainfall only averages 12 inches per year and that half of that rainfall soaks into the exposed soil, the remaining runoff still adds up to over 250,000 afy of locally available water. If only half of the runoff was captured, it would exceed the amount currently supplied by CCWD to its 500,000 customers. However, projects to maximize stormwater capture have not yet been identified in the County.

Australia is a leader in implementing innovative systems for stormwater capture. Two schematics for surface stormwater capture and underground storage systems are shown:



**Underground Storage Scheme (NSW Dept. of Environ. & Conservation-2006)**



**Surface Swale Scheme (NSW Dept. of Environ. & Conservation-2006)**

Various "water-advocates" agree that regional self-reliance and multi-benefit solutions are keys in achieving a sustainable, reliable water infrastructure. The focus on stormwater management by the County and its nineteen cities relates almost exclusively to compliance with NPDES stormwater discharge permits. These municipalities do not have plans for capturing stormwater for beneficial use, except to the extent that it promotes retention of pollutants that might otherwise be released into the San Francisco Bay or Delta.

The storage capacities of groundwater basins in the County have not yet been quantified. Even if significant (tens of thousands of acre-feet) storage capacity were identified, well drilling data collected by US Geological Service and California DWR suggest that augmented recharging could be difficult. Contra Costa's basins have layers of impermeable and low permeability clays that slow percolation, thus natural percolation from the surface is limited in many areas. Additionally, geological faults impede the flow of groundwater from one area to another.

#### **Desalination Options –**

The most prevalent technology for desalination, Reverse Osmosis (RO), involves forcing water molecules through filtering membranes at high pressure to remove salts

and other impurities. Sea water systems require 2 cycles (stages) to produce fresh water. Brackish water requires only one cycle to produce fresh water and, thus, is a less expensive source than sea water. The process is slightly more efficient when the inlet water is warmer.

A large sea water desalination plant was just completed in Carlsbad, CA, which is producing fresh water for approximately \$2200 to \$2400/acre-foot. Recent RMC estimates for producing DPR quality water from wastewater supplied by CCCSD ranged from \$2200 to \$2300/acre-foot, a cost that is on a par with sea water desalination, but higher than brackish water desalination. This suggests that in certain scenarios brackish water desalination might be a less costly option than recycling wastewater up to potable quality.



**Bank of Desalination Membrane Filtering Tubes**

RO is considered to be a "mature" technology, meaning it is unlikely that there will be breakthroughs in the near future that will drive either construction or operating costs down. According to the California Energy Commission in 1980 it took 36 MWh of electricity to produce one acre-foot of desalinated water. Currently only 3.5 MWh is needed – which is roughly fifty percent energy efficiency – extremely good for an industrial process. By comparison, almost the same amount of energy is needed to import an equal quantity of surface water to Los Angeles and San Diego from the Colorado River.

At least two emerging technologies may place less demand on the electric grid in the future: solar desalination (SD) and humidification dehumidification (HDH) desalination. The former uses solar concentrators and panels to produce fresh water and salt cake

from brackish water. The latter is designed to use waste-heat (hot air) to promote evaporation on one side of a heat transfer surface and condensation of fresh water on the other. "Dewvaporization" is one variation of the HDH process. It uses a common heat transfer surface and is theoretically even more energy efficient. Although pilot plants have been tested with both methods, thus far there is little interest in taking the next step to an industrial scale operation. Appendix 2 contains a discussion of other desalination options.

The U.S. Bureau of Reclamation funded an HDH pilot plant. One of the goals for the project was to "develop methods to make desalting more efficient through promotion of dual-use facilities in which waste energy could be applied to desalting water." The 5,000 gallons/day pilot plant is located at a wastewater treatment plant near Phoenix, Arizona. The HDH process uses low-grade heat and waste heat to promote evaporation of the wastewater stream. A similar plant could be built at CCCSD. It uses natural gas from the adjacent landfill as fuel for drying its treated solid waste; thus, waste heat should be available for an HDH desalination plant.

Regardless which technology is selected, water professionals believe that desalination plants will ultimately be part of the water reliability solution. In addition to treating water from the San Francisco Bay and the Delta, they also can upgrade groundwater that contains a high level of total dissolved solids (TDS). Such water is currently blended with higher quality surface water, limiting the amount that can be used.

