

**CONTRA COSTA COUNTY FIRE PROTECTION DISTRICT**

**BOARD CHAMBERS ROOM 107, ADMINISTRATION BUILDING, 651 PINE STREET  
MARTINEZ, CALIFORNIA 94553-1229**

**CANDACE ANDERSEN, CHAIR**  
**MARY N. PIEPHO, VICE CHAIR**  
**JOHN GIOIA**  
**KAREN MITCHOFF**  
**FEDERAL D. GLOVER**

**DAVID J. TWA**, CLERK OF THE BOARD AND COUNTY ADMINISTRATOR, (925) 335-1900  
**JEFF CARMAN**, FIRE CHIEF

PERSONS WHO WISH TO ADDRESS THE BOARD DURING PUBLIC COMMENT OR WITH RESPECT TO AN ITEM THAT IS ON THE AGENDA, WILL BE LIMITED TO THREE (3) MINUTES.

The Board Chair may reduce the amount of time allotted per speaker at the beginning of each item or public comment period depending on the number of speakers and the business of the day.  
Your patience is appreciated.

A closed session may be called at the discretion of the Board Chair.

Staff reports related to open session items on the agenda are also accessible on line at [www.co.contra-costa.ca.us](http://www.co.contra-costa.ca.us).

**AGENDA**  
**July 19, 2016**

**1:30 P.M.** Convene and call to order.

**DISCUSSION ITEMS**

D. 1 CONSIDER Consent Items previously removed.

D. 2 PUBLIC COMMENT (3 Minutes/Speaker)

**D.3** CONSIDER accepting a report on the Integrated Energy Assessment being performed by Opterra Energy Services, Inc. for all District facilities. (Lewis Broschard, Deputy Fire Chief)

**D.4** CONSIDER accepting a report from the Fire Chief providing a status summary for ongoing Fire District activities and initiatives. (Jeff Carman, Fire Chief)

**GENERAL INFORMATION**

The Board meets in its capacity as the Board of Directors of the Contra Costa County Fire Protection District pursuant to Ordinance Code Section 24-2.402. Persons who wish to address the Board of Directors should complete the form provided for that purpose and furnish a copy of any written statement to the Clerk.

Any disclosable public records related to an open session item on a regular meeting agenda and distributed by the Clerk of the Board to a majority of the members of the Board of Directors less than 72 hours prior to that meeting are available for public inspection at 651 Pine Street, First Floor, Room 106, Martinez, CA 94553, during normal business hours. All matters listed under CONSENT ITEMS are considered by the Board of Directors to be routine and will be enacted by one motion. There will be no separate discussion of these items unless requested by a member of the Board or a member of the public prior to the time the Commission votes on the motion to adopt. Persons who wish to speak on matters set for PUBLIC HEARINGS will be heard when the Chair calls for comments from those persons who are in support thereof or in opposition thereto. After persons have spoken, the hearing is closed and the matter is subject to discussion and action by the Board. Comments on matters listed on the agenda or otherwise within the purview of the Board of Directors can be submitted to the office of the Clerk of the Board via mail: Contra Costa County Fire Protection District Board of Directors, 651 Pine Street Room 106, Martinez, CA 94553; by fax: 925-335-1913.

The District will provide reasonable accommodations for persons with disabilities planning to attend Board meetings who contact the Clerk of the Board at least 24 hours before the meeting, at (925) 335-1900; TDD (925) 335-1915. An assistive listening device is available from the Clerk, Room 106. Copies of recordings of all or portions of a Board meeting may be purchased from the Clerk of the Board. Please telephone the Office of the Clerk of the Board, (925) 335-1900, to make the necessary arrangements. Applications for personal subscriptions to the Board Agenda may be obtained by calling the Office of the Clerk of the Board, (925) 335-1900. The Board of Directors' agenda and meeting materials are available for inspection at least 96 hours prior to each meeting at the Office of the Clerk of the Board, 651 Pine Street, Room 106, Martinez, California.

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[www.co.contra-costa.ca.us](http://www.co.contra-costa.ca.us)

## **ADVISORY COMMISSION**

The Contra Costa County Fire Protection District Advisory Fire Commission is scheduled to meet next on Monday, August 8, 2016 at 7:00 p.m. at the District Training Center, 2945 Treat Blvd., Concord, CA 94518.

