



**RANCHO SANTA FE FIRE PROTECTION DISTRICT  
BOARD OF DIRECTORS MEETING  
AGENDA**

Rancho Santa Fe FPD  
Board Room – 18027 Calle Ambiente, Ste. 101  
Rancho Santa Fe, California 92067

March 19, 2025  
1:00 pm PT  
Regular Meeting

**Public Comment:** To submit a comment in writing, please email [Montagne@rsf-fire.org](mailto:Montagne@rsf-fire.org) and write “Public Comment” in the subject line. In the body of the email include the item number and/or title of the item as well as your comments. If you would like the comment to be read aloud at the meeting (not to exceed five minutes), please write “Read Out Loud at Meeting” at the top of the email. All comments received by 11:00 am will be emailed to the Board of Directors and included as “Supplemental Information” on the district’s website prior to the meeting. Any comments received after 11:00 am will be added to the record and shared with the members of the Board at the meeting.

**Public Virtual Option Information:** To join virtually via Microsoft Teams, click the link below:  
[Join the meeting now](#)

Meeting ID: 238 896 055 773; Passcode: i5AQ7U

Dial in by phone: +1 872-215-6310; Phone Conference ID: 966314063#

**Americans with Disabilities Act:** If you need special assistance to participate in this meeting, please contact the Board Clerk 858-756-5971 ext. 1014. Notification 48 hours prior to the meeting will enable the district to make reasonable arrangements to assure accessibility to the meeting.

**Rules for Addressing the Board of Directors:** Members of the audience who wish to address the Board of Directors are requested to complete a form near the entrance of the meeting room and submit it to the Board Clerk. Any person may address the Board on any item of Board business or Board concern. The Board cannot act on any matter presented during the Public Comment but can refer it to staff for review and possible discussion at a future meeting. As permitted by State Law, the Board may act on matters of an urgent nature, or which require immediate attention. The time allotted for each presentation is subject to the discretion of the board and based on the number of intended speakers. Each audience member will be allotted an equal amount of time.

**Agendas:** Agenda packets are available for public inspection 72 hours prior to scheduled meetings at the Board Clerk’s office located at 18027 Calle Ambiente, Suite 101, Rancho Santa Fe, CA during normal business hours. Packet documents are also posted online at [www.rsf-fire.org](http://www.rsf-fire.org).



# Rancho Santa Fe Fire Protection District Board of Directors

## Regular Meeting

March 19, 2025

1. Call to Order
2. Pledge of Allegiance
3. AB 2449 Approve Director's Request
  - If a request is submitted, consider approval of the Director's request to participate remotely and utilize Just Cause or Emergency Circumstance per AB 2449
4. Determination of a Quorum/Roll Call
5. Approval of Agenda
6. Public Comment

This portion of the agenda may be utilized by any person to address the Board of Directors on any matter within their jurisdiction. However, depending on the subject matter, the Board may be unable to respond at this time or until the specific item is placed on the agenda at a future meeting, as provided by The Brown Act. Comment time will be set based on the number of intended commentors.
7. Motion waiving reading in full of all Resolutions/Ordinances

All items listed on the Consent Calendar are considered routine and will be enacted by one motion without discussion unless Board Members, Staff, or the public requests removal of an item for separate discussion and action. The Board of Directors has the option of considering items removed from the Consent Calendar immediately or under Unfinished Business.

8. Consent Calendar
    - a. Board of Directors Minutes
      - Minutes of February 19, 2025  
ACTION REQUESTED: **Approve**
    - b. Receive and File
      - Monthly/Quarterly Reports for February 2025
        - (1) List of Demands: Checks 38584 through 38665 and Electronic Funds Transfers (EFTs)

totaling:	\$ 793,530.26
Payroll(s) totaling:	\$ <u>972,129.67</u>
TOTAL DISTRIBUTION	\$ 1,765,659.93
        - (2) Grant Recap
        - (3) Division Reports – February 2025
          - (a) Operations
          - (b) Training
          - (c) Fire Prevention
- ACTION REQUESTED: **Receive and File**



# Rancho Santa Fe Fire Protection District Board of Directors Regular Meeting

March 19, 2025

## 9. Correspondence

- a. SMW Letter to Fire District  
E-mail received 2/27/2025 at 3:38 p.m.  
ACTION REQUESTED: **Information Only**

## 10. New Business

- a. RSF Fire Station 4 Shift Duty Battalion Chiefs  
Relocation of Shift Duty Battalion Chiefs. [Staff Report 25-02](#)  
ACTION REQUESTED: **Information Only**
- b. Additional Lease Space to NCDJPA  
Requesting approval to lease additional office space at RSF Fire Station 1 to NCDJPA. [Staff Report 25-03](#)  
ACTION REQUESTED: **Approve**

## 11. Oral Reports

- i. Fire Chief
- ii. Operations
- iii. Training
- iv. Fire Prevention
- v. Finance
- vi. Board of Directors
  - North County Dispatch JPA
  - County Service Area – 17
  - Rancho Santa Fe Fire District Foundation
  - Director Comments

## 12. Adjournment

The next regular Board of Directors meeting to be held on April 16, 2025, in the Board Room located at 18027 Calle Ambiente, Rancho Santa Fe, California. The business meeting will commence at 1:00 p.m.

## CERTIFICATION OF POSTING

I certify that on March 14, 2025, a copy of the foregoing agenda was posted on the district's website and near the meeting place of the Board of Directors of Rancho Santa Fe Fire Protection District, said time being at least 72 hours in advance of the meeting of the Board of Directors (Government Code Section 54954.2)

Executed at Rancho Santa Fe, California on March 14, 2025:

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Sarah Montagne  
Board Clerk

Rancho Santa Fe Fire Protection District  
Regular Board of Directors Meeting  
Minutes February 19, 2025



*These minutes reflect the order in which items appeared on the meeting agenda and do not necessarily reflect the order in which items were considered.*

Director Ashcraft called to order the regular session of the Rancho Santa Fe Fire Protection District Board of Directors at 1:00pm.

**Determination of a Quorum**

Quorum confirmed.

**Roll Call**

Directors Present: Ashcraft, Barnard, Hillgren, Stine, Tanner

Directors Absent: None

Staff Present: Fire Chief Dave McQuead; Deputy Chief Jim Mickelson; Training Chief Greg O’Gorman; Fire Marshal Marlene Donner; Finance Manager Burgen Havens; Executive Assistant/Board Clerk Sarah Montagne; Battalion Chief Luke Bennett; Firefighter/Paramedic Corbin Martinez

RSF Fire District Foundation: Retired Fire Chief Frank Twohy

**Pledge of Allegiance**

Fire Marshal Marlene Donner led the assembly in the Pledge of Allegiance.

**AB 2449 Approve Director’s Request**

No request was made.

**Approval of Agenda**

MOTION BY DIRECTOR TANNER, SECOND BY DIRECTOR HILLGREN, and CARRIED 5 AYES; 0 NOES; 0 ABSENT; 0 ABSTAIN to approve agenda as submitted.

1. **Public Comment**

No public comment was made.

2. **Motion waiving reading in full of all Resolutions/Ordinances**

MOTION BY DIRECTOR STINE, SECOND BY DIRECTOR HILLGREN, and CARRIED 5 AYES; 0 NOES; 0 ABSENT; 0 ABSTAIN to waive reading in full of all resolutions and/or ordinances.

3. **Consent Calendar**

MOTION BY DIRECTOR STINE, SECOND BY DIRECTOR HILLGREN, and CARRIED 5 AYES; 0 NOES; 0 ABSENT; 0 ABSTAIN to approve the consent calendar as submitted.

4. **Correspondence**

No correspondence filed.

Rancho Santa Fe Fire Protection District  
Regular Board of Directors Meeting  
Minutes February 19, 2025



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5. **Ordinances/Resolutions**

a. **Resolution 2025-01**

Board requested additional follow up information on security measures be provided at the March Board meeting.

MOTION BY DIRECTOR STINE, SECOND BY DIRECTOR HILLGREN, and CARRIED 5 AYES; 0 NOES; 0 ABSENT; 0 ABSTAIN to adopt a Resolution of the Board of Directors of the Rancho Santa Fe Fire Protection District Authorizing Signers on District Bank Accounts.

6. **New Business**

a. Paul Kaymark, Auditor with Nigro & Nigro, reported on the financial status of the Fire District for FY24 and presented results from the year-end audit.

MOTION BY DIRECTOR TANNER, SECOND BY DIRECTOR STINE, and CARRIED 5 AYES; 0 NOES; 0 ABSENT; 0 ABSTAIN to accept audit as presented.

7. **Adjournment**

*Meeting adjourned at 2:48pm*

*The next regular Board of Directors meeting is to be held on March 19, 2025, in the Board Room located at 18027 Calle Ambiente, Rancho Santa Fe, California. The business meeting will commence at 1:00 p.m.*

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Sarah Montagne  
Board Clerk

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James H. Ashcraft  
President

Report Criteria:

Report type: Invoice detail

Check.Type = {<->} "Adjustment"

Check Issue Date	Check Number	Payee	Amount	Invoice GL Account Title
02/07/2025	38584	Accme Janitorial Service Inc	740.00	BUILDING: ADMIN
02/07/2025	38585	All Star Fire Equipment INC.	33,058.78	PPE
02/07/2025	38586	AT&T Calnet 2/3	31.53	UTILITIES: RSF1
02/07/2025	38586	AT&T Calnet 2/3	31.53	UTILITIES: RSF1
02/07/2025	38586	AT&T Calnet 2/3	78.58	UTILITIES: RSF3
02/07/2025	38586	AT&T Calnet 2/3	93.05	UTILITIES: RSF1
02/07/2025	38586	AT&T Calnet 2/3	157.26	UTILITIES: ADMIN
02/07/2025	38586	AT&T Calnet 2/3	35.59	UTILITIES: RSF3
02/07/2025	38586	AT&T Calnet 2/3	60.28	UTILITIES: ADMIN
02/07/2025	38587	Charter Communications Holdings LLC (Sp	1,232.39	UTILITIES: ADMIN
02/07/2025	38587	Charter Communications Holdings LLC (Sp	48.62	UTILITIES: RSF4
02/07/2025	38588	Cielo Village Partners LP	3,200.00	BUILDING: ADMIN
02/07/2025	38589	Cox Communications	617.40	UTILITIES: RSF5
02/07/2025	38590	Direct Energy Business-Dallas	2,253.96	UTILITIES: RSF1
02/07/2025	38591	EDCO Waste & Recycling Inc	252.25	UTILITIES: RSF5
02/07/2025	38591	EDCO Waste & Recycling Inc	139.14	UTILITIES: RSF6
02/07/2025	38591	EDCO Waste & Recycling Inc	221.46	UTILITIES: RSF6
02/07/2025	38592	Erik M. & Christina M Bessel DBA Spot On	783.00	UNIFORMS
02/07/2025	38593	Genuine Parts Company, Inc.	107.64	FUEL/PROPANE
02/07/2025	38594	Griffin Ace Hardware Co.	47.39	FUEL/PROPANE
02/07/2025	38594	Griffin Ace Hardware Co.	83.90	STATION SUPPLIES
02/07/2025	38595	HGW Architecture	1,056.00	PROFESSIONAL SERVICES-MISC
02/07/2025	38596	Integrity Data	258.00	MEMBERSHIPS & SUBSCRIPTIONS
02/07/2025	38597	L N Curtis & Sons Inc	1,025.00	APPARATUS TOOLS
02/07/2025	38597	L N Curtis & Sons Inc	3,491.59	PPE
02/07/2025	38598	MES California	6,467.24	SCBA EQUIPMENT
02/07/2025	38599	North County EVS Inc	808.75	APPARATUS: REPAIR
02/07/2025	38599	North County EVS Inc	7,224.37	APPARATUS: REPAIR
02/07/2025	38600	Olivenhain Municipal Water District	225.99	UTILITIES: RSF3
02/07/2025	38601	Pocket Nurse Enterprises LLC	1,248.65	CSA-17 CONTRACT
02/07/2025	38602	Race Telecommunications INC	179.50	UTILITIES: RSF1
02/07/2025	38603	Rincon Del Diablo Municipal Water Distri	200.29	UTILITIES: RSF5
02/07/2025	38603	Rincon Del Diablo Municipal Water Distri	482.83	UTILITIES: RSF5
02/07/2025	38604	Robert Half International	1,160.00	TEMPORARY STAFF EXPENSE
02/07/2025	38605	RSF Mail Delivery Solutions	150.00	OFFICE EXPENSES
02/07/2025	38606	SC Commercial LLC	2,568.93	FUEL/PROPANE
02/07/2025	38607	Streamline	497.00	WEBSITE
02/07/2025	38608	U.S. Bank Corporate Payment Systems	20,734.46	CAL-CARD PROGRAM
02/07/2025	38609	Verizon Wireless	245.77	CSA-17 CONTRACT
02/07/2025	38610	Waste Management Inc	559.74	UTILITIES: RSF1
02/07/2025	38610	Waste Management Inc	341.32	UTILITIES: RSF4
02/07/2025	38610	Waste Management Inc	341.32	UTILITIES: RSF3
02/07/2025	38610	Waste Management Inc	550.12	UTILITIES: RSF2
02/13/2025	38611	AT&T Calnet 2/3	108.31	UTILITIES: RSF6
02/13/2025	38611	AT&T Calnet 2/3	2,689.11	UTILITIES: RSF4
02/13/2025	38611	AT&T Calnet 2/3	2,669.46	UTILITIES: RSF6
02/13/2025	38611	AT&T Calnet 2/3	90.30	UTILITIES: RSF2
02/13/2025	38611	AT&T Calnet 2/3	150.27	UTILITIES: RSF4
02/13/2025	38611	AT&T Calnet 2/3	218.53	UTILITIES: ADMIN
02/13/2025	38611	AT&T Calnet 2/3	19.73	UTILITIES: ADMIN
02/13/2025	38612	City Treasurer	12.00	ADMINISTRATION FEES
02/13/2025	38613	County of San Diego	3,035.00	PROFESSIONAL SERVICES-MISC
02/13/2025	38614	Day Wireless Systems Inc	3,844.35	RADIOS
02/13/2025	38614	Day Wireless Systems Inc	12.54	RADIOS