The California Legislature is considering allowing "surplus" solar power to be used for desalination projects at below market price. This would make such projects an even more attractive alternative.

#### **The Cost of Doing Nothing –**

If nothing is done, the result may be higher rates for less water. While some environmentalists view this as a "least worst" outcome that will rein-in wasteful practices and minimize environmental impacts, there are disadvantages:

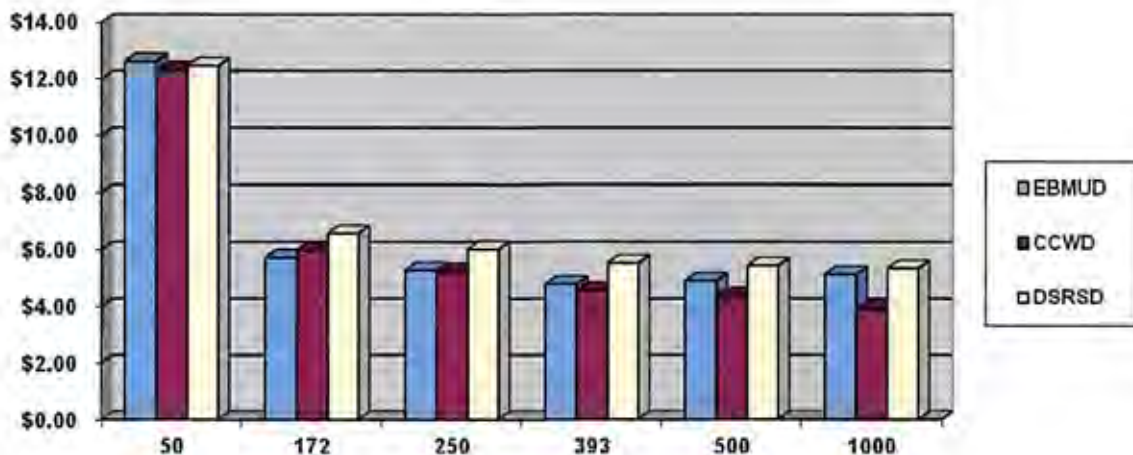
- It adversely affects lifestyle choices, such as: outdoor pools, home gardens and orchards, and landscaping
- It discourages new industries that need water to operate their businesses from locating here
- It leaves the County's residents at the mercy of the weather and reliant on stored water reserves

If water conservation is the only approach used, customers could end up paying almost as much each billing cycle while using less water. On the other hand, if the water shortage is approached using a combination of water conservation and water treatment, customers may ultimately pay less than water conservation alone. This is because a

water supplier can increase its profitability by providing treated water to its customers. Increasing the amount of water delivered generally does not increase a water supplier's fixed costs and can help to cover those costs. The fixed costs come from debt financing of infrastructure that must be paid off (such as the Los Vaqueros Reservoir and the Freeport Intake on the Sacramento River), employee salaries, and maintenance costs on equipment that must be kept in operation regardless of the amount of water passing through.

The bar chart (Table 3) illustrates conservation's unavoidable consequence: the first few gallons of water used become more expensive as total consumption decreases. This may seem counter-intuitive, given that the unit rates incorporated on tiered-rate water bills show progressively higher unit costs when the "life-line" quantity is exceeded. However, the reality is the fixed "service charge" is added on top of whatever amount of water is used.

**Table 3 – Unit Cost Bar Chart**



**Vertical-axis = dollars/unit (748 gallons) based on a 61 day billing cycle**  
**Horizontal-axis = average gallons per day over 61 day billing cycle**

Water providers recently pointed out that water conservation has resulted in "drastic losses in revenue needed for infrastructure investments and fixed cost recovery (costs incurred regardless of amount of water used – representing about 70 percent of customer bills)." A recent Fitch Ratings survey revealed that 78 percent of municipal water agencies have already, or plan to, adjust rates to offset losses from mandatory conservation. Clearly the downside of conservation is that the retail customer will not be saving much money for using less water.