**AGENDA DEADLINE: Thursday, 12 noon, 12 days before the Tuesday Board meetings.**

## **Glossary of Acronyms, Abbreviations, and other Terms (in alphabetical order):**

The Contra Costa County Fire Protection District has a policy of making limited use of acronyms, abbreviations, and industry-specific language in its Board of Supervisors meetings and written materials. Following is a list of commonly used language that may appear in oral presentations and written materials associated with Board meetings:

**AB** Assembly Bill

**ABAG** Association of Bay Area Governments

**ACA** Assembly Constitutional Amendment  
**ADA** Americans with Disabilities Act of 1990  
**AFSCME** American Federation of State County and Municipal Employees  
**ARRA** American Recovery & Reinvestment Act of 2009  
**BAAQMD** Bay Area Air Quality Management District  
**BART** Bay Area Rapid Transit District  
**BayRICS** Bay Area Regional Interoperable Communications System  
**BGO** Better Government Ordinance  
**BOC** Board of Commissioners  
**CALTRANS** California Department of Transportation  
**CAER** Community Awareness Emergency Response  
**CAL-EMA** California Emergency Management Agency  
**CAO** County Administrative Officer or Office  
**CBC** California Building Code  
**CCCPCFD (ConFire)** Contra Costa County Fire Protection District  
**CCHP** Contra Costa Health Plan  
**CCTA** Contra Costa Transportation Authority  
**CCRMC** Contra Costa Regional Medical Center  
**CCWD** Contra Costa Water District  
**CFC** California Fire Code  
**CFDA** Catalog of Federal Domestic Assistance  
**CEQA** California Environmental Quality Act  
**CIO** Chief Information Officer  
**COLA** Cost of living adjustment  
**ConFire (CCCPCFD)** Contra Costa County Fire Protection District  
**CPA** Certified Public Accountant  
**CPF** – California Professional Firefighters  
**CPI** Consumer Price Index  
**CSA** County Service Area  
**CSAC** California State Association of Counties  
**CTC** California Transportation Commission  
**dba** doing business as  
**EBMUD** East Bay Municipal Utility District  
**ECCPCFD** East Contra Costa Fire Protection District  
**EIR** Environmental Impact Report  
**EIS** Environmental Impact Statement  
**EMCC** Emergency Medical Care Committee  
**EMS** Emergency Medical Services  
**et al.** et alii (and others)  
**FAA** Federal Aviation Administration  
**FEMA** Federal Emergency Management Agency  
**FTE** Full Time Equivalent  
**FY** Fiscal Year  
**GIS** Geographic Information System  
**HCD** (State Dept of) Housing & Community Development  
**HHS** (State Dept of ) Health and Human Services  
**HOV** High Occupancy Vehicle  
**HR** Human Resources

**HUD** United States Department of Housing and Urban Development  
**IAFF** International Association of Firefighters  
**ICC** International Code Council  
**IFC** International Fire Code  
**Inc.** Incorporated  
**IOC** Internal Operations Committee  
**ISO** Industrial Safety Ordinance  
**JPA** Joint (exercise of) Powers Authority or Agreement  
**Lamorinda** Lafayette-Moraga-Orinda Area  
**LAFCo** Local Agency Formation Commission  
**LLC** Limited Liability Company  
**LLP** Limited Liability Partnership  
**Local 1** Public Employees Union Local 1  
**Local 1230** Contra Costa County Professional Firefighters Local 1230  
**MAC** Municipal Advisory Council  
**MBE** Minority Business Enterprise  
**MIS** Management Information System  
**MOE** Maintenance of Effort  
**MOU** Memorandum of Understanding  
**MTC** Metropolitan Transportation Commission  
**NACo** National Association of Counties  
**NEPA** National Environmental Policy Act  
**NFPA** National Fire Protection Association  
**OES-EOC** Office of Emergency Services-Emergency Operations Center  
**OPEB** Other Post Employment Benefits  
**OSHA** Occupational Safety and Health Administration  
**PARS** Public Agencies Retirement Services  
**PEPRA** Public Employees Pension Reform Act  
**RFI** Request For Information  
**RFP** Request For Proposal  
**RFQ** Request For Qualifications  
**SB** Senate Bill  
**SBE** Small Business Enterprise  
**SEIU** Service Employees International Union  
**SUASI** Super Urban Area Security Initiative  
**SWAT** Southwest Area Transportation Committee  
**TRANSPAC** Transportation Partnership & Cooperation (Central)  
**TRANSPLAN** Transportation Planning Committee (East County)  
**TRE** or **TTE** Trustee  
**TWIC** Transportation, Water and Infrastructure Committee  
**UASI** Urban Area Security Initiative  
**UCOA** United Chief Officers Association  
**vs.** versus (against)  
**WAN** Wide Area Network  
**WBE** Women Business Enterprise  
**WCCTAC** West Contra Costa Transportation Advisory Committee