Check Issue Date	Check Number	Payee	Amount	Invoice GL Account Title
02/13/2025	38615	DreamSeats, LLC	7,079.18	STATION SUPPLIES
02/13/2025	38616	E7 Systems LLC	500.00	CONSULTING SVCS - PREVENTI
02/13/2025	38617	Fitch Law Firm Inc	540.00	LEGAL SERVICES
02/13/2025	38618	Global Door & Gate Inc.	368.75	BUILDING: RSF6
02/13/2025	38619	Government Finance Officers Association	160.00	MEMBERSHIPS & SUBSCRIPTIONS
02/13/2025	38620	Griffin Ace Hardware Co.	35.79	BUILDING: RSF2
02/13/2025	38620	Griffin Ace Hardware Co.	51.17	BUILDING: RSF2
02/13/2025	38621	Henley Pacific LA LLC (Valvoline)	140.78	APPARATUS: SCHEDULED
02/13/2025	38622	Home Depot INC	2,041.20	BUILDING: RSF5
02/13/2025	38623	Jauregui & Culver Inc	1,415.00	FUEL FACILITY MAINTENANCE
02/13/2025	38624	Konica Minolta Business Inc	126.73	COPIER MAINTENANCE CONTRACT
02/13/2025	38625	L N Curtis & Sons Inc	-624.95	PPE
02/13/2025	38625	L N Curtis & Sons Inc	601.07	PPE
02/13/2025	38625	L N Curtis & Sons Inc	88.61	PPE
02/13/2025	38626	R.E. Badger & Son INC.	400.00	BUILDING: RSF6
02/13/2025	38627	Robert Half International	1,200.00	TEMPORARY STAFF EXPENSE
02/13/2025	38628	Santa Fe Irrigation District	230.76	UTILITIES: RSF1
02/13/2025	38628	Santa Fe Irrigation District	303.62	UTILITIES: RSF1
02/13/2025	38629	SC Commercial LLC	993.36	FUEL/PROPANE
02/13/2025	38629	SC Commercial LLC	1,434.22	FUEL/PROPANE
02/13/2025	38630	SDG&E	996.21	UTILITIES: RSF5
02/13/2025	38630	SDG&E	1,198.73	UTILITIES: RSF6
02/13/2025	38631	Veck Building Group	203,060.00	GRANT EXPENSES
02/21/2025	38632	All Star Fire Equipment INC.	3,893.39	PPE
02/21/2025	38633	AT&T	69.55	UTILITIES: RSF6
02/21/2025	38634	California Paramedic Foundation	158.39	CSA-17 CONTRACT
02/21/2025	38635	California PPE Recon Inc	799.96	PPE
02/21/2025	38636	Caselle INC.	1,389.00	COMPUTERS & PRINTERS
02/21/2025	38637	Compressed Air Specialties Inc	58.59	SCBA EQUIPMENT
02/21/2025	38638	County of SD/RCS	72.50	800 MHz NETWORK FEES
02/21/2025	38638	County of SD/RCS	3,333.50	800 MHz NETWORK FEES
02/21/2025	38639	Erik M. & Christina M Bessel DBA Spot On	1,066.73	UNIFORMS
02/21/2025	38640	First Alarm Wellness	450.00	PHYSICALS & WELLNESS PROGRAM
02/21/2025	38641	Life-Assist Inc	298.49	CSA-17 CONTRACT
02/21/2025	38642	SC Commercial LLC	1,611.33	FUEL/PROPANE
02/21/2025	38643	SDG&E	362.47	UTILITIES: ADMIN
02/21/2025	38643	SDG&E	1,460.97	UTILITIES: RSF3
02/21/2025	38643	SDG&E	4,021.81	UTILITIES: RSF1
02/21/2025	38643	SDG&E	2,929.32	UTILITIES: RSF4
02/21/2025	38644	ZOLL Medical Corporation	101.29	CSA-17 CONTRACT
02/28/2025	38645	Across the Street Productions	385.00	TRAINING: SUPPRESSION
02/28/2025	38646	AT&T	239.29	UTILITIES: RSF5
02/28/2025	38646	AT&T	79.80	UTILITIES: RSF2
02/28/2025	38646	AT&T	71.70	UTILITIES: RSF1
02/28/2025	38646	AT&T	68.09	UTILITIES: RSF3
02/28/2025	38647	C.A.P.F.	1,770.00	DISABILITY INSURANCE
02/28/2025	38648	Calolympic Safety Inc	582.28	APPARATUS TOOLS
02/28/2025	38649	Charter Communications Holdings LLC (Sp	275.76	UTILITIES: ADMIN
02/28/2025	38650	Duthie Electric Svc Corp	1,027.95	GENERATORS
02/28/2025	38651	Fader Electric	285.00	BUILDING: RSF3
02/28/2025	38651	Fader Electric	250.00	BUILDING: RSF5
02/28/2025	38651	Fader Electric	425.00	BUILDING: RSF6
02/28/2025	38652	Griffin Ace Hardware Co.	152.45	STATION SUPPLIES
02/28/2025	38653	Guardian Life Insurance Co	6,399.12	DENTAL MARCH 2025
02/28/2025	38654	K & M Pest Solutions	546.00	BUILDING: ADMIN
02/28/2025	38655	L N Curtis & Sons Inc	623.80	PPE
02/28/2025	38655	L N Curtis & Sons Inc	1,718.88	PPE
02/28/2025	38655	L N Curtis & Sons Inc	-251.87	PPE

Check Issue Date	Check Number	Payee	Amount	Invoice GL Account Title
02/28/2025	38656	Laerdal Medical Corp.	39,381.32	CSA-17 CONTRACT
02/28/2025	38656	Laerdal Medical Corp.	-1,286.41	CSA-17 CONTRACT
02/28/2025	38656	Laerdal Medical Corp.	-12,223.18	CSA-17 CONTRACT
02/28/2025	38656	Laerdal Medical Corp.	-67.91	CSA-17 CONTRACT
02/28/2025	38657	Lincoln National Life Ins Co	390.74	LIFE INSURANCE
02/28/2025	38657	Lincoln National Life Ins Co	498.48	LIFE INSURANCE
02/28/2025	38658	North County EVS Inc	6,262.36	APPARATUS: SCHEDULED
02/28/2025	38658	North County EVS Inc	4,191.68	APPARATUS: REPAIR
02/28/2025	38658	North County EVS Inc	239.84	APPARATUS: REPAIR
02/28/2025	38658	North County EVS Inc	1,077.05	APPARATUS: REPAIR
02/28/2025	38658	North County EVS Inc	988.85	APPARATUS: REPAIR
02/28/2025	38658	North County EVS Inc	439.12	APPARATUS: REPAIR
02/28/2025	38659	Olivenhain Municipal Water District	203.37	UTILITIES: RSF6
02/28/2025	38660	Robert Half International	910.00	TEMPORARY STAFF EXPENSE
02/28/2025	38660	Robert Half International	780.00	TEMPORARY STAFF EXPENSE
02/28/2025	38661	RSF Security Inc	50.00	UTILITIES: RSF5
02/28/2025	38662	SC Commercial LLC	3,424.55	FUEL/PROPANE
02/28/2025	38662	SC Commercial LLC	1,007.04	FUEL/PROPANE
02/28/2025	38662	SC Commercial LLC	833.40	FUEL/PROPANE
02/28/2025	38662	SC Commercial LLC	1,064.91	FUEL/PROPANE
02/28/2025	38662	SC Commercial LLC	2,156.12	FUEL/PROPANE
02/28/2025	38663	SDG&E	1,111.60	UTILITIES: ADMIN
02/28/2025	38663	SDG&E	2,796.13	UTILITIES: RSF2
02/28/2025	38663	SDG&E	201.67	UTILITIES: ADMIN
02/28/2025	38663	SDG&E	1,696.13	UTILITIES: RSF5
02/28/2025	38664	Shred it Stericycle	147.44	OFFICE EXPENSES
02/28/2025	38665	State Fire Training	100.00	TRAINING: SUPPRESSION
02/28/2025	38665	State Fire Training	100.00	TRAINING: SUPPRESSION
02/07/2025	25020701	Sean Johnson	850.00	TRAINING: SUPPRESSION
02/07/2025	25020702	Michael Schieber	250.00	CSA-17 CONTRACT
02/07/2025	25020703	Michael Hernandez	250.00	CSA-17 CONTRACT
02/13/2025	25021301	Mitchell Grant	1,128.00	TRAINING: SUPPRESSION
02/28/2025	25022802	CalPERS - Health	111,373.61	MARCH HEALTH
02/28/2025	25022802	CalPERS - Health	5,730.69	MARCH DIRECTOR HEALTH
02/28/2025	25022803	CalPERS	251,568.67	JANUARY PERS RETIREMENT
02/28/2025	25022804	Kyle Carranza	250.00	CSA-17 CONTRACT
02/28/2025	25022805	Brian Schmid	250.00	CSA-17 CONTRACT
02/28/2025	25022806	Sean Johnson	399.00	TRAINING: SUPPRESSION
Grand Totals:			793,530.26	

2/15/2025	\$622,129.67	RSF Fire Payroll
2/28/2025	\$350,000.00	RSF Fire Payroll
<b>Total</b>	<b>\$972,129.67</b>	

**Grand Total: \$1,765,659.93**



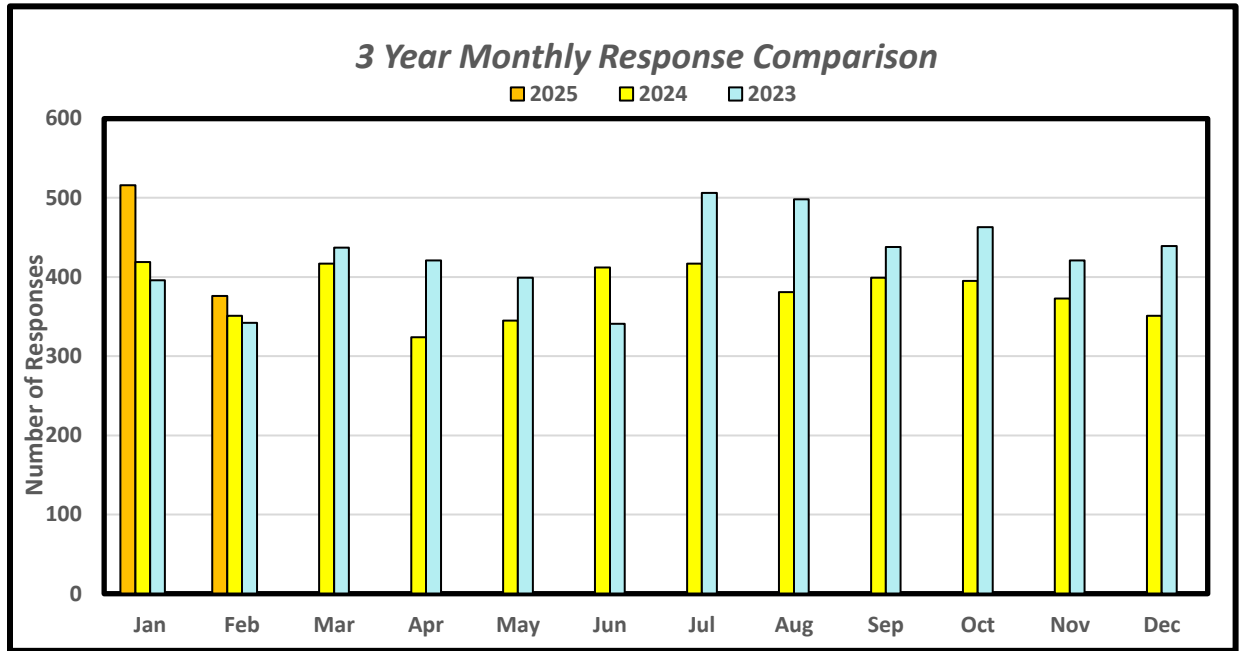
# RSF Grant Re-Cap February 2025

Status	Date Submitted	Agency/Grantor Name	Description / Items Requested	Amount Requested	Total Received	Notes:
ACTIVE	9/30/2021	FEMA	Covid Forced Labor OT	\$ 93,084.25		RFI completed 8/2022. Under eligibility review.
ACTIVE	9/7/2021	UASI FY19	Rescue Systems 1	\$ 7,705.26		Audit Feedback recieved, working on correcting issues
ACTIVE		UASI FY21	Fresno Symposium & Rescue Systems 1	\$ 20,655.00		Submitted for Reimbursement
ACTIVE		UASI FY22	Fresno Symposium	\$ 15,000.00		Not seeking Reimbursement-No Symposium in FY22
ACTIVE	9/29/2022	UASI FY23	Training Courses	\$ 89,098.86		Approved 05/16/2024, Approved amount lowered to \$52,645.00
ACTIVE	9/26/2023	UASI FY24	Fresno Symposium & Training Courses	\$ 63,620.00		Application Submitted
ACTIVE	9/12/2024	UASI FY25	Fresno Symposium & Training Courses	\$ 15,000.00		Application Submitted
						Elfin Forest/Harmony Grove Clean Up; Collaborating w/UrbanCorp, San Marcos Fire and Escondido Fire; 3 year grant - 1/2023-12/2025; Financials going through UrbanCorp. Work expected to be completed by end of February 2024.
ACTIVE	8/1/2022	Coastal Conservancy	Escondido Creek/San Marcos Defensible Space/Roadway Clearance	\$ 325,864.00		Submitted for Reimbursement
ACTIVE		SHSGP FY23	2 Radios, MacBooks	\$ 17,080.00		Application updated, amount reduced per County.
ACTIVE		SHSGP FY24	Multigas Monitors	\$ 12,655.00		Application Submitted
ACTIVE	12/15/2024	AFG FY25 (Assistance to Firefighters Grant)	Self Contained Breathing Apparatus	\$ 596,000.00		Application Submitted
ACTIVE	2/1/2025	California Office of Traffic Safety	Advanced auto extrication training	\$ 14,218.00		Application Submitted
CLOSED		SHSGP FY22	4 Radios	\$ 20,338.00	\$20,338.00	Completed-Check received
CLOSED	4/17/2024	SHSGP FY21	4 Radios	\$ 22,904.00	\$ 22,904.00	Completed-Check Recieved
CLOSED	5/15/2023	SD Regional Fire Foundation (County Supervisor Terra Lawson-Remer)	70 Wildland Brush Jackets	\$ 7,380.00		Approved. Jackets received from Fire ETC.
		RSF Fire Protection District General Fund	70 Wildland Brush Jackets	\$ 9,286.97		
CLOSED	5/15/2023	SD Regional Fire Foundation	E-Hydraulic Extrication Tools	\$ 5,000.00		Approved. Tools received from LN Curtis.
		County Supervisor Terra Lawson-Remer	E-Hydraulic Extrication Tools	\$ 20,000.00		
		RSF Fire Protection District General Fund	E-Hydraulic Extrication Tools	\$ 20,000.00		
CLOSED	1/30/2021	OTS	Struts, Airbags, Circ. Saw (Extrication)	\$ 15,181.23	\$ 15,181.23	Check received; Final Quarterly report provided to OTS. Process is officially closed.
CLOSED	6/1/2022	SD Regional Fire Foundation	Mental Health Program Support	\$ 3,000.00	\$ 3,000.00	Check received. Presentation given at prior Board Meeting. Process is officially closed.
CLOSED	3/11/2021	DEPT OF THE TREASURY (ARPA)	COVID-19 Recovery Funds	\$ 329,000.00	\$ 329,000.00	5/12: All documentation submitted to County & approved; Check received. Process is officially closed.
CLOSED	4/21/2023	RSF Association	Firefighter of the Year Award	\$ 750.00	\$ 750.00	Scott Schieber accepted. Process is officially closed.
CLOSED	10/15/2021	CSDA (CA Special Districts)	COVID-19; Staffing and Supplies	\$ 6,163,371.00	\$ 1,154,981.00	Check received. Audit complete.
CLOSED	7/6/2022	UASI FY20	Training; L-954 Course	\$ 15,196.00	\$15,196.00	Approved 04/08/2022. Check Received 9/2023. Check received. Utilizing funds for Via Ambiente Roadway Clearance; Work completed and payment received.
CLOSED	5/12/2020	FEMA	Vegetation Management	\$ 18,000.00	\$ 17,000.00	
<b>RSF Fire District Foundation</b>						
	12/7/2021	RSF Foundation	Forcible Entry	\$ 8,905.00	\$ 8,905.00	(1) Multi-Force Door (Forcible Entry Door Simulator). 50/50 split with the District for pendants, cell guards for Staff and harmonizers for each facility.
	9/21/2021	RSF Foundation	GIA Wellness	\$ 8,537.50	\$ 8,537.50	10 UVC LED Disinfecting Air Purifiers.
	8/19/2021	RSF Foundation	UVC Air Disinfecting	\$ 1,000.00	\$ 1,000.00	Completed.
	8/19/2022	RSF Foundation (Sharon McDonald)	E-Hydraulic Extrication Tools	\$ 45,000.00	\$ 45,000.00	Approved.
	2/22/2023	RSF Foundation	Station 6 Improvements	\$ 203,000.00	\$ 203,000.00	Approved. Items in Service.
	4/1/2023	RSF Foundation (Sharon McDonald)	UTV/Radios	\$ 196,337.00	\$196,337.00	Approved. Items delivered.
	6/16/2023	RSF Foundation	RSF3 Barbecue	\$ 1,000.00	\$1,000.00	Approved. Item delivered. Ongoing purchases procured as needed for Drone program.
	9/1/2023	RSF Foundation (Sharon McDonald)	Drone Program	\$ 50,000.00	\$50,000.00	Items delivered. Staff Report.
	11/27/2023	RSF Foundation (Sharon McDonald)	TICs	\$ 25,000.00	\$25,000.00	Approved. Items received.
	12/18/2023	RSF Foundation	Blackstone Griddle - RSF1	\$ 399.00	\$399.00	Approved. Item received and installed
	5/3/2024	RSF Foundation	Specialized turf	\$ 21,849.00	\$ 21,849.00	Approved. Items recieved and installed
	5/3/2024	RSF Foundation	5-Decontamination units	\$ 16,501.00	\$ 16,501.00	Approved. Items recieved and installed
	5/3/2024	RSF Foundation	RSF6 Parking lot improvement	\$ 29,551.90	\$ 29,551.90	Approved 50/50 Split with the district for Asphalt work
	5/3/2024	RSF Foundation	RSF2 Training Burn Prop Containers	\$ 12,000.00	\$ 12,000.00	Approved. Containers Installed
	5/3/2024	RSF Foundation	RSF6-50 Staking chairs for Community room	\$ 2,498.83	\$ 2,498.83	Approved
	1/15/2025	RSF Foundation	57 Columbia Down Jackets	\$ 6,831.00	\$6,831.00	Approved