## Final Observations –

- Water supplies are not growing, but population is.
- Desalination of brackish water (where available) needs to be revisited. Estimated costs are slightly lower than DPR quality water and public acceptance could be easier to gain.
- The estimated costs for IPR and DPR remain relatively high, even though the energy cost to operate the plants should be lower than desalination plants.
- Unless CCCSD can get a State or Federal grant to increase its capacity for recycled water, it cannot be cost competitive with raw canal water supplied by CCWD to their industrial customers.
- State matching grant money and low-interest loans are available for recycled water and desalination projects.
- Recycling Title 22-quality water to year-around customers has a better chance to maximize its use, provided willing customers can be signed up.
- Both mandated conservation and recycling water potentially reduce water purveyors' revenue resulting in upward pressure on billing rates.
- Stormwater should be part of the water sustainability solution – even though its expected contribution will be limited.
- The Board of Supervisors could (through a Task Force) be an effective facilitator in the formation of a recycled water JPA.
- The Board of Supervisors could (through an Advisory Council) be an effective facilitator in educating and encouraging the participation of the public.

## FINDINGS

- F1. Among obstacles to using more recycled water are: determining who will pay for installing the necessary infrastructure and distribution system; finding a willing customer; and minimizing the financial and legal impacts to the current potable water purveyor.
- F2. Water purveyors and wastewater processors can share water treatment costs and revenues under a JPA.
- F3. State matching grants and low-interest loans are available for small indirect potable reuse projects, which could potentially increase water supply.
- F4. Indirect potable reuse projects are ideal for areas in the County where other new water sources are unavailable.
- F5. It is difficult to develop large recycled water projects without the cooperation and commitment of water purveyors and customers.
- F6. Where recycled water can be wheeled to one customer, it could "free up" an equivalent amount of fresh water that could then be wheeled to another customer who might be willing to pay more, thus creating "win-win" results for recycled water projects.
- F7. While stormwater capture and reuse has potential for contributing to the County's long-term water needs, the County has focused on NPDES compliance.
- F8. Contra Costa County and its cities could adopt water saving and recycling ordinances for large commercial buildings, similar to those adopted in other large urban locations such as San Francisco.
- F9. Satellite wastewater treatment plants are feasible in situations where the user is distant from existing recycled water distribution systems, needs water for irrigation, and is able to meet the costs to build and operate the plant.
- F10. The County is below the State average in use of recycled water.
- F11. Desalination technology continues to evolve, including smaller scale solar powered and HDH ("Dewvaporation") pilot plants, although neither has been developed to full commercialization.
- F12. Citizen involvement (possibly through an Advisory Council) is a key to getting buy-in for recycle and IPR/DPR projects because it is citizens who pay for, consume, and depend on a reliable source of pure water.
- F13. There is no single point of contact for water recycle and reuse issues in the County.

## RECOMMENDATIONS

- R1. The Board of Supervisors should consider facilitating (possibly through a Task Force) the formation of a JPA to promote water recycling, stormwater capture and desalination projects.
- R2. CCCSD and CCWD should explore the feasibility of cooperatively developing an IPR Injection Well Project.
- R3. CCCSD, CCWD, and DSRSD should consider the formation of a JPA to expand CCCSD's tertiary treatment capacity in order to free up fresh water for domestic and commercial customers.
- R4. The Board of Supervisors should consider directing that priority be given to capture and reuse of stormwater where possible in all new County flood control projects.
- R5. The Board of Supervisors should consider adopting ordinances that promulgate recycling and recovery of water on a County-wide basis.
- R6. The city should consider adopting requirements relating to the use of reclaimed water for planned communities and large commercial buildings to maximize its use.
- R7. The district should consider facilitating the use of satellite wastewater treatment plants, where appropriate.
- R8. The Board of Supervisors should consider adopting a County goal to exceed the State average for recycled water use and establish a target date.
- R9. The County and Districts should consider meeting to discuss each District's need for land for demonstration of scaled-up recycling and desalination projects using green technologies, which may qualify for State grant money, and the County's ability to lease such land.
- R10. To promote public awareness and citizen involvement, the Board of Supervisors should consider establishing a citizen's "Water Reuse Advisory Council" which includes citizen stakeholders and technology experts to advise them on all water reuse issues affecting the County.
- R11. The Board of Supervisors should consider designating a single point of contact within County government for water recycle/reuse issues or establishing a permanent water sustainability subcommittee under their Transportation, Water and Infrastructure Committee to advise the committee on water reuse issues.