Contra  
Costa  
County

To: Contra Costa County Fire Protection District Board of Directors  
From: Jeff Carman, Chief, Contra Costa County Fire Protection District  
Date: July 19, 2016

Subject: Update on Districtwide Energy Conservation Assessment

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**RECOMMENDATION(S):**

ACCEPT a report on the integrated energy assessment being performed by Opterra Energy Services, Inc. for Contra Costa County Fire Protection District facilities.

**FISCAL IMPACT:**

No immediate fiscal impact. This is an update on work conducted and initial findings related to an energy assessment authorized by the Fire Board of Directors on May 10, 2016.

**BACKGROUND:**

The Contra Costa County Fire Protection District (District) is interested in considering the installation of photovoltaic (solar) systems and other energy saving initiatives aimed at reducing the District's dependency on energy from traditional sources as well as identifying potential energy saving technologies to reduce utility costs.

On May 10, 2016, the Fire Board of Directors authorized the Fire Chief to execute a Program Development Agreement (PDA) with Opterra Energy Services, Inc. (Opterra) for an integrated energy assessment to identify potential energy conservation measures at District

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APPROVE

OTHER

RECOMMENDATION OF CNTY ADMINISTRATOR

RECOMMENDATION OF BOARD  
COMMITTEE

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Action of Board On: **07/19/2016**  APPROVED AS RECOMMENDED  OTHER

Clerks Notes:

**VOTE OF SUPERVISORS**

I hereby certify that this is a true and correct copy of an action taken and entered on the minutes of the Board of Supervisors on the date shown.

ATTESTED: July 19, 2016

Contact: Lewis Broschard, Deputy Fire Chief (925) 941-3501

David J. Twa, County Administrator and Clerk of the Board of Supervisors

By: , Deputy

cc:

BACKGROUND: (CONT'D)

facilities. Opterra is finalizing their assessment of District facilities and providing an update to the Board regarding their findings and potential recommendations.

The primary purposes of the assessment and the recommendations are to identify energy improvements and operational changes that are recommended to be installed or implemented at the facilities and to provide an engineering and economic basis for the implementation of the energy conservation measures identified in the recommendations. Under the proposed PDA, if Opterra's assessment concludes that the cost of the energy conservation measures will be less than amounts the District would otherwise spend on energy, the District and Opterra would proceed with drafting an energy services contract under Government Code section 4217.12, providing for, among other things, engineering, procurement, installation, construction, and training services in connection with the implementation of the energy conservation measures identified during the assessment and described in the recommendations. The District would return to this Board for consideration and approval of the energy services contract.

The ultimate goal of this assessment is to identify where the District may be able to install solar arrays, either on the roofs of certain facilities or as standalone systems, to reduce the dependency on traditional power from PG&E. In addition, certain other measures including water conservation equipment and techniques will also be explored and implemented where they are determined to be cost effective and in the best interest of conservation. The assessment will also provide recommendations on changes in interior and exterior lighting systems that will reduce power consumption.

CHILDREN'S IMPACT STATEMENT:

No impact.