Change since previous re-cap

# Rancho Santa Fe Fire Protection District Operations Report

## February 2025



### 3 Year Call Volume Tracker:

2025		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD Responses
	Responses	516	376											
YTD	516	892	892	892	892	892	892	892	892	892	892	892	892	
2024		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD Responses
	Responses	419	351	417	324	345	412	417	381	399	395	373	351	4,584
YTD	419	770	1187	1511	1856	2268	2685	3066	3465	3860	4233	4584		
2023		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD Responses
	Responses	396	342	437	421	399	341	506	498	438	463	421	439	5,101
YTD	396	738	1175	1596	1995	2336	2842	3340	3778	4241	4662	5101		

### Significant Incidents

Date:	Incident:	Units Assigned:
2/1/2025	Trail Rescue - Caminito Pacifica	B264, E263, E238, San Diego Units

# Rancho Santa Fe Fire Protection District Operations Report

## February 2025

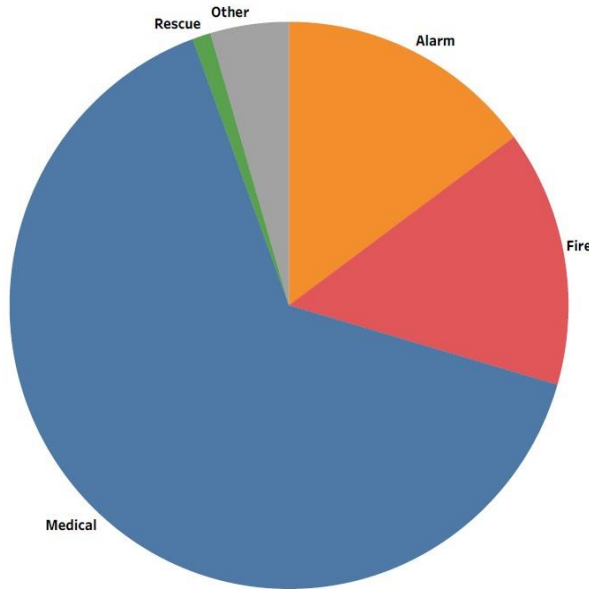
### Monthly Incidents

Assigned Incidents for RANCHO SANTA FE FPD  
February 2025

Agency  
RANCHO SANTA FE FPD

Month  
February 2025 to February 2025

Alarm	56 incidents / 14.89%
Fire	55 incidents / 14.63%
Medical	244 incidents / 64.89%
Rescue	4 incidents / 1.06%
Other	17 incidents / 4.52%
<b>Grand Total</b>	<b>376 incidents / 100.00%</b>

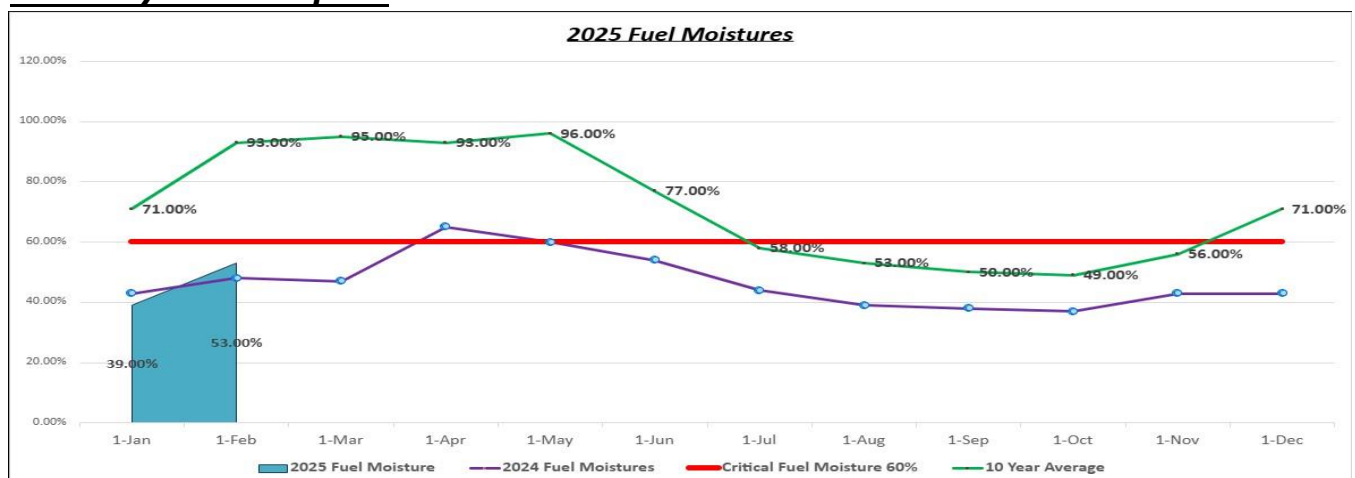


Problem Category

- Alarm
- Fire
- Medical
- Rescue
- Other

Data Source: AgencyDashboard\_v3\_Extract\_v4  
Data Last Updated: 3/3/2025 7:56:40 PM

### Monthly Fuels Report

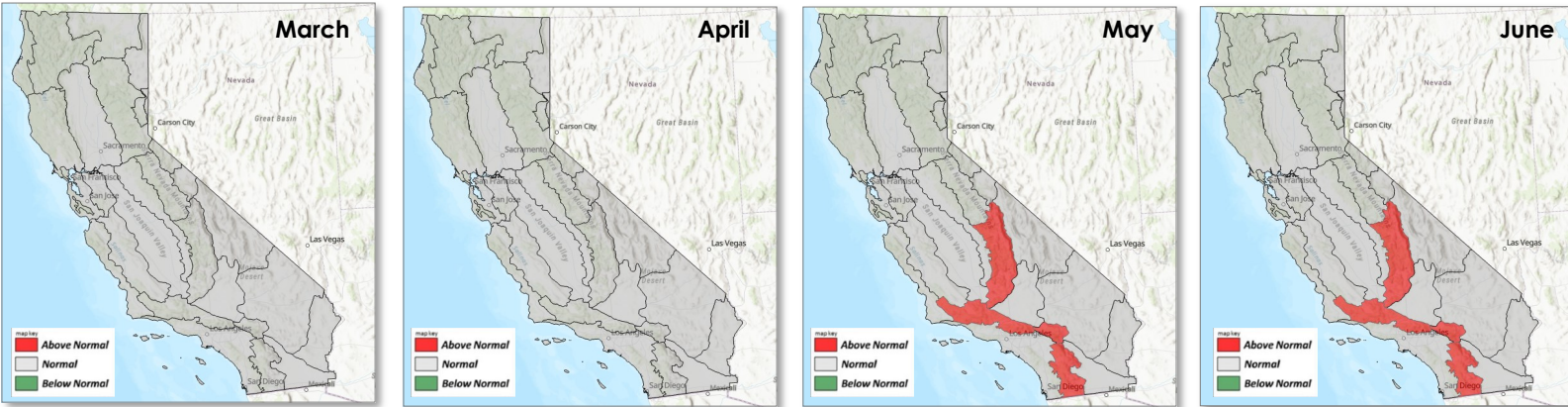


# WFTIIC Four Month Outlook



Visit WFTIIC Hub @ <https://wftiic.ca.gov> for more information | Created: March 3, 2025

## Significant Fire Potential | March - June 2025



### Northern Operations | [Click Here for Source](#)

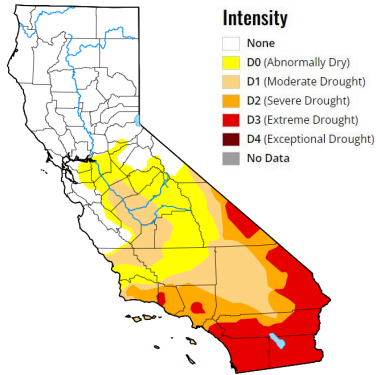
- Significant Fire Potential is projected to be normal from March through June. June historically represents the month when large fire activity increases.
- Active jet stream periods creating cool/moist weather are expected during most of March.
- April is expected to be the transition month with timely moisture intrusions and near to above normal precipitation while May and June trend warmer and drier than normal.
- Extended flammable fuel alignments - in terms of cured grasses and critically dry dead fuels, will be possible across the lowlands during June. However, confidence is not high enough at this time to warrant an above normal outlook.

### Southern Operations | [Click Here for Source](#)

- The odds indicate a slight likelihood towards near-normal large fire potential for March and April 2025.
- The odds indicate a slight to moderate likelihood for above normal large fire potential for the Western Mountains, Eastern Mountains, Southern Mountains, and Southern Sierra Predictive Service Areas (PSAs).
- There is a higher probability of large fires in timber dominated fuel types and a lower probability in grass dominated fuel types due to the lower grass crop yield from the lack of rain this winter.

## Drought Monitor

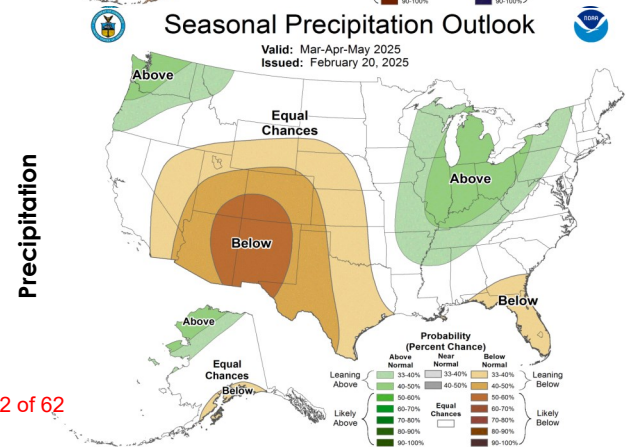
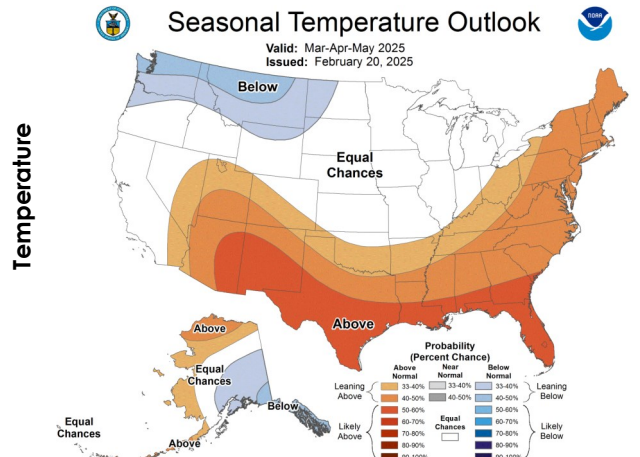
California | U.S. Drought Monitor (unl.edu)



The current U.S. Drought Monitor shows widespread drought of various degrees across Southern and Central California. Approximately 60% of the state falls between D0 and D3. Much of Southern California, nearly 40% of the state, falls into either severe (D2) or extreme (D3) drought despite some February precipitation. With La Niña conditions expected to persist through April 2025 - favoring drier conditions in the Southwest; the potential for continued drying of vegetation, and increased conditions for fire spread are possible, and could extend fire activity periods in 2025.