## REQUIRED RESPONSES

	<u>Findings</u>	<u>Recommendations</u>
Contra Costa County Board of Supervisors	F1, F2, F7-F8, F10-F13	R1, R4, R5, R8-R11
Board of Directors for the Contra Costa Water District	F3-F6, F9	R2, R3, R7, R9
Board of Directors for the Central Contra Costa Sanitary District	F3-F6, F9	R2, R3, R7, R9
Board of Directors for the Dublin San Ramon Services District	F3-F6, F9	R2, R3, R7, R9
Board of Directors for the East Bay Municipal Utilities District	F9	R7, R9
Concord City Council	F8	R6
San Ramon City Council	F8	R6
Walnut Creek City Council	F8	R6

These responses must be provided in the format and by the date set forth in the cover letter that accompanies this report. An electronic copy of these responses in the form of a Word document should be sent by e-mail to [epant@contracosta.courts.ca.gov](mailto:epant@contracosta.courts.ca.gov) and a hard (paper) copy should be sent to:

Civil Grand Jury – Foreperson

725 Court Street

P.O. Box 431

Martinez, CA 94553-0091

## APPENDIX 1

### METHODOLOGY

The Grand Jury surveyed a cross-section of wastewater treatment agencies; attended various public meetings at agencies, special districts, and boards; and conducted sixteen interviews with managers, technical specialists, and water industry consultants from:

- Cities that treat their own water and/or wastewater
- Contra Costa Central Sanitary District (CCCSD)
- Contra Costa Clean Water Program (CCCWP)
- Contra Costa Water District (CCWD)
- County Departments with responsibility for water-related issues
- Delta Diablo (DD) – formerly Delta Diablo Sanitary District
- Diablo Water District (DWD)
- Dublin San Ramon Services District (DSRSD)
- East Bay Municipal Utilities District (EBMUD)
- East Bay Leadership Conference – Water Task Force
- East Contra Costa County Integrated Regional Water Management (Plan)
- East County Water Management Association (ECWMA)
- Local Agency Formation Commission (LAFCO)
- San Francisco Bay Regional Water Quality Control Board (SFBRWQCB)

## APPENDIX 2

### OTHER DESALINATION OPTIONS–

The information below expands on some other technologies available for desalination. Electrodialysis and Forward Osmosis were not previously discussed in the report.

#### Electrodialysis (ED)–

ED is an ion exchange membrane process that uses electrical potential as a driving force to remove salts from brackish or sea water. Reportedly the process operates most efficiently with brackish water containing less than 3,000 TDS. This technology may be best suited to smaller projects. According to Lee and Moon (in *Desalination – Water from Water*), a 10,000 cubic meter capacity plant could produce desalinated water for \$0.83/m<sup>3</sup> or about \$1024/acre-foot. However, brine disposal costs would have to be added.

#### Forward Osmosis (FO)–

FO is an osmotic process similar to reverse osmosis, but instead of a pressure gradient, it uses a higher concentration “draw” solution as the driving force to move water across a semi-permeable membrane. This produces a less concentrated solution on the draw side of the membrane from which the water must then be extracted. A pilot or demonstration plant was built by NASA Ames Research Laboratory recently. According to McCutcheon and Bui, (in *Desalination – Water from Water*), “FO promises to enable low cost desalination with improved recovery and fouling resistance...” For wastewater treatment it could be “hybridized” with existing RO units. In this scenario it would act as a pre-filter to skim out the water from an otherwise unprocessed waste stream.

### ADDITIONAL REFERENCES AND SUGGESTED READING–

*Water 4.0: the Past, Present and Future of the World's Most Valuable Resource*, David Sedlak; (Yale University Press: New Haven, CT), 2014

*Desalination – Water from Water*, Jane Kucera, Editor; (Scrivener Publishing: Beverley, MA), 2014

*Desalination with a Grain of Salt – A California Perspective*, Heather Cooley, Peter H. Gleick, and Gary Wolff; (Pacific Institute: Oakland, CA), June 2006

*Desalination Engineering: Planning and Design*, Nikolay Voutchkov; (McGraw-Hill: New York, NY), 2007



A REPORT BY  
THE 2015-2016 CONTRA COSTA COUNTY GRAND JURY  
725 Court Street  
Martinez, California 94553


Report 1607

**DELTA LEVEES IN CONTRA COSTA  
COUNTY**

How Well Do We Protect This Vital Safety System?