ATTACHMENTS

Energy Conservation Presentation



# "Energizing" Contra Costa County Fire Protection District



OPTERRA  
ENERGY SERVICES



**District Directors' Update**  
Martinez, CA  
July 19, 2016



# Today's Agenda



- Partnership Vision
- Energy Consumption, Savings
- Conservation Measures Summary
- Preliminary Solar PV Layouts
- Media and Community Engagement Plan
- Roadmap and Next Steps





# Program Vision and Objectives: “Energizing” CCCFPD



Improve operations and performance of CCCFPD facility assets; address deferred maintenance needs



Model fiscally responsible environmental stewardship in the region



Create local jobs for County residents and engage community

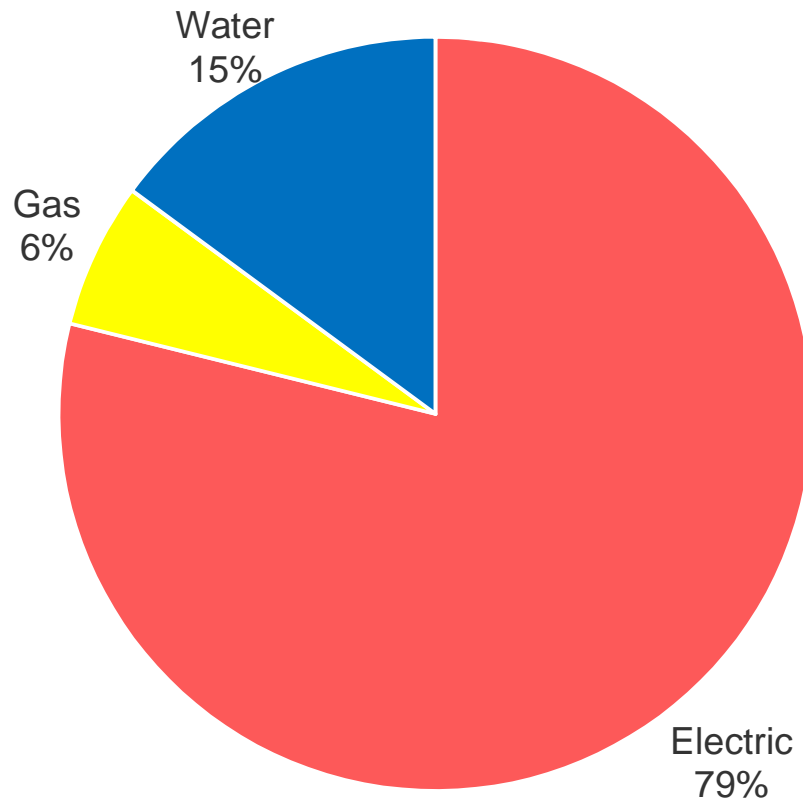


Leverage PG&E incentives, rebates and grants

# Energy Consumption and Savings Potential



CCCFPD Annual Utility Spend: \$438,000/year



Estimated amount of electricity saved upon project completion: **60-70%**

# Contra Costa County Fire Protection District

## Energy Summary Matrix



Site	Solar Photovoltaic	Indoor Lighting	Outdoor Lighting	HVAC Improvements	Water Conservation
FS 1		○	○	○	○
FS 2, Admin and Comm Center		○	○	○	○
FS 3		○	○	○	○
FS 5		○	○		○
FS 6		○	○		○
FS 7		○	○	○	○
FS 8		○	○		○
FS 10 and Training Center	○	○	○	○	○
FS 11	○	○	○		○
FS 13		○	○	○	○
FS 14	○	○	○	○	○
FS 15		○	○		○
FS 17		○	○		○
FS 22	○	○	○	○	○
FS 69		○	○		○
FS 81		○	○	○	○
FS 82	○	○	○		○
FS 83		○	○		○
FS 84	○	○	○		
FS 85 and FPB East	○	○	○		○ (FPB only)
FS 87		○	○		
FS 88		○	○	○	
Investigations		○	○	○	
Delta Fair Property	RES-BCT				

# Solar Design Principles

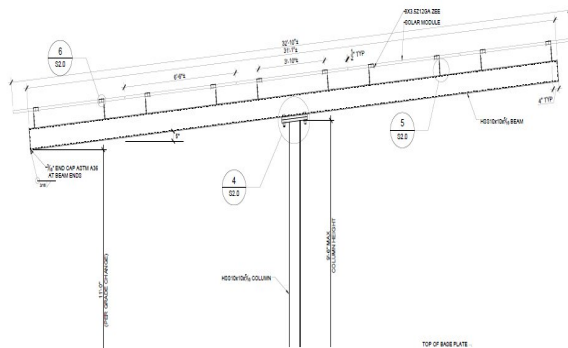


- Aim to offset 80-90% of planned electric load by site
- Locate close to main electrical service
- SW ideal orientation
- Avoid shade from buildings and trees
- Prioritize areas that provide valuable shade for staff and public
- Align designs with future plans & upgrades
- Avoid hazards to the panels (baseballs, etc.)
- Avoid hazards to building users (truck traffic, etc.)