## Temperature & Precipitation

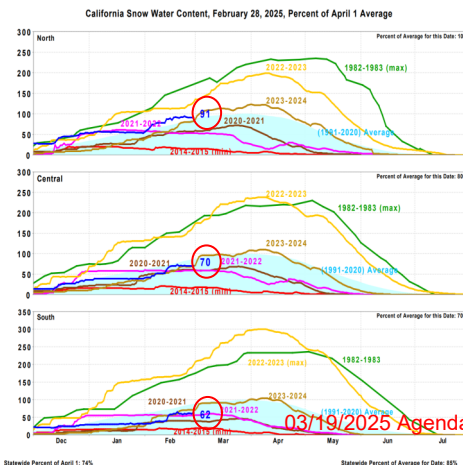
Climate Prediction Center



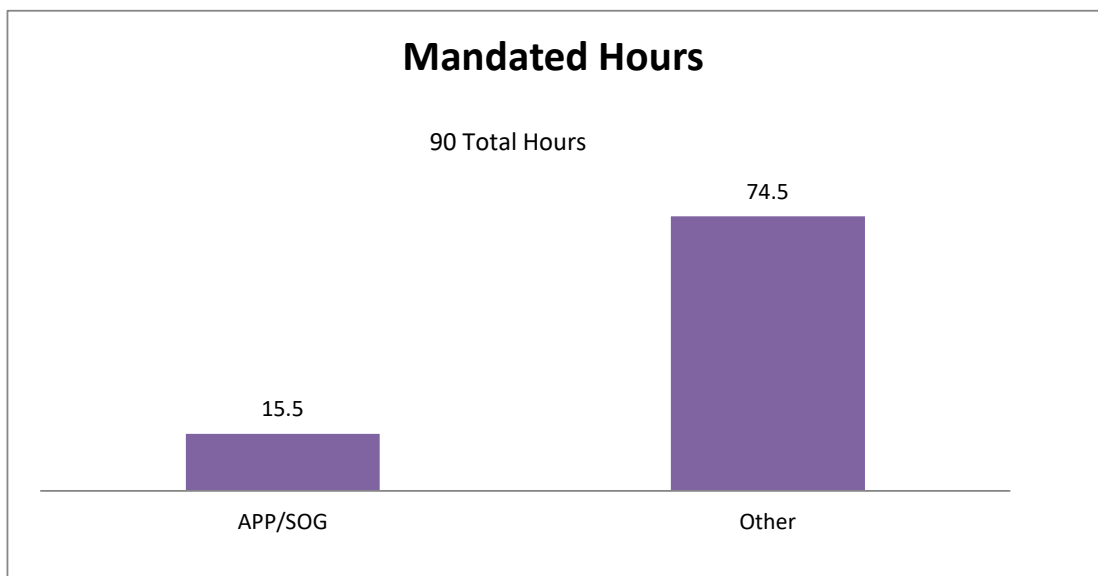
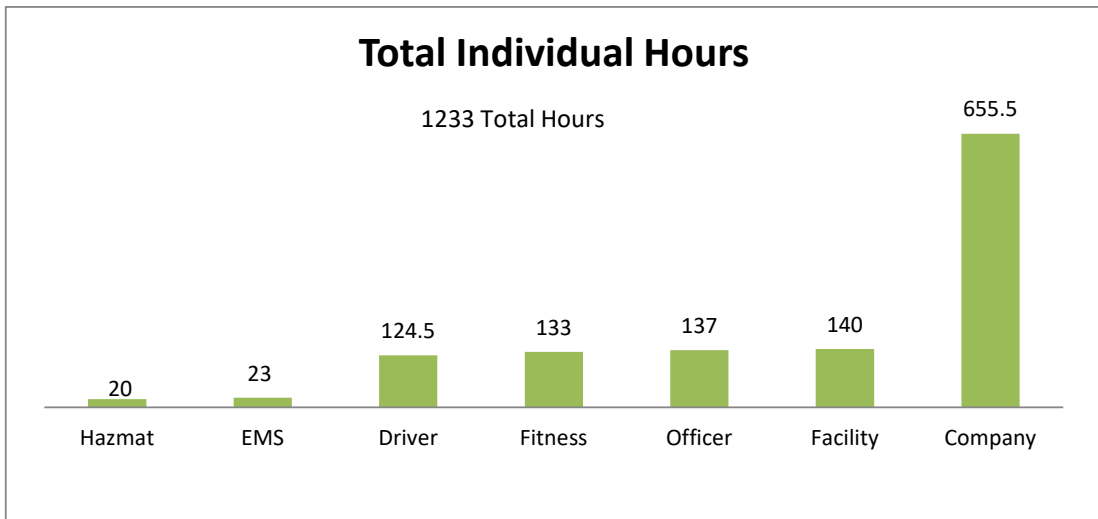
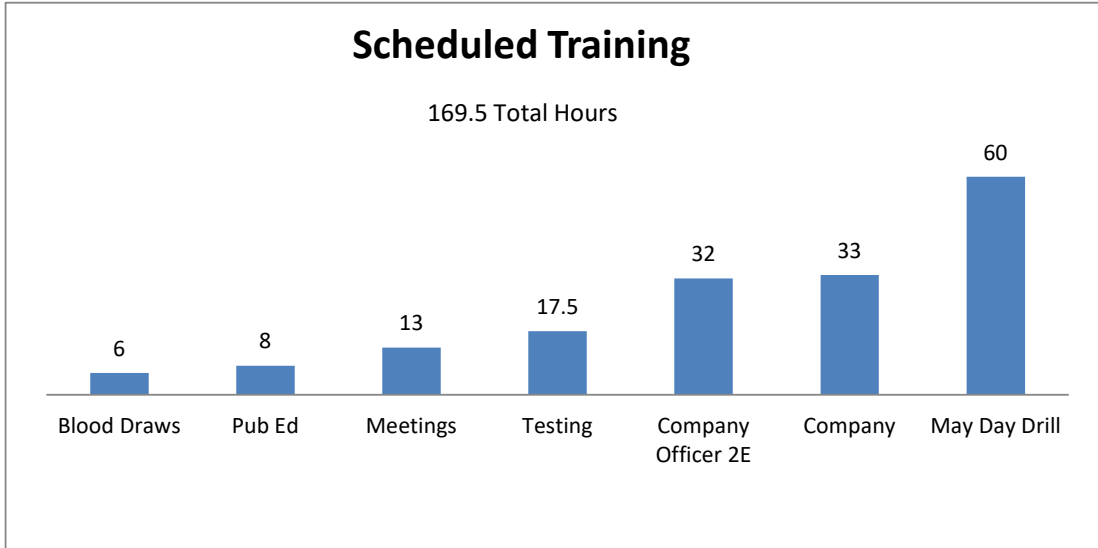
## Snow Water Content

California Snow Water Content

California has experienced low snow levels due to a warm winter and a lack of snow-building storms. Statewide snow water content, as of February 28, 2025, stands at 74% of the April 1st 30-year average. Northern California stands at 91%, Central California at 70%, and Southern California stands at only 62% of the April 1 average. Consecutive low performing snow years are exacerbating drought conditions. Pending late season snow storms, and the lacking melt off will potentially lead to drier fuel beds and an earlier start to; and extending the height of fire activity for the year.



# Training Division February 2025





## Training Division - Descriptions

Scheduled Training		
Training hours are planned annually. This is to maintain a well organized year and to help the firefighters be successful with the hours required by Federal, State, Local.		
Total Individual Hours - 6 Subjects		
Subject	Definition	Examples
<b>Company</b>	Documentation of all Company Training that is not Driver, Officer, Haz-Mat, or Facility Training.	Aerial Ladder, Hose, Ladders, Physical Fitness, SCBA, Technical Rescue, Ventilation, etc.
<b>Driver</b>	This is for documenting Driver Training hours. Per ISO standards employees considered a "Driver" will be required to complete 12 hours of Driver Training annually. You can use this same form to record Driver Training hours for Non-Drivers and it will be counted towards Company Training.	Apparatus Inspections & Maintenance, Basic Hydraulics, Defensive Driving, Maps, Driving Heavy Vehicles, Etc.
<b>Facility</b>	This is live training conducted at an approved site. For the location to be approved it must have at least two acres on the property, a three story tower, and a burn facility. It is also important to note that the training must not just occur on the approved site, but the facility itself must be used. If your users are just sitting in a classroom at an approved site, this cannot count towards facility hours and the completion would need to be applied elsewhere. However, if the classroom portion was followed by utilization of the facility, the entire time could count towards Facility Training.	Company Evolutions, NFPA 1410 Driver/Operator, NFPA 1002 Fire Officer, NFPA 1021 Firefighter Skills, NFPA 1001 Hazardous Materials, NFPA 472 Live Fire, NFPA 1403 Other NFPA Fire Based Training
<b>HazMat</b>	This is for documenting Hazardous Materials Training hours. Per ISO standards all firefighters are required to complete 6 hours of Hazardous Materials Training annually.	DOT Guidebook Review, Decontamination Procedures, First Responder Operations, Etc.
<b>Officer</b>	Per ISO standards employees considered a "Officer" will be required to complete 12 hours of Officer Training annually. You can use this same form to record Officer Training hours for Non-Officers and it will be counted towards Company Training.	Dispatch, General Education, Meetings, Orientation, Exam, Management Principles, Personnel, Promotional, Public Relations, Etc.
<b>EMS</b>	EMS is not tracked or required by Insurance service Organization for Rating. EMS Continuing Education is tracked for recertification of Paramedics (48/2yrs) and EMT (24/2yrs). Through Emergency Service Medical Administration (EMSA).	Continuing Education and SIMS
Mandated Hours		
Hours completed through an assignment on an online database (Target Solutions). Mandated assignments are required by either Federal, State, Local.		

<b>FIRE PREVENTION ACTIVITIES</b>	
Investigations	-
Public Education/Community Outreach	1
Special Project	5
Meetings	41
Training Hours	10
<b>TOTAL</b>	<b>57</b>

<b>WEED ABATEMENT</b>	
<b>Activity</b>	<b># of Inspections</b>
Weed Abatement Inspection	2
Weed Abatement Reinspection	2
1st Notice	1
Final Notice	-
Posting	-
Notices Printed	-
Abated	-
Forced Abatement	1
<b>TOTAL</b>	<b>6</b>

<b>OFFICE SUPPORT</b>	
<b>Activity</b>	<b># Completed</b>
Phone Calls	899
Correspondence	4,686
Walk in/Counter	219
Knox Application Request	6
Burn Permits	-
Plans Accepted/Routed	89
Special Projects	2
Scanning Documents/Electronic Files	128
Meetings: Admin/Prevention/Admin Shift	1
Post Office Runs	-
Deposit Runs/Preparations	2
<b>TOTAL</b>	<b>6,032</b>

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## WEED ABATEMENT

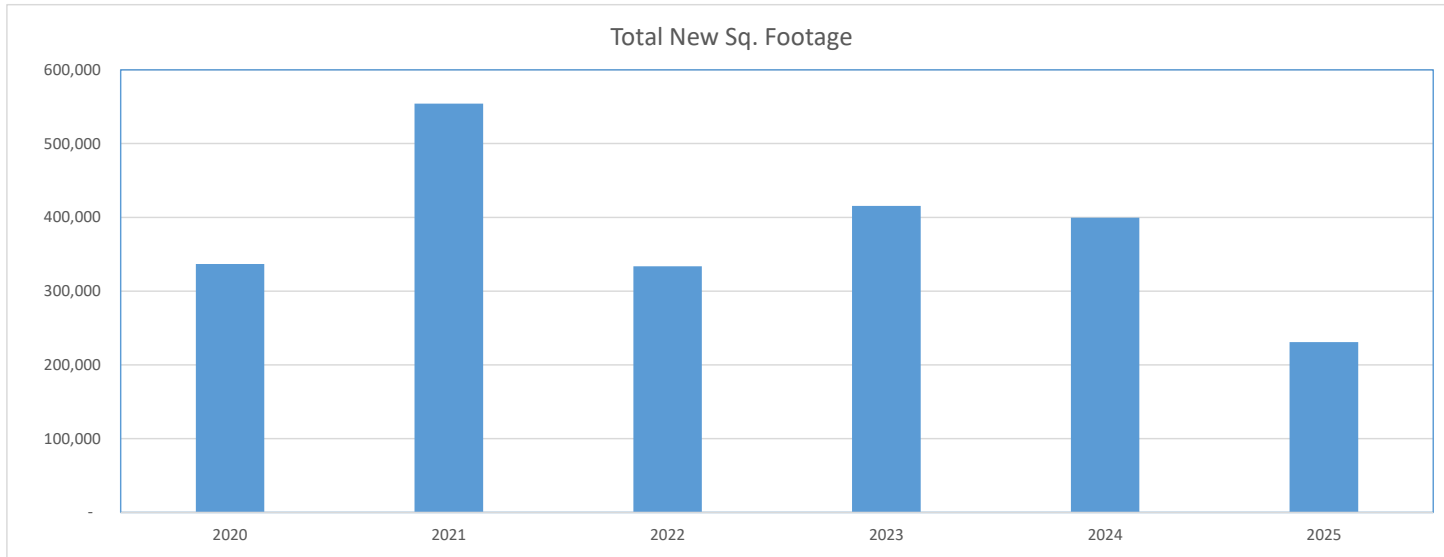
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<b>TOTAL</b>	<b>6,032</b>



Rancho Santa Fe Fire Protection District  
**Fire Prevention Bureau Monthly Activity Summary**



**Total New Square Footage (\*Reflected in Chart Above)**

Year	Total
2020	336,899
2021	554,173
2022	333,814
2023	415,530
2024	399,523
2025	230,959

**Total New Square Footage Only**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
<b>2020</b>	29,226	41,043	38,102	25,751	38,400	7,290	16,516	15,384	77,848	15,070	22,529	9,740	336,899
<b>2021</b>	29,808	23,298	50,000	29,760	7,104	19,361	24,413	1,794	33,357	106,768	99,103	129,407	554,173
<b>2022</b>	42,895	14,666	32,871	8,805	39,325	42,871	18,679	21,916	23,981	18,782	46,658	22,365	333,814
<b>2023</b>	18,185	62,584	62,584	26,121	29,280	19,320	35,530	43,154	6,591	32,907	30,062	49,212	415,530
<b>2024</b>	34,014	12,126	27,634	32,019	47,195	12,864	21,183	124,723	32,445	7,901	40,362	7,057	399,523
<b>2025</b>	221,451	9,508											230,959

**Comparison Total Reviewed Square Footage**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
<b>2020</b>	40,748	86,593	145,794	76,506	54,651	42,950	47,950	91,532	163,417	127,963	59,192	47,677	984,973
<b>2021</b>	90,462	89,135	111,456	98,218	118,557	151,000	203,116	254,055	312,253	204,313	171,023	137,116	1,940,704
<b>2022</b>	128,254	204,226	162,816	250,473	176,018	115,972	27,777	130,623	261,094	319,242	219,859	243,944	2,240,298
<b>2023</b>	212,285	345,997	283,413	401,980	136,835	240,963	144,320	111,107	46,952	98,828	211,622	250,663	2,484,965
<b>2024</b>	188,103	90,004	176,084	148,134	0	49,134	130,763	210,614	286,781	106,718	202,387	209,584	1,798,306
<b>2025</b>	276,151	108,405											384,556

SHUTE, MIHALY  
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TORI BALLIF GIBBONS  
Attorney  
Gibbons@smwlaw.com

February 27, 2025

**Via E-Mail and U.S. Mail**

Dave McQuead  
Rancho Santa Fe Fire Protection District  
Board of Directors  
18027 Calle Ambiente, Ste. 101  
Rancho Santa Fe, CA 92091  
Email: [mcquead@rsf-fire.org](mailto:mcquead@rsf-fire.org)

Re: Harmony Grove Village South DEIR Recirculation; PDS2015-GPA-15-002, PDS2015-SP-15-002, PDS2015-REZ-15-003, PDS2018-TM-5626, PDS2015-MUP-15-008, PDS2015-ER-15-08-006

Dear Mr. McQuead and Members of the Board of Directors:

On behalf of the Elfin Forest Harmony Grove Town Council (“Council”), we write to urge the Rancho Santa Fe Fire Protection District (“Fire District” or “RSFFPD”) and its Fire Chief to use their authority and expertise to strongly caution the County of San Diego’s Board of Supervisors against approving the Harmony Grove Village South (“HGVS” or “Project”) Project and to review the existing Fire Protection Plan (“FPP”) for its consistency with the current applicable fire code requirements.