APPROVED BY THE GRAND JURY:

Date: 5/31/16

  
MICHAEL SIMMONS  
GRAND JURY FOREPERSON

ACCEPTED FOR FILING:

Date: 5/31/16

  
JOHN T. LAETTNER  
JUDGE OF THE SUPERIOR COURT

Contra Costa County Grand Jury Report 1607

## **DELTA LEVEES IN CONTRA COSTA COUNTY**

### **How Well Do We Protect This Vital Safety System?**

**TO: The Boards of Trustees of All Contra Costa Reclamation Districts; the Contra Costa Board of Supervisors; the Contra Costa Tax Collector; the Contra Costa County Clerk Recorder Elections Division; Contra Costa County LAFCO; and the City Council of Oakley**

### **SUMMARY**

Some say about Contra Costa County's Delta levees, "It's not a question of *if* but *when* they will fail." Others disagree. They say that these levees can continue indefinitely to perform successfully *if* they are constantly and proactively monitored and maintained, and receive appropriate improvements as conditions evolve. The answer to this "if or when" debate is of vital interest to the County.

The Delta levees form a critical bulwark against flooding that could have disastrous consequences for the County and even the State. The levees, most of which were built more than a century ago, originally protected privately owned land. This land was reclaimed from marshland for agricultural use, and was sparsely populated by the landowners and possibly a few farmworkers. Today, these levees protect much more:

- the lives and property of 28% of Contra Costa County's population (based on the 2010 census, although the number continues to grow),
- infrastructure that is critical to the County and region (including major roads and highways, a railroad line, oil and gas wells and pipelines, power transmission lines, and aqueducts and canals that supply water to nearly 2/3 of the State), and
- the quality of Delta water that could be exposed to excessive saline levels due to the incursion of seawater.

Many of these levees are fragile, subject to degradation from natural forces and from the effects of human activities. While the Reclamation Districts (Districts) that own and/or manage the levees have done much to protect and maintain them, often aided by State financial support, more can be done, even within the limits of the Districts' financial resources.

This report recommends focusing on three major areas: sharing of resources and knowledge among Reclamation Districts, education of residents of the Districts as to the reasons behind levee rules and regulations, and increased involvement and participation by the various entities that benefit from the protection afforded by the levee system.

## **METHODOLOGY**

In conducting its investigation and preparing this report, the Contra Costa County Grand Jury performed the following:

**Interviewed and/or obtained information from representatives of the following public agencies and Reclamation Districts, including professional engineering firms that provide engineering support to the Reclamation Districts:**

California Department of Water Resources; Contra Costa County Flood Control; Contra Costa County Department of Public Works/Engineering Services; Contra Costa County Department of Conservation and Development; Contra Costa County Local Agency Formation Commission; Contra Costa Water Department; Contra Costa County Flood Control; Contra Costa County Tax Collector; Contra Costa County Clerk Recorder Elections Division; Ironhouse Sanitary District; Bethel Island Municipal Improvement District, Reclamation Districts 799 (Hotchkiss), 800 (Byron-Discovery Bay), 830 (Jersey Island), 2025 (Holland), 2026 (Webb), 2059 (Bradford), 2065 (Veale), 2122 (Winter), and 2137 (Dutch Slough).

**Conducted site visits to the following Reclamation Districts:**

Bethel Island Municipal Improvement; District; 799 (Hotchkiss); 800 (Byron-Discovery Bay); 2024 (Orwood and Palm); 2025 (Holland); and 2065 (Veale).

**Attended Board Meetings and/or reviewed agendas and minutes from the following public agencies and Reclamation Districts:**

Contra Costa LAFCO; Contra Costa Board of Supervisors; Contra Costa Water Agency; Reclamation Districts 799, 800, and 2059.

**Reviewed numerous publications of various public agencies, including but not limited to the following:**

Department of Water Resources reports and bulletins; Delta Stewardship Council email notices and interim Delta Levee Investment Strategy reports and studies; Delta Risk Management Strategy (DRMS); Delta Overview; United States Geological Survey