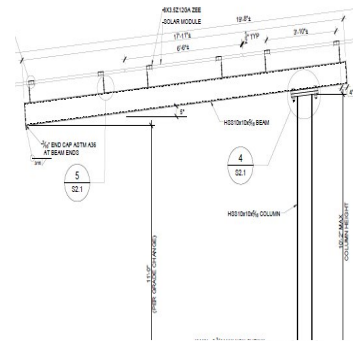




# Solar Design Types



“T” Structure



“L” Structure



“Ground-Mount”



“Roof-Mount”

# Fire Station 85 & FPB East Office



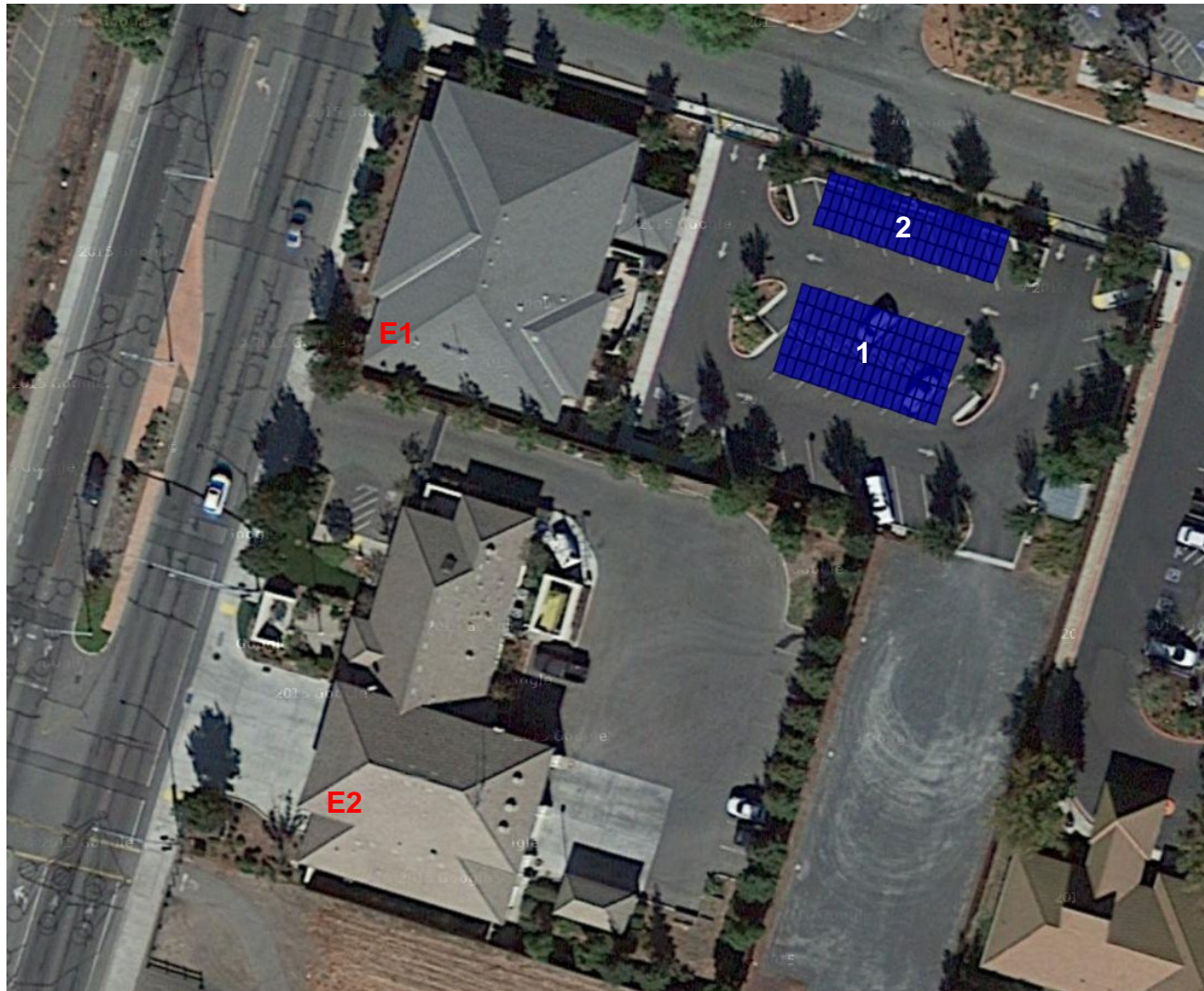
## Project Description

2331 LOVERIDGE ROAD,  
PITTSBURG, 94565

Array 1 (T): 30.6W

Array 2 (L): 20.4kW

**E** = Meter Location





# Delta Fair Blvd RESBCT site



## Project Description

DELTA FAIR PROPERTY,  
ANTIOCH, CA

Array 1 (GM) : 691 kW

**E** = Proposed Meter Location



# Community Impact



- Collaborate with District on media and community outreach
- Presentations alongside FPD Battalion Chiefs to District-area City Councils on program's fiscal and environmental benefits
- Program groundbreaking and ribbon cutting celebrations





# Next Steps to Realizing Vision



Development Activity	Complete?	Date(s)
Feasibility Assessment	✓	2015
Board Approval of Program Development Agreement	✓	5/10
Site walks and existing condition audits	✓	5/26 – 7/8
Update Board		7/19
Competitive Procurement Process: OpTerra/CCCYPD staff run transparent, competitive RFP-based procurement with multiple contractors on installation, equipment		7/11-7/22
Working Group Scope Review and Feedback		7/20-8/3
Issue Competitive Finance RFP		7/27
CCCYPD Approval of Funding Plan & Implementation Contract		9/13
Groundbreaking Ceremony		11/3
Construction/Implementation		November 2016 – Spring 2017

# Contact Information



**Kelly Fergusson, PhD, PE**  
Business Development Manager  