As you are aware, the Fourth District Court of Appeal found that the original 2018 HGVS Project (“2018 Project”) was inconsistent with the County’s General Plan and that its environmental impact report (“2018 EIR”) failed to comply with the California Environmental Quality Act (“CEQA”). The County was therefore required to set aside its approvals of this project, which it did. After making some modifications to its greenhouse gas mitigation, the Project applicant has once again submitted its request to the County for a General Plan Amendment, a Specific Plan, a Rezone, a Tentative Map, a Major Use Permit, a Site Plan, and a Habitat Loss Permit.

The County has taken the position that the “2018 FEIR is only required to correct the portions of the document that are not compliant with CEQA, even though the County

vacated certification of the Project’s FEIR.” Readers’ Guide, Harmony Grove Village South Project Recirculated FEIR, at 2. For this reason, the County maintains—erroneously—that the doctrine of *res judicata* bars it from revisiting wildfire safety and evacuation under its Hazards and Hazardous Materials analysis, despite significant new wildfire information that the Council has repeatedly pointed out in person and in written comments.<sup>1</sup> We understand that the County may have led the Fire District and the Fire Chief, specifically, to believe that it may not submit a new or amended review of the updated Project application and the (unrevised) FPP under the same, erroneous legal theory. As this letter explains, that is decidedly not the case, and the Fire District and Fire Chief’s failure to carry out their obligations under the San Diego County Code and County Fire Code could expose the Fire District to liability.

***The Fire District Has Authority to Review the Project and Fire Protection Plan Independent of the County’s CEQA Analysis***

The Project applicant’s request for a tentative map under the Subdivision Map Act triggered a renewed opportunity for the Fire District to review the Project and its accompanying FPP. Under San Diego County Code section 81.306, the proposed Project’s inclusion of a major subdivision and processing of a tentative map required the Planning Commission to “obtain and review the recommendations” of the RSFFPD Fire Chief with respect to “fire hydrants, connections to be installed, fire control measures, improvements and compliance with SRA Fire Safe Regulations..., or sections of fire district’s code or County Fire Code, related to subdivisions...” Because the original subdivision map approval was rescinded as a result of the litigation, the County must obtain the Fire Chief’s review and recommendations anew, and in that process the Fire Chief may provide new recommendations, before the subdivision map is considered for approval again. Indeed, the County Code explicitly recognizes that the District Fire Chief is responsible for enforcement of the County Fire Code. San Diego County Code § 96.1.004.

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<sup>1</sup> Even where a certified EIR is in effect, an agency must prepare a subsequent or supplemental EIR (“SEIR”) for a project where substantial changes occur with respect to the circumstances under which the project is being undertaken or new information shows the Project’s environmental impacts will be more severe or that there are additional mitigation measures or alternatives that would reduce impacts. § 21166; CEQA Guidelines § 15162(a)(3). As the Council discussed extensively in its comments on the Recirculated Draft Environmental Impact Report, substantial changes and new information regarding wildfire risk and evacuation have significantly worsened the Project’s impacts and must be analyzed in the County’s current round of CEQA review.

County Code section 4903.1.1 further requires that, when an applicant seeks a subdivision map for property located in a wildland-urban interface fire area, it must submit a FPP that is prepared consistent with applicable fire codes and accepted by the Fire Agency Having Jurisdiction and County. *See also* San Diego County 2024 Fire Protection Plan Guidelines (2024 FPPG) at 38, 75.<sup>2</sup> The proposed Project’s location in a Very High Fire Hazard Severity Zone triggers this requirement. Since the original subdivision map approval was rescinded and a new tentative map application has been submitted, the FPP must be re-examined for “compliance with all applicable ordinances and regulations” currently in effect. 2024 FPPG at 38, 75. If, upon review, the Fire Chief “determines that the plan is incomplete or inadequate, it should be sent back to the preparer.” *Id.* at 75. The County’s Planning and Development Services (PDS) department also reviews the FPP, but its approval hinges on acceptance from the Fire District: “If the plan is found to be incomplete, to be inconsistent with code requirements or not to have been accepted by the [Fire District], ***PDS will not accept the plan.***” *Id.* at 75 (emphasis added).

As noted, the Fire Chief’s ability to provide an honest assessment of the Project does not turn on the County’s CEQA review or res judicata theories (which only come into play if there is subsequent litigation and do not prohibit either the County or the Fire District from taking actions within their authority to protect the County’s residents). The Fire Chief’s authority to comment on the project is related to the ***application for a subdivision map***, meaning it is distinct from the County’s current CEQA process. Because the County rescinded its approvals for the project in December 2022, it must decide anew whether to approve the request for a vesting tentative map. Under the County’s current fire laws, this need for a new discretionary approval of the requested subdivision map means that the County must once again obtain the Fire Chief’s review/recommendations regarding the Project’s compliance with the County Fire Code and the Fire Chief’s review/acceptance of the FPP as consistent with County’s current fire laws. The Fire Chief must provide an honest assessment of the Project and FPP’s compliance with current law. If the County’s PDS has not provided the Fire Chief with this opportunity for updated review of the Project and its FPP, the Fire Chief must assert their right to do so.

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<sup>2</sup> Available at

<https://www.sandiegocounty.gov/content/dam/sdc/pds/ceqa/FireCEQAGuidelines2024/Public%20Review%20FPP%20Guidelines%20%20Format%20Clean%20.pdf>

***The HGVS Fire Protection Plan Does Not Meet Applicable Fire Codes***

As noted, the Project applicant resubmitted its request for a vesting tentative map without updating its FPP. Instead, it relies on the FPP developed with the original HGVS project application. *See* 2018 HGVS Final Environmental Impact Report, Exhibit L. The FPP states it is consistent with the Fire Code from **2014** and relies on County significance guidelines from **2010**. FPP at 3, E-3. Much of the FPP’s analysis relies on even older documents. *See* FPP at 57 (citing CAL FIRE 2013 Fire and Resource Assessment Program); E-2 (fuel model from 2005); Appendix G (Safety Master Plan dated 5/10/2016).

RSFFPD last reviewed the FPP and gave its approval in **2016**. The applicable fire laws with which the FPP must achieve consistency have changed considerably since that time. Indeed, under **current** FPP-related laws and requirements, the FPP is grossly inadequate. The Fire Chief should demand that the FPP be significantly revised to comply with applicable FPP guidelines, and should explicitly withhold acceptance of the FPP until and unless it comes into compliance.

The County’s 2024 Fire Protection Plan Guidelines (“2024 FPPG”) sets out a number of guidelines and requirements that the current FPP fails to meet. For instance, applicants for development approvals must consult with the Fire Department and include all mitigation necessary to comply with their recommendations. 2024 FPPG at 26. Written findings of fact must be made showing that the project will minimize fire hazards and will not have a significant adverse impact on fire hazards. *Id.* at 26-27. In addition, all new development “shall comply” with stated requirements, including:

- “New development shall provide for emergency vehicle access and adequate fire-flow water supply in compliance with applicable fire safety regulations. **Development in areas with insufficient access, water pressure, fire flows, or other accepted means for adequate fire protection shall be prohibited.** “
- “**New development shall be limited if served by a street or street system restricted to a single route of access to a highway...**”

*Id.* at 27-28. Developers must also indemnify the County for wildfire risk. *Id.* at 28.

Under the heading BEST PRACTICE, the 2024 FPPG warns that other jurisdictions “limit the number of lots that can be located on a single point of access” in order “to control the number of County residents who may be placed at risk[,] need to

evacuate, limit the number of structures that may be destroyed, and reduce the risks to firefighters created in defending those structures.” *Id.* at 28. The guidelines recognize increased density increases risk:

This is particularly important in limiting the development of new primary dwelling units in [Fire Hazard Severity Zones (FHSZs)] as recent California legislation permitting up to two ADUs on many single-family lots significantly increases the existing risks by increasing the potential number of County residents that may be at risk when wildfire emergencies occur. **Any increase in occupancy in FHSZs creates additional risk, regardless of whether occupancy occurs in primary dwelling units or ADUs.**

*Id.* at 28.

The 2024 FPPG rejects the complacent attitude reflected in the EIR toward wildfire risk. It notes that the 2022 California Attorney General’s “Best Practices” identify that “development of wildlands situates more people into ‘harm’s way’ for wildfire exposure. In particular, the AG cites the lack of adequate evacuation planning or evacuation impediment due to lack of sufficient transportation infrastructure.” *Id.* at 30. The guidelines continue:

Some EIRs have concluded that the conversion of some wildland vegetation into paved development reduces or does not increase wildfire risk. This conclusion is contrary to existing evidence and the well-accepted understanding that the fundamental driver of increased wildfire risk is the introduction of people into a flammable landscape. Accordingly, the conversion of vegetation into developed land does not obviate the need for lead agencies to carefully consider and model how the addition of development into wildfire prone areas contributes to the risk of wildfire.

*Id.* at 33.

In evacuation planning, the guidelines recognize the County goal is “to not detract from evacuation times for existing communities if new development is determined to use the same routes. New road improvements or infrastructure may be needed to achieve this goal.” *Id.* at 34. The County must also consider “simultaneous means of emergency vehicle response access commensurate with public evacuation.” *Id.* at 34. Evacuation modeling should, among other things, assess timing for evacuation for existing and future populations and quantify travel times under likely emergency scenarios. *See id.* at 33-34;



*see also* Letter from Dr. Thomas Cova re Harmony Grove Village South, September 2024 at 3-5. Fire protection plans should also include “contingencies for large animal safety when such animals are present.” 2024 FPPG at 35. Although horses and horse trailers are common in Harmony Grove, the FPP fails to address this issue.

The Guidelines also warn of the dangers of single access point projects like the HGVS:

**Developments with inadequate access (e.g., long roads with a single access point, roads over steep grades, improper road surfaces, and/or narrow roads) significantly contribute to the inability to effectively evacuate residents during a disaster (wildfire, earthquake, or flood) and provide necessary emergency access for fire, ambulance, or law enforcement personnel.**

*Id.* at 52. The guidelines contain detailed standards for dead-end roads—standards that have never been applied to this Project to determine if it complies. *Id.* at 53.

As the guidelines state, for projects located in high wildfire risk areas, “evacuation modeling and planning should be considered and developed at the time of project review and approval.” *Id.* at 34. While the guidelines warn against *deferred* analysis, this instruction applies equally to *outdated* analysis. Evacuation modeling should be current at the time of approval, not based on outdated modeling and analysis. This is because the “ultimate objective is to allow for informed decision-making that minimizes the environmental and public safety hazards associated with new developments that increase the risk of ignition and impede evacuation in high wildfire prone areas.” *Id.* at 34; *id.* (thresholds of existence should reflect “existing” evacuation objectives); *see also id.* at 27 (new development “shall be sized, sited, and designed to minimize risks to life and property from fire hazard, considering changes to fire risk caused by increasing global temperatures”).

Finally, the guidelines restrict the granting of Fire Code exemptions, noting: “**Alternate measures that do not exceed the level of safety provided by the requirements of the adopted plans, codes, and regulations, will not be approved.**” *Id.* at 74. To allow a modification, the Fire Authority Having Jurisdiction must include an explanation of why compliance is impractical and how the approved modification does not lessen safety requirements. *Id.* at 75. Nothing in the existing record shows that the Project features “exceed the level of safety” that would be achieved by complying with the code’s strict limits on dead-end road development.

In short, the 2024 FPPG contains numerous provisions and requirements that warn against exactly the type of Project proposed here: a higher density residential development on a single access, dead-end road. The guidelines make clear that these types of projects should be denied, not granted variances. Neither the County nor this Fire District has evaluated the Project under the 2024 FPPG, or any of the other recently amended safety and emergency plans. Instead, County staff appears to be recommending that the County approve this Project based on an outdated FPP that relies on 2011 guidelines and a field assessment and Fire Code regulations from **2014**. *See* FPP at 3. Because the applicant seeks a vesting tentative map, and the original map approval has been rescinded, the Project requires a new FPP that addresses the *current* fire history and complies with the most current regulations. The Fire Chief and Fire District should withhold acceptance of the FPP until the requisite modifications are made.

***The Fire District Has a Duty to Enforce the County Fire Code***

To date, the Fire Chief and Fire District have taken a passive approach to the new HGVS application, largely deferring to the County's incorrect belief that any renewed consideration of the Project's wildfire impacts and the FPP's consistency with current fire laws is somehow prohibited. For all the reasons discussed above, this is not the case. Moreover, County Code explicitly requires the District Fire Chief to enforce the County Fire Code. San Diego County Code § 96.1.004. Here, the Fire Chief's relative silence on the revived HGVS application in the face of the Project's incompatibility with the Fire Code and other relevant fire guidelines constitutes a failure to comply with the Fire Chief's duty to enforce the Code that could expose the Fire District and the Fire Chief in his official capacity to legal liability. *See, e.g., Horwitz v. City of Los Angeles* (2004) 124 Cal.App.4th 1344, 1356 (city abused discretion by granting permit that did not comply with applicable ordinances); *Terminal Plaza Corp. v. City and County of San Francisco* (1986) 186 Cal.App.3d 814, 836 (writ could issue to enforce city's duty to design and build required infrastructure); *Summit Media LLC v. City of Los Angeles* (2012) 211 Cal.App.4th 921, 940 ("permits issued in contravention of municipal ordinances are invalid").

In sum, the Elfin Forest Harmony Grove Town Council respectfully requests that the Fire Chief and Fire District undertake the requisite review of the renewed HGVS vesting map application and its accompanying Fire Plan under current fire laws, and withhold approval of this dangerous development based on the Project's myriad violations of state and local requirements.



Rancho Santa Fe Fire Protection District  
February 27, 2025  
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Very truly yours,

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Tori Ballif Gibbons

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Prepared by Thomas J. Cova, Ph.D.  
Dated: September 19, 2024

## **Subject: Harmony Grove Village South would compromise wildfire public safety**

Please accept these comments on the Harmony Grove Village South community regarding current and proposed new development. I was retained by *Shute, Mihaly & Weinberger LLP* to evaluate the impact of new development on wildfire public safety as it pertains to evacuation egress. The greater Harmony Grove community is slated to grow from 1322 to 2018 housing units (+696) with minor change to its evacuation egress system. As this community is in a CALFIRE very high fire hazard severity zone (VHFHSV), additional development represents a threat to public safety, as extreme wildfires may not allow enough time to safely evacuate community residents if the community is not designed to support rapid evacuation.

I have been a professor at the University of Utah for 25 years conducting research on wildfire evacuation analysis and modeling (See attached CV). My original inspiration for pursuing community evacuation egress as a research topic was the 1991 Oakland Fire, and I have published articles on topics that include community egress (Cova et al. 2013), evacuation traffic simulation, and wildfire public safety. I proposed a set of community egress codes in the *Natural Hazards Review* for improving public safety in fire-prone communities that the National Fire Protection Agency adopted in their document *NFPA 1141: Standard for Fire Protection Infrastructure for Land Development in Wildland, Rural and Suburban Areas* (Cova, 2005).

### **Background**

The Harmony Grove Village South (HGVS) is a 111-acre project site southwest of Escondido in San Diego County about 3 miles west of I-15 and 3 miles south of SR-78. The site is bounded by Escondido Creek to the north, Country Club Drive to the west, and the Del Dios Highland Preserve to the south. The HGVS project consists of 453 residential units and an estimated 1400 residents. The immediately surrounding area of HGVS includes the communities of Harmony Grove, Eden Valley and Elfin Forest which together have 1500 homes and 4050 residents. HGVS will be in a box canyon surrounded by chaparral open space.

Harmony Grove, Eden Valley, and adjacent areas are classified by CALFIRE as a Very High Fire Hazard Severity Zone (VHFHSZ). This area has a storied fire history that includes 12 named fires since 1980 ranging in size from 46 acres (1980 Elfin Forest Fire) to 197,990 acres (2007 Witch

Creek Fire). The 2014 Cocos Fire is the most recent major wildfire which burned 1995 acres and destroyed 36 homes including part of the HGVS site. The problematic Cocos Fire evacuation served to highlight the poor egress in this area due to very limited low-capacity exit roads to move residents to safety. Many residents reported traffic gridlock and frustration in this evacuation and stated that it took an hour or more to get out, and some residents reported being arrested for attempting to rescue family members in the evacuation zone (Figueroa, 2014). Problems in evacuating Harmony Grove were also exacerbated by San Elijo Hills residents who were directed to evacuate using Harmony Grove Road along with Elfin Forest residents. Residents and others also criticized the lack of personnel to manage traffic intersections and provide evacuation route guidance.

### **Evacuation road network**

The initial exit from HGVS will be a single 800-foot access road to the intersection of Country Club Drive and Harmony Grove Road (CCD/HGR). The safest direct route out of the community from this intersection is to travel north on Country Club Drive to SR-78. While there is an additional exit road to the west (toward Elfin Forest), it is not a safe means of egress for Harmony Grove communities given that it is lined with heavy wildland fuels and lacks a viable fire shelter or safety zones as a back-up plan should evacuation become infeasible. Harmony Grove Road to Citracado Parkway represents a third exit to the east but it is also lined with wildland fuels along Escondido Creek and risks becoming impassable during a wildfire.

### **Travel demand scenarios**

The estimated travel demand during a wildfire evacuation depends primarily on the evacuation zone boundary, number of households, and vehicle use. If the evacuation zone was solely the 453 HGVS homes, this would represent about 680 to 1359 vehicles depending on the number of residents at home and their associated vehicle use (i.e. 1.5 to 3.0 vehicles per household). If surrounding communities were also evacuating including Harmony Grove Village (742 homes) and Valiano (243 homes), the number of departing vehicles could range from 2157 to 4314 (1.5 to 3.0 vehicles per household). Including more communities in the zone would add more vehicles including Eden Valley rural (80 homes), Hidden Hills (100 homes), and Harmony Grove rural (100) which would lead to 1718 households and a range of 2577 to 5154 evacuating vehicles (1.5 to 3.0 vehicles per household). The evacuation of this area would also include horse trailers which can prolong household preparation times and cause traffic delays (NFPA, 2024).

Travel demand is the rate that the evacuating vehicles depart from households in vehicles per hour (vph) over time, and this rate depends primarily on the urgency of the scenario (i.e. time available to evacuate) and the response of the public to public warnings and direct perception of flames and smoke (i.e. household decision making and preparation). Given the few available exiting roads in the HGVS area, it is likely that road capacities (vehicles per hour) will have a

greater influence in determining the evacuation time than the household departure rate. In areas with greater exit road capacity than travel demand, household departure rates would have a greater influence on evacuation times (i.e. the sooner households leave the shorter the evacuation time if the roads are not a significant constraint).

### **Estimated evacuation time**

Given that the roads are likely to be the binding constraint in a Harmony Grove evacuation, the exit road capacities can be used to estimate minimum evacuation times. DUDEK (2018) used traffic engineering standards to estimate that Country Club Drive could serve 500 vehicles per hour (8.3 vehicles per minute). This rate assumes continuous (uninterrupted) vehicle flow at key intersections, for example Country Club Drive and Harmony Grove Road, as well as Country Club Drive and Auto Park Way. This is possible if the intersections are manually controlled by public safety personnel to favor residents heading north on Country Club Drive from HGV/HGVS. If the key intersections are not manually controlled and operating under normal control (stop sign or signalization), then their capacity could be much lower under the extreme vehicle loads presented by an evacuation.

#### *Scenario 1*

The initial scenario is evacuating the HGVS households. In this case, traversing the 800-foot access road would be the sole means of egress and 'safety' would be defined as crossing Harmony Grove Road and heading north on Country Club Drive. For simplicity, we can assume that warning time and household preparation time are not a major constraint. In other words, households receive a warning and depart at a relatively rapid rate such that the intersection at CCD/NHR is the binding constraint. If the capacity of this intersection is 500 vph then the minimum evacuation time would range from 1.4 hours (1.5 vehicles per household) to 2.7 hours (3 vehicles per household). Note that the evacuation times in this table are minimums (lower bounds) on evacuation time and not actual evacuation times. Actual times could be much longer given other critical evacuation time phases including: 1) the time it takes for officials to decide whom to evacuate (decision time), 2) the time to notify residents (warning time), and 3) the time for households to gather their belongings and decide when to evacuate (preparation time). In other words, realistic evacuation time estimates would be greater than the ones shown in Table 1, possibly twice as long in duration.

veh/home	vehicles	Evacuation time (hours)
1.5	680	1.4
2.0	906	1.8
2.5	1133	2.3
3.0	1359	2.7

Table 1. HGVS minimum evacuation time varying the vehicles per household for 453 households leaving the access road via the intersection of CCD/NHR (500 vph capacity).

*Scenario 2*

The second scenario to consider is an evacuation a combination of Harmony Grove communities around HGVS including Harmony Grove Village, Valiano, Hidden Hills, Eden Valley, and Harmony Grove rural, which all-together total 1718 households. This example assumes that Country Club Road is the sole exit, and the key intersection at CCD and Auto Park Way has a capacity of 500 vph (DUDEK 2018). Table 2 shows the range of minimum evacuation times varying household vehicle use. Similar to scenario 1, these are minimums that do not take into account other critical time phases. All of the aforementioned communities evacuating north on CCD could take at least 5.2 hours (1.5 vehicles per household) to 10.3 hours (3.0 vehicles per household).

veh/house	vehicles	Evacuation time (hours)
1.5	2577	5.2
2.0	3436	6.9
2.5	4295	8.6
3.0	5154	10.3

Table 2. Harmony Grove minimum evacuation time (hours) varying the vehicles per household (v/h) and whether the key intersection at Country Club Drive and Auto Park Way is controlled or uncontrolled (assuming 500 vph capacity at CCD/NHR).

**Available Time for Evacuation**

Table 3 provides a range of available (lead) times for ignition distances ranging from 2 to 10 miles from Harmony Grove and fire spread rates ranging from 2.0 to 6.0 mph. With the extended scenarios, the time available could range from 5.0 hours (i.e. an ignition location 10 miles from HG with a 2.0 mph rate-of-spread to as little as 0.3 hours (i.e. an ignition location 2 miles from HG with a 6.0 mph rate-of-spread). Lead times that are less than evacuation time for a given scenario represent a case where public safety would be compromised. Table 3 has many

cases that would not offer enough time for evacuation scenarios shown Table 2 (all of Harmony Grove) and a few of the ones shows in Table 1 (HGVS). For example, the red square where a wildfire ignites 8 miles from Harmony Grove traveling at 2 mph would offer 4.0 hours of time to evacuate, which is not sufficient for any of the scenarios shown in Table 2.

Available Lead Time (hours)		Fire spread rate (mph)		
		2.0	4.0	6.0
Ignition distance from HGVS (miles)	2	1.0	0.5	0.3
	4	2.0	1.0	0.7
	6	3.0	1.5	1.0
	8	4.0	2.0	1.3
	10	5.0	2.5	1.7

Table 3. Available time to evacuate Harmony Grove (hours) based on the ignition distance from Harmony Grove (miles) and the fire-spread rate (miles per hour).

### Shelter-in-Place viability

Shelter-in-place (SIP) has received increasing attention in the wildfire context due to the increasing number of scenarios (current and potential) whereby residents may not be able to safely evacuate. SIP usually comes in two forms: 1) remaining in a structure without any travel, and 2) traveling a short distance to a refuge within a wildfire risk area (e.g. structure, bunker, or refuge area). Examples of the first type of SIP include: 1) the 2003 Cedar Fire, where 300 occupants remained in the Barona Casino in lieu of attempting to evacuate and being exposed to the fire on exit roads, and 2) the 2008 Tea Fire in Montecito, where 900 students sheltered in the Westmont College gymnasium rather than attempting to evacuate during the fire. These examples show that when the right conditions are met, SIP with no travel can offer sufficient life safety protection in a wildfire. The 2018 Camp Fire in Paradise provides an example of the second type of SIP. In that instance, residents evacuating in vehicles were redirected to take shelter in a commercial parking lot free of fuel and defended by fire fighters.

Section 3.3.3. of the DUDEK (2018) HGVS evacuation plan mentions SIP as a possible protective action. Several factors undermine the viability of SIP for HGVS. First, the DUDEK plan involves sheltering people in their home if they are not directly impacted by the path of a wildfire to reduce transportation demand. This can lead to late household evacuations if the residents ordered to stay in their homes become at-risk to a wildfire. We have little to no experience with a mass in-home SIP in the U.S. because one has never been ordered (i.e. no jurisdiction has ever ordered residents in a designated area proximal to a wildfire to stay in their homes during a wildfire). DUDEK’s suggested approach for HGVS remains untested. Second, the plan mentions HGVS’s ignition-resistant construction and fuel-modification zones as features that

could facilitate SIP, but these are defined to protect structures from ignition and not occupants. There are currently no standards or codes in the U.S. regarding the construction of homes to protect occupants remaining inside those homes during a wildfire. Moreover, because the HGVS evacuation plan focuses on HGVS residents, it does not analyze what this means for the existing community surrounding HGVS whose homes are not fire hardened. Third, there is no way for officials to know the mental and physical health conditions of residents in a wildfire area to level sufficient enough to order defined groups to stay in their homes while prioritizing others to evacuate.

In addition to in-home SIP, DUDEK's HGVS fire evacuation plan also proposes the idea of a temporary refuge area (TRA). While this has been done successfully for a small number of evacuees that were unable to clear the risk area (e.g. 2014 Camp Fire), we do not have any examples of a mass assignment of residents to a TRA on the order of thousands. There are many issues that might arise from overestimating the level of protection offered by the TRA as well as its capacity. For example: 1) what level of protection will the TRA offer its occupants from radiant heat, 2) how many residents can the TRA accommodate, 3) how long might it take residents to reach the TRA, 4) is the TRA handicap accessible, and 5) how would the TRA be defended by fire fighters? There are currently no standards or codes in the U.S. for designing a TRA to a level where it would guarantee a level of protection similar to evacuating the risk area.

### **Potential Additional Evacuation and Wildfire Factors**

There are a number of additional proposed projects in the area surrounding HGVS that could complicate evacuations if approved and constructed. One is the Solaris Business Park (500,000 square feet of building space) which will be located at the end of Country Club and Autopark Way. In event of a wildfire, employees from this facility will share the same egress on Country Club Drive as HGVS and the communities surrounding it, potentially increasing the number of vehicles on the road and evacuation times.<sup>1</sup> The second proposed project is the Harmony Grove Village Yoz Community Center, a 1.85-acre site located in Harmony Grove Village at 2625 HG Village Parkway, which could also generate additional evacuation traffic demand on Country Club Drive.<sup>2</sup> Thirdly, the Seguro Battery Storage Facility—proposed for a site along Country Club Drive which burned in the 2014 Cocos Fire—could potentially create an additional fire hazard and evacuation complication due its storage of lithium batteries.<sup>3</sup>

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<sup>1</sup> See City of Escondido, "Initial Study Part II," PHG20-0035 Solaris Business Park Project, at 5 ("Country Club Way serves as an emergency access for the project onto Country Club Drive.")

<sup>2</sup> See Item L (Major Use Permit: PDS2024-MUP-24-005), San Dieguito Planning Group Meeting Agenda, May 9, 2024 at 3, available at: <https://www.sandiegocounty.gov/content/dam/sdc/pds/Groups/sandieguito/2024/SD240509AG.pdf>.

<sup>3</sup> See "Seguro energy storage project," available at <https://www.aes.com/california/project/seguro-energy-storage-project> (accessed Oct. 1, 2024).

## **Fire Protection Plan Guidelines**

In March 2024, San Diego County’s Fire Protection District and Land Use & Environmental Group, Planning & Development Services adopted revised Fire Protection Plan Guidelines for Staff (“2204 FPPG”).<sup>4</sup> Under the 2024 FPPG, Goal S-4 (Minimize injury, loss of life, and damage to property resulting from structural or wildland fire hazards), Section S-4.5 (Access Road) requires a development to, “... provide additional access roads where feasible to provide for safe access of emergency equipment and civilian evacuation concurrently.”<sup>5</sup> Given that HGVS will house over a thousand residents in 453 households, this raises the question of whether one access road will meet this requirement, even if widened to three lanes in some places. If firefighter ingress must be maintained, then only one to two lanes of egress to the intersection of the access road with Harmony Grove Road will be available to the residents of HGVS. This highly limited single road egress would not meet this requirement for “additional access roads” to allow concurrent civilian evacuation and emergency equipment use.

## **Summary**

Harmony Grove Village South would be difficult to evacuate in an urgent wildfire (i.e. one that offers less than one hour to clear the community). A scenario that offers little time is entirely possible because HGVS would be situated in a very high fire hazard zone that is surrounded on three sides by hills covered in dense fuels (chaparral). This is due to the fact that the estimated 900 vehicles (454 homes) departing HGVS would have one safe exit north to the intersection of Country Club Drive and Harmony Grove Road. The time to evacuate HGVS alone ranges from 1.4-2.7 hours, depending on household vehicle use, so any scenario in Table 3 that offers less than this time would compromise the safety of the HGVS residents and the residents already living in the surrounding communities.

In evacuation scenarios that also include neighboring communities, HGVS would face additional background traffic from New Harmony Village, Valiano, Elfin Forest, and others. Conversely, if HGVS was ordered to evacuate first, then traffic departing from HGVS would also represent a challenge to neighboring communities, as the HGVS traffic could congest the primary exit of Country Club Drive. Given the very-high wildfire hazard in the HGVS area, there is not a sufficient number of safe exit roads with sufficient capacity and that lead in multiple directions to add 453 additional housing units without compromising the safety of prospective HGVS residents as well as the residents of existing communities in an urgent wildfire scenario that offers under two hours of lead time.