[kfergusson@opterraenergy.com](mailto:kfergusson@opterraenergy.com)  
(415) 405-6674

***OpTerra Energy's National Headquarters***  
500 12<sup>th</sup> Street, Suite 300  
Oakland, CA, 94607





Contra  
Costa  
County

To: Contra Costa County Fire Protection District Board of Directors  
From: Jeff Carman, Chief, Contra Costa County Fire Protection District  
Date: July 19, 2016

Subject: Fire Chief's Report - July 19, 2016

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**RECOMMENDATION(S):**

ACCEPT a report from the Fire Chief providing a status summary for ongoing Fire District activities and initiatives.

**FISCAL IMPACT:**

No fiscal impact.

**BACKGROUND:**

At the request of the Contra Costa County Fire Board of Directors, the Fire Chief is providing a report on the status and progress of the various District initiatives.

**CONSEQUENCE OF NEGATIVE ACTION:**

None.

**CHILDREN'S IMPACT STATEMENT:**

No impact.

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APPROVE

OTHER

RECOMMENDATION OF CNTY ADMINISTRATOR

RECOMMENDATION OF BOARD  
COMMITTEE

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Action of Board On: **07/19/2016**  APPROVED AS RECOMMENDED  OTHER

Clerks Notes:

**VOTE OF SUPERVISORS**

I hereby certify that this is a true and correct copy of an action taken and entered on the minutes of the Board of Supervisors on the date shown.

ATTESTED: July 19, 2016

Contact: Jeff Carman, Fire Chief  
925-941-3500

, County Administrator and Clerk of the Board of Supervisors

By: , Deputy

cc:

ATTACHMENTS

Fire Chief's Report - July  
2016





July 19, 2016

TO: Board of Directors  
FROM: Jeff Carman, Fire Chief  
RE: Fire Chief's Report

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- In honor of our fallen firefighters, the Fire District's annual Line of Duty Death Memorial Ceremony will be held on Thursday, July 21 at the Fire District Training Facility located at 2945 Treat Blvd., Concord. The ceremony will begin at 9:30 a.m. and will include a moment of silence.
- The District continues to work with the City of Pinole and the Rodeo-Hercules Fire Protection District on a proposal to provide administrative oversight to both agencies. Details of the proposal were discussed at a June meeting, and the agencies' ad-hoc committees reported back to their governing bodies. Both the Rodeo-Hercules Fire Board of Directors and the Pinole City Council voted in favor of continuing to negotiate the details of the proposed contract.
- District negotiations to purchase a fire boat from the Tiburon Fire Protection District did not reach fruition. During the inspection process, significant corrosion was detected in both hulls. Negotiations were terminated when the purchasing committee concluded that the corrosion in the hulls could cause future maintenance issues. The funds that were allocated for the purchase of the boat in fiscal year 2015-16 were reserved. After the committee identifies a suitable boat for purchase, the District will request that the Board approve a budget appropriation in fiscal year 2016-17. The District is fortunate that the East Contra Costa Fire Protection District fireboat remains available for our use.
- Fire Station 16 in Lafayette continues to progress. District and City staff have met and finalized the design concepts, and the application for environmental review has been filed. The environmental process will take approximately five months during which time the architect will complete the drawings and construction documents.
- Fire Station 70 in San Pablo is a few months behind Fire Station 16 in the design process. The architect is working on the conceptual design and attempting to determine if a single-story building will be sufficient as opposed to a two-story building. The District is working with the City on design concepts to determine egress routes and other important matters.

- Wildland fire season is here! While the rainfall we received last winter did improve our drought situation, there has been little to no improvement in fire behavior. The fires we have experienced thus far appear similar to late season fires, spreading very quickly and “spotting” ahead of the fire. Our fire prevention staff are ensuring that excess fuels are removed from land and around structures. Furthermore, we are requesting that the public exercise maximum caution when handling items that can start fires such as smoking materials, welding equipment, and lawn mowers.
- On June 25 and July 3, the District and the County experienced a significant drawdown of fire resources as a result of multiple incidents occurring over a short period of time. For example (see graphic), on June 25, over a period of 73 minutes, the District experienced seven significant incidents that required more than 41 District companies of firefighters and 11 chief officers to mitigate. It is important to note that our District currently operates with 25 fire companies. Several companies went directly from one incident to another in order to successfully resolve the incidents. In addition to District companies, all fire agencies in the County (and some from outside) provided assistance through our mutual and automatic aid agreements. This assistance included response to the scene, support vehicles, and station coverage. Additionally, our ambulance transport division handled many medical incidents without the assistance they would normally receive from our firefighters. On the evening of July 3, there were circumstances similar to those of June 25. I have chosen to bring these events to your attention for two reasons:
  1. As our governing body, it is important for you to know that the types of events we are experiencing include those where our resources are drawn down to the point that services are delayed and calls may go unanswered for a period of time.
  2. Despite scarce resources, District personnel are managing to handle these incidents. On the dates noted above, for example, many of our personnel went directly from one fire to another, and even on to a third incident, without getting any rest between calls. Additionally, our communication center staff are processing multiple incidents at an incredible pace.
- The communication center has been in transition for the last several months in order to fully assume responsibility for the dispatch of ambulance transport resources. The final step of this transition, implemented on June 28, fully eliminates call transfer time. We anticipate that response times could improve by as much as 30 seconds. The full extent of the improvement will not be known until we have operated under the new system for at least 90 days. In October, we will report back to the board on our performance.
- I am pleased to announce that Engine 6 in Concord has been officially re-opened! Fire Station 6 is one of our busiest fire houses, running approximately 20 incidents per day. Previously, Fire Station 6 housed two companies which consisted of a ladder truck and a fire engine, each with three personnel. During the recession, the

engine company was closed, and the truck company was required to respond to all incidents occurring in the District. Because of the high number of incidents, surrounding companies were required daily to respond to many of those calls. In 2014, the District was able to open a two-person EMS squad at Fire Station 6 which, to some extent, addressed the workload issues. Last year, the Board allowed the District to temporarily staff Engine 6 during most of the fire season. The corresponding data indicated that the second company was effective in relieving not only the high workload at Station 6 but also that of the surrounding companies. The Fire District is pleased to be able to open this company permanently as it will result in better service to our citizens and promote a safer working environment for our personnel.

- Preparations for Academy 50 continue to move forward. Currently, we have 17 candidates participating in the hiring process which includes a background investigation and fitness for duty psychological and medical screening. Academy 50 is scheduled to begin on October 3 and graduate in early 2017.