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<sup>4</sup> Available at

<https://www.sandiegocounty.gov/content/dam/sdc/pds/docs/2024%20County%20of%20San%20Diego%20Fire%20Protection%20Plan%20Guidelines.pdf>.

<sup>5</sup> 2024 FPPG at 18.



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# **ATTACHMENT 1**

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### Education

1999 Ph.D., Geography, University of California Santa Barbara.  
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1986 B.S., Computer & Information Science, University of Oregon.

### Research and Teaching Interests

Environmental Hazards, Emergency Management, Geographic Information Science, Transportation, Warning & Evacuation.

### Professional Experience

2012 – Professor, Department of Geography, University of Utah.  
2005 – 2012 Associate Professor, Department of Geography, U. of Utah.  
1999 – 2005 Assistant Professor, Department of Geography, U. of Utah.  
1993 – 1996 Research Assistant, National Center for Geographic Information and Analysis (NCGIA), UC Santa Barbara.  
1992 – 1997 Teaching Assistant, Department of Geography, UCSB.  
1987 – 1992 Systems Analyst, Matthew Bender & Co., Oakland, California.

### Other Professional Activities

2016 – 2023 Director, Environmental Track, *Professional Master of Science & Technology*, The Graduate School, University of Utah.  
2003 – 2018 Director, *Center for Natural & Technological Hazards*, College of Social & Behavioral Science, University of Utah.  
2014 – 2018 Director, *Certificate in Environmental Hazards & Emergency Management*, Department of Geography, University of Utah.  
2001 – 2016 Director, *Certificate in Geographic Information Science*, Department of Geography, University of Utah.  
2011 – 2013 Chair, Hazards, Disasters & Risk Specialty Group, Association of American Geographers, Washington, D.C.  
2007 – 2008 Program Chair, 5<sup>th</sup> International Conference in Geographic Information Science (GIScience 2008), Park City, Utah.  
2005 – 2008 Chair (and Vice Chair, Past Chair), GIS Specialty Group, Association of American Geographers, Washington, D.C.  
2005 – 2008 Chair, Research Projects Committee, University Consortium for Geographic Information Science (UCGIS).  
2004 – 2006 Secretary/Treasurer, GIS Specialty Group, Association of American Geographers, Washington, D.C.

- 2001 – 2003 Academic Councilor, GIS Specialty Group, Association of American Geographers, Washington, D.C.
- 1999 – 2003 Associate Director for Research, Center for Natural & Technological Hazards, Department of Geography, U of Utah.

### **Editorial Board Memberships**

- 2023 – Associate Editor, *Natural Hazards Review*
- 2020 – *International Journal of Geographical Information Science*
- 2018 – *Journal of Applied Geography*
- 2011 – 2014 *Journal of Geography & Natural Disasters.*
- 2011 – 2014 *Journal of Spatial Science*
- 2009 – 2011 *Professional Geographer*
- 2001 – 2004 *Computers, Environment & Urban Systems*

### **Professional Honors and Awards**

- 2016 Excellence in Mentoring Award, College of Social & Behavioral Science (CSBS), University of Utah.
- 2014 – 2016 Advisor, *Enabling the Next Generation of Hazards Researchers*, D. Thomas, S. Brody, & B. Gerber (PIs), National Science Foundation, CMMI-IMEE.
- 2008 – 2010 Mentor, *Enabling the Next Generation of Hazards Researchers*, Tom Birkland (PI), National Science Foundation, CMMI-IMEE.
- 2005 John I. Davidson Award for Practical Papers, American Society for Photogrammetry & Remote Sensing – with P. Sutton and D. Theobald.
- 2005 Leica Geosystems Award for Best Scientific Paper in Remote Sensing, American Society for Photogrammetry & Remote Sensing (ASPRS) – with P. Sutton and D. Theobald.
- 2003 – 2005 Fellow, *Enabling the Next Generation of Hazards Researchers*, Raymond Burby (PI), National Science Foundation, CMMI-IMEE.
- 2003 University Consortium for Geographic Information Science (UCGIS) Young Scholar’s Award.
- 1996 – 1999 Dwight D. Eisenhower Doctoral Fellowship, National Highway Institute, Federal Highway Admin., Dept. of Transportation.
- 1995 International Geographic Information Foundation (IGIF) Award for Best Student Paper, GIS/LIS '95, Nashville, TN.
- 1995 Outstanding Student in Transportation, UC Santa Barbara, Western Coal Transportation Association.

## RESEARCH AND SCHOLARSHIP

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- 2022 Kar, A., Wan, N., Cova, T.J., Wang, H., Lizotte, S.L. Using GIS to understand the influence of Hurricane Harvey on spatial access to primary care. *Risk Analysis*, Online: <https://doi.org/10.1111/risa.13806>.
- 2021 Cova, T.J., Li, D., Drews, F.A., Siebeneck, L.K. Toward simulating dire wildfire scenarios. *Natural Hazards Review*, 22(3): August.
- 2021 Siebeneck, L.K. and Cova, T.J. The disaster return-entry process: a discussion of issues, strategies, and further research. *Disaster Prevention and Management: an International Journal*. <https://doi.org/10.1108/DPM-07-2020-0243>.
- 2019 Li, D., Cova, T.J., Dennison, P.E. Why do we need a national address point database to improve wildfire public safety in the US? *International Journal of Disaster Risk Reduction*, <https://doi.org/10.1016/j.ijdr.2019.101237>
- 2018 Li, D., Cova, T.J., Dennison, P.E. Setting wildfire evacuation triggers by coupling fire and traffic simulation models: a spatio-temporal GIS approach. *Fire Technology*, 55: 617-642.
- 2017 Li, D., Cova, T.J., Dennison, P.E. Setting wildfire evacuation triggers using reverse geocoding. *Applied Geography*, 84: 14-27.
- 2017 Cova, T.J., Dennison, P.E., Li, D., Drews, F.A., Siebeneck, L.K., Lindell, M.K., Warning triggers in environmental hazards: who should be warned to do what and when? *Risk Analysis*, 37(4): 601-611.
- 2016 Nicoll, K.A., Cova, T.J., Siebeneck, L.K., Martineau, E. Assessing "preparedness elevated": seismic risk perception and household adjustment in Salt Lake City, Utah. *Journal of Geography & Natural Disasters*, 6: 168.
- 2015 Li, D., Cova, T.J., Dennison, P.E., A household-level approach to staging wildfire evacuation warnings using trigger modeling. *Computers, Environment, & Urban Systems*, 54:56-67.
- 2015 Drews, F.A., Siebeneck, L.K., Cova, T.J., Information search and decision making in computer based wildfire simulations.

- Journal of Cognitive Engineering and Decision Making*. 9(3): 229-240.
- 2015 Hile, R. and Cova, T.J. (2015) Exploratory testing of an artificial neural network classification for enhancement of the social vulnerability index. *ISPRS International Journal of Geo-Information*, 4(4): 1774-1790.
- 2014 Drews, F.A., Musters, A., Siebeneck, L.K., and Cova, T.J. Environmental factors that affect wildfire protective-action recommendations. *International Journal of Emergency Management*, 10(2): 153-168.
- 2014 Siebeneck, L.K., and Cova, T.J. Risk communication after disaster: re-entry following the 2008 Cedar River Flood. *Natural Hazards Review*, 15: 158-166.
- 2014 Dennison, P.E., Fryer, G.K., and Cova, T.J., Identification of fire fighter safety zones using lidar, *Environmental Modelling and Software*, 59: 91-97.
- 2013 Fryer, G., Dennison, P.E. and Cova, T.J. Wildland firefighter entrapment avoidance: modeling evacuation triggers. *International Journal of Wildland Fire*, 22(7): 883-893.
- 2013 Cova, T.J., Theobald, D.M, Norman, J., and Siebeneck, L.K., Mapping wildfire evacuation vulnerability in the western US: the limits of infrastructure. *Geojournal*, 78(2): 273-285.
- 2012 Siebeneck, L.K. and Cova, T.J., Spatial and temporal variation in evacuee risk perception throughout the evacuation and return-entry process. *Risk Analysis*, 32(9), 1468-1480.
- 2011 Cova, T.J., Dennison, P.E., Drews, F.A., Modeling evacuate versus shelter-in-place decisions in wildfires. *Sustainability*, 3(10): 1662-1687.
- 2011 Cao, L., Cova, T.J., Dennison, P.E., and Dearing, M.D., Using MODIS imagery to predict hantavirus risk. *Global Ecology and Biogeography*, 20: 620-629.
- 2011 Kobayashi, T., Medina, R., and Cova, T.J., Visualizing diurnal population change in urban areas for emergency management. *Professional Geographer*, 63: 113-130.
- 2011 Larsen, J.C., Dennison, P.E., Cova, T.J., Jones, C. Evaluating dynamic wildfire evacuation trigger buffers using the 2003 Cedar Fire. *Applied Geography*, 3: 12-19.
- 2010 Pultar, E., Cova, T.J., Yuan, M., and Goodchild, M.F., EDGIS: a dynamic GIS based on space-time points. *International Journal of Geographical Information Science*, 24: 329-346.
- 2010 Moffatt, S.F. and Cova, T.J., Parcel-scale earthquake loss estimation with HAZUS: a case-study in Salt Lake County, Utah. *Cartography and Geographic Information Science*, 37: 17-29.
- 2010 Anguelova, Z., Stow, D.A., Kaiser, J., Dennison, P.E., Cova, T.J., Integrating fire behavior and pedestrian mobility models to assess potential risk to humans from wildfires within the

- US-Mexico border zone. *Professional Geographer*, 62: 230-247.
- 2009 Cova, T.J., Drews, F.A., Siebeneck, L.K. and Musters, A., Protective actions in wildfires: evacuate or shelter-in-place? *Natural Hazards Review*, 10(4): 151-162.
- 2009 Pultar, E., Raubal, M., Cova, T.J., Goodchild, M.F. Dynamic GIS case studies: wildfire evacuation and volunteered geographic information. *Transactions in GIS*, 13: 84-104.
- 2008 Siebeneck, L.K., and Cova, T.J., An assessment of the return-entry process for Hurricane Rita 2005. *International Journal of Mass Emergencies and Disasters*, 26(2): 91-111.
- 2007 Goodchild, M.F., Yuan, M., and Cova, T.J., Towards a theory of geographic representation. *International Journal of Geographical Information Science*, 21(3): 239-260.
- 2007 Kim, T.H., and Cova, T.J., Tweening grammars: deformation rules for representing change between discrete geographic entities. *Computers, Environment & Urban Systems*, 31(3): 317-336.
- 2007 Dennison, P.E., Cova, T.J., and Moritz, M.A., WUIVAC: A wildfire evacuation trigger model applied in strategic scenarios. *Natural Hazards*, 40, 181-199.
- 2007 VanLooy, J. and Cova, T.J., A GIS-based index for comparing airline flight path vulnerability to volcanoes. *Professional Geographer*, 59(1): 74-86.
- 2006 Sutton, P.C., Cova, T.J., Elvidge, C., Mapping "Exurbia" in the conterminous U.S. using nighttime satellite imagery. *Geocarto International*, 21(2): 39-45.
- 2006 Kim, T.H., Cova, T.J., and Brunelle, A., Exploratory map animation for post-event analysis of wildfire protective action recommendations. *Natural Hazards Review*, 7(1): 1-11.
- 2005 Cova, T.J., Dennison, P.E., Kim, T.H., and Moritz, M.A., Setting wildfire evacuation trigger-points using fire spread modeling and GIS. *Transactions in GIS*, 9(4): 603-617.
- 2005 Cova, T.J., Public safety in the urban-wildland interface: Should fire-prone communities have a maximum occupancy? *Natural Hazards Review*, 6(3): 99-108.
- 2004 Cova, T.J., Sutton, P.A., Theobald, D.M., Exurban change detection in fire-prone areas with nighttime satellite imagery. *Photogrammetric Engineering & Remote Sensing*, 70: 1249-1257.
- 2003 Cova, T.J., and Johnson, J.P., A network flow model for lane-based evacuation routing. *Transportation Research Part A: Policy and Practice*, 37: 579-604.
- 2002 Cova, T.J. and Johnson, J.P., Microsimulation of neighborhood evacuations in the urban-wildland interface. *Environment and Planning A*, 34: 2211-2229.
- 2002 Cova, T.J. and Goodchild, M.F., Extending geographic representation to include fields of spatial objects.



- International Journal of Geographic Information Science*, 16: 509-532.
- 2000 Cova, T.J., and Church, R.L., Contiguity constraints for single-region site search problems. *Geographical Analysis*, 32: 306-329.
- 2000 Church, R.L., and Cova, T.J., Mapping evacuation risk on transportation networks with a spatial optimization model. *Transportation Research Part C: Emerging Technologies*, 8: 321-336.
- 2000 Cova, T.J., and Church, R.L., Exploratory spatial optimization in site search: a neighborhood operator approach. *Computers, Environment, & Urban Systems*, 24: 401-419.
- 2000 Radke, J., Cova, T.J., Sheridan, M.F., Troy, A., Lan, M., and Johnson, R., Application challenges for GIScience: implications for research, education, and policy for risk assessment, emergency preparedness and response, *Urban and Regional Information Systems Association (URISA) Journal*, 12: 15-30.
- 1997 Cova, T.J., and Church, R.L., Modeling community evacuation vulnerability using GIS. *International Journal of Geographical Information Science*, 8: 763-784.

### **Book Chapters and Sections**

- 2024 Cova, T.J. and Drews, F.A. Wildfire protective actions and collective spatial cognition. *Collective Spatial Cognition*, D.M. Montello and K.M. Curtin (eds).
- 2019 Cova, T.J., *Evacuation*. Encyclopedia of Wildfires and Wildland-Urban Interface (WUI) Fires.
- 2017 Cova, T.J., Data model: o-fields and f-objects. The International Encyclopedia of Geography, 1-5.
- 2016 Cova, T.J., Evacuation Planning, in *Encyclopedia of Transportation*, SAGE Publications, M. Garrett (ed.), pp.
- 2004 Cova, T.J., and Conger, S., Transportation hazards, in *Handbook of Transportation Engineering*, M. Kutz (ed.), pp. 17.1-17.24.
- 1999 Cova, T.J., GIS in emergency management. In *Geographic Information Systems: Principles, Techniques, Applications, and Management*, Longley, P., Goodchild, M.F., Maguire D., Rhind D. (eds), pp. 845-858.

### **Conference Papers and Posters**

- 2022 Wood M, Zhang X, Zhao X, McBride S, Luco N, Baldwin D, Cova T., Earthquake Early Warning: Toward Modeling Protective Actions. *Proceedings of the 12th National Conference in Earthquake Engineering, Earthquake Engineering Research Institute, Salt Lake City, UT. 2022.*

- 2019 Cova, T.J., Geosimulating hazard warning triggers: geometry, dynamics, and timing. *GeoComputation '19*, September 19, Queenstown, New Zealand.
- 2015 Li, D., Cova, T.J., Dennison, P.E., An open-source software system for setting wildfire evacuation triggers. ACM SIGSPATIAL EM-GIS'15, November 3, 2015, Seattle, WA.
- 2013 Cova, T.J., Dennison, P.E., and Drews, F.A. Protective-action Triggers: Modeling and Analysis. *Natural Hazards Workshop*, University of Colorado, Boulder, July (poster).
- 2012 Cova, T.J., Dennison, P.E., and Drews, F.A. Protective-action Triggers. *Natural Hazards Workshop*, University of Colorado, Boulder, July (poster).
- 2012 Cova, T.J., Dennison, P.E., and Drews, F.A. Protective-action Triggers. National Science Foundation-CMMI Innovation Conference, Boston, July (poster).
- 2009 Siebeneck, L.K. and Cova, T.J. Current Research at the Center for Natural and Technological Hazards. *Natural Hazards Workshop*, U. of Colorado, Boulder, July (poster).
- 2008 Cova, T.J. et al., Protective actions in wildfire: the incident commander perspective. *Pacific Coast Fire Conference*, San Diego, November (poster).
- 2005 Yuan, M., Goodchild, M.F., Cova, T.J., Towards a general theory of geographic representation in GIS (poster). *Conference on Spatial Information Theory (COSIT) 2005*, Ellicottville, New York, September (poster).
- 2005 Kim, T.H., and Cova, T.J., Tweening Grammars: Deformation Rules for Representing Change between Discrete Geographic Entities. *Geocomputation 2005*, Ann Arbor, MI, August.
- 2001 Cova, T.J. and Johnson, J.P., Evacuation analysis and planning tools inspired by the East Bay Hills Fire, *California's 2001 Wildfire Conference: 10 years after the 1991 East Bay Hills Fire*, Oakland, October.
- 2001 Hepner, G.F., Cova, T.J., Forster, R.R., and Miller, H.J., Use of remote sensing and geospatial analysis for transportation hazard assessment: an integrated university, government and private sector consortium, *IEEE/ISPRS Joint Workshop on Remote Sensing and Data Fusion over Urban Areas Proceedings*, IEEE-01EX482, Rome, Italy, pp.241-244.
- 2000 Atwood, G., and Cova, T.J., Using GIS and linear referencing to analyze the 1980s shorelines of Great Salt Lake, Utah, USA. *4th International Conference on Integrating GIS and Environmental Modeling (GIS/EM4): Problems, Prospects and Research Needs*. Banff, Alberta, Canada, September 2-8.
- 1997 Cova, T.J., and Church, R.L., An algorithm for identifying nodal clusters in a transportation network. *University Consortium for Geographic Information Science (UCGIS) Summer Retreat*, Bar Harbor, Maine, June 15-21.

- 1995 Cova, T.J., and Church, R.L., A spatial search for neighborhoods that may be difficult to evacuate, *Proceedings GIS/LIS '95*, ACSM/ASPRS, Nashville, TN, vol. 1, 203-212.
- 1995 Goodchild, M.F., Cova, T.J. and Ehlschlaeger, C., Mean geographic objects: extending the concept of central tendency to complex spatial objects in GIS, *Proceedings GIS/LIS '95*, ACSM/ASPRS, Nashville, TN, vol. 1, 354-364.
- 1994 Cova, T.J. and Goodchild, M.F., Spatially distributed navigable databases for intelligent vehicle highway systems, *Proceedings GIS/LIS '94*, ACSM, Phoenix, AZ, 191-200.

### **Other Publications**

- 2018 Wei, R., Golub, A., Wang, L., Cova, T.J. *Evaluating and enhancing public transit systems for operational efficiency and access equity*. TREC Final Report, NITC-RR-1024.
- 2018 Wei, R., Golub, A., Wang, L., Cova, T.J. *Integrated performance measures: transit equity & efficiency*. TREC Final Report, NITC-RR-1024.
- 2008 Siebeneck, L.K. and Cova, T.J. Risk perception associated with the evacuation and return-entry process of the Cedar Rapids, Iowa flood. Quick Response Research Report, Natural Hazards Center, University of Colorado, Boulder.
- 2006 Cova, T.J., *Concerning Stonegate and Public Safety*. North County Times, San Diego, California, Nov. 3.
- 2002 Cova, T.J., Like a bat out of hell: simulating wildfire evacuations in the urban interface, *Wildland Firefighter Magazine*, November, 24-29.
- 2000 Cova, T.J., When all hell breaks loose: firestorm evacuation analysis and planning with GIS, *GIS Visions Newsletter*, August, The GIS Cafe.
- 2000 Cova, T.J. (2000) Wildfire evacuation. *New York Times letter to the Editor*, June 6.
- 1996 Church, R., Cova, T., Gerges, R., Goodchild, M., Conference on object orientation and navigable databases: report of the meeting. *NCGIA Technical Report 96-9*.
- 1994 Church, R., Coughlan, D., Cova, T., Goodchild, M., Gottsegen, J., Lemberg, D., Gerges, R., Caltrans Agreement 65T155, Final Report, *NCGIA Technical Report 94-6*.

### **Invited Lectures, Presentations and Participation**

- 2024 "On timing wildfire evacuations." Risk Communication Workshop. National Academy of Sciences. Virtual. Feb. 5.
- 2024 "Wildfire public safety under climate change: preparing for the unprecedented." GROW Colloquium. Department of Geography. University of Utah.

- 2023 "Public safety in the wildland-urban interface." Earth Lab, University of Colorado, Jan. 31 (virtual).
- 2020 "Evacuation planning for dire scenarios." Preparing for Disaster: Workshop on Advancing WUI Resilience. National Fire Protection Agency (NFPA), San Francisco, CA
- 2019 "Public safety in the wildland-urban interface." Department of Geography, University of Alabama, Tuscaloosa, November.
- 2019 "Public safety in the wildland-urban interface." Department of Geography, Texas A&M (TAMU), College Station, February.
- 2018 "ESRI Science Symposium." Panelist, ESRI Conference, San Diego, July.
- 2018 "Public safety in the wildland-urban interface." Living with Fire in California's Coast Ranges, Sonoma, May.
- 2017 "Improving situational awareness in wildfire evacuations with volunteered geographic information." NSF IBSS/IMEE Summer Workshop, San Diego, August.
- 2014 "Modeling adaptive warnings with geographic trigger points." Department of Geography, SDSU, San Diego, CA, April 18.
- 2013 "Wildfires and geo-targeted warnings." Geo-targeted Alerts and Warnings Workshop. *National Academy of Sciences*, Washington DC, February 21-22.
- 2012 "Evacuation planning in the wildland-urban interface." California Joint Fire Science Program, Webinar Speakers Series, September.
- 2010 "Evacuating threatened populations in disasters: space, time & information." University of Minnesota, Spatial Speakers Series (Geography/CS/CE), April.
- 2009 "The art and science of evacuation modeling." Utah Governor's Conf. in Emergency Management, Provo, May.
- 2008 "GIScience and public safety." Brigham Young University, November.
- 2007 "Fire, climate and insurance." Panel Discussion. Leonardo Museum, Salt Lake City, November.
- 2007 "GIScience and public safety." University of Northern Iowa, April.
- 2006 "Evacuation and/or Shelter in Place." Panel Discussion, Firewise Conference: Backyards & Beyond, Denver, CO, Nov.
- 2006 "Evacuation modeling and planning." Colorado Springs Fire Department, Colorado Springs, CO, October.
- 2006 "Evacuation modeling and planning." Sante Fe Complexity Institute, Sante Fe, NM, August.
- 2006 "Evacuation modeling and planning." Colorado Wildfire Conference. Vail, CO, April, \$1000.
- 2006 "Dynamic GIS: in search of the killer app." Center for Geocomputation, National U. of Ireland, Maynooth, April.
- 2006 "Setting wildfire evacuation trigger points with GIS." University Consortium for Geographic Information Science, Winter meeting, Washington, DC.

- 2005 "Setting wildfire evacuation trigger points with GIS." Pennsylvania State University, State College, PA, November.
- 2004 "The role of scale in ecological modeling," NSF PI meeting for Ecology of Infectious Diseases, Washington D.C., September.
- 2004 "The 2003 Southern California wildfires: Evacuate and/or or shelter-in-place," Natural Hazards Workshop, Boulder, CO.
- 2004 "When all hell breaks loose: new methods for wildfire evacuation planning," colloquium, Department of Geography, University of Denver, February.
- 2004 "When all hell breaks loose: new methods for wildfire evacuation planning," Colorado Governor's Conference and Colorado Emergency Management Association (CEMA) Conference, Boulder, CO, February.
- 2004 "When all hell breaks loose: new methods for wildfire evacuation planning," colloquium, Department of Geography, University of California Los Angeles, February.
- 2003 "When all hell breaks loose: new methods for wildfire evacuation planning," colloquium, Natural Resources Ecology Lab (NREL), Colorado State University, April.
- 2003 "When all hell breaks loose: new methods for wildfire evacuation planning," Departmental colloquium, Department of Geography, University of Arizona, January.
- 2002 "When all hell breaks loose: new methods for wildfire evacuation planning," Departmental colloquium, Department of Geography, Western Michigan University, November.
- 2001 "Regional evacuation analysis in fire-prone areas with limited egress," Departmental colloquium, Department of Geography, University of Denver, May.
- 2000 "Integrating Site Search Models and GIS," Colloquium, Department of Geography, Arizona State University, Feb.
- 1999 "Site Search Problems and GIS," Colloquium, Department of Geography, University of Utah.
- 1996 "A spatial search for neighborhoods that may be difficult to evacuate," Colloquium, Department of Geography, UC Santa Barbara.
- 1995 "A spatial search for neighborhoods that may be difficult to evacuate," Regional Research Lab, Bhopal, India.
- 1995 "A spatial search for neighborhoods that may be difficult to evacuate," Indian Institute of Technology, Bombay. India.

### **Papers Presented at Professional Conferences**

- 2021 Cova, T.J., Planning for dire wildfire scenarios. Association of American Geographers Annual Meeting, April (virtual).
- 2020 Cova, T.J, Public safety in the wildland-urban interface. Association of American Geographers Annual Meeting, Denver, CO, April.

- 2018 Cova, T.J., GIScience & Emergency Management: where do we go from here? Association of American Geographers Annual Meeting, New Orleans, LA, April.
- 2017 Cova, T.J., Simulating warning triggers. Association of American Geographers Annual Meeting, Boston, MA, CA, April.
- 2016 Cova, T.J., Spatio-temporal representation in modeling evacuation warning triggers. Association of American Geographers Annual Meeting, San Francisco, CA, March.
- 2015 Cova, T.J. and Jankowski, P., Spatial uncertainty in object-fields: the case of site suitability. Association of American Geographers Annual Meeting, Chicago, IL, April.
- 2014 Cova, T.J. and Jankowski, P., Spatial uncertainty in object-fields: the case of site suitability. International Conference on Geographic Information Science (GIScience '14), Vienna, Austria, September.
- 2013 Cova, T.J., Dennison, P.E. and Drews, F.A., Protective-action triggers: modeling and analysis. *Association of American Geographers Annual Meeting*, Los Angeles, CA, April.
- 2012 Cova, T.J., Dennison, P.E. and Drews, F.A., Protective-action triggers. Poster presented at the Natural Hazards Workshop, University of Colorado, Boulder, July.
- 2012 Cova, T.J., Dennison, P.E. and Drews, F.A., Protective-action triggers. Poster presented at the NSF CMMI Innovation Conference, Boston, July.
- 2012 Cova, T.J., Dennison, P.E. and Drews, F.A., Protective-action triggers, *Association of American Geographers Annual Meeting*, New York, NY, February.
- 2011 Cova, T.J., Modeling stay-or-go decisions in wildfires, *Association of American Geographers Annual Meeting*, Seattle, WA, April.
- 2010 Cova, T.J., Theobald, D.M. and Norman, III, J., Mapping wildfire evacuation vulnerability in the West, *Association of American Geographers Annual Meeting*, Wash. D.C., April.
- 2010 Cova, T.J., and Van Drimmelen, M.N., Family gathering in evacuations: the 2007 Angora Wildfire as a case study. *National Evacuation Conference*, New Orleans, February.
- 2010 Siebeneck, L.K., Cova, T.J., Drews, F.A., and Musters, A. Evacuation and shelter-in-place in wildfires: The incident commander perspective. *Great Basin Incident Command Team Meetings*, Reno, April.
- 2009 Cova, T.J. et al., Protective action decision making in wildfires: the incident commander perspective. *Association of American Geographers Annual Meeting*, Las Vegas, March.
- 2009 Siebeneck, L.K. and Cova, T.J. Using GIS to explore evacuee behavior before, during and after the 2008 Cedar Rapids Flood. *Association of American Geographers Annual Meeting*, Las Vegas, March.



- 2009 Lindell, M.K., Prater, C.S., Siebeneck, L.K. and Cova, T.J. Hurricane Ike Reentry. *National Hurricane Conference*, Austin, March.
- 2008 Cova, T.J., Simulating evacuation shadows, *Association of American Geographers Annual Meeting*, Boston, April.
- 2007 Cova, T.J., An agent-based approach to modeling warning diffusion in emergencies, *Association of American Geographers Annual Meeting*, San Francisco, March.
- 2006 Cova, T.J., New GIS-based measures of wildfire evacuation vulnerability and associated algorithms. *Association of American Geographers Annual Meeting*, Denver, March.
- 2005 Cova, T.J., Dennison, P.E., Kim, T.H., and Moritz, M.A., Setting wildfire evacuation trigger-points using fire spread modeling and GIS. *Association of American Geographers Annual Meeting*, Denver, March.
- 2004 Cova, T.J., Sutton, P.C., and Theobald, D.M. Light my fire proneness: residential change detection in the urban-wildland interface with nighttime satellite imagery, *Association of American Geographers Annual Meeting*, Philadelphia, March.
- 2004 Cova, T.J. and Johnson, J.P., A network flow model for lane-based evacuation routing. *Transportation Research Board (TRB) Annual Conference*, Washington, D.C., January.
- 2003 Cova, T.J. Lane-based evacuation routing, *Association of American Geographers Annual Meeting*, New Orleans, March.
- 2002 Cova, T.J., Extending geographic representation to include fields of spatial objects, *GIScience 2002*, Boulder, September.
- 2002 Husdal, J. and Cova, T.J., A spatial framework for modeling hazards to transportation systems, *Association of American Geographers Annual Meeting*, Los Angeles, March.
- 2001 Cova, T.J. and Johnson, J.P., Evacuation analysis and planning tools inspired by the East Bay Hills Fire, *California's 2001 Wildfire Conference: 10 years after the 1991 East Bay Hills Fire*, Oakland, October.
- 2001 Cova, T.J., Husdal, J., Miller, H.J., A spatial framework for modeling hazards to transportation networks, *Geographic Information Systems for Transportation Conference (GIS-T 2001)*, Washington DC, April.
- 2001 Cova, T.J., Miller, H.J., Husdal, J., A spatial framework for modeling hazards to transportation systems, *Association of American Geographers Annual Meeting*, New York, New York, February.
- 2000 Cova, T.J., Church, R.L., Goodchild, M.F., Extending geographic representation to include fields of spatial objects, *GIScience 2000*, Savannah, Georgia, November.
- 2000 Cova, T.J. Microscopic simulation in regional evacuation: an experimental perspective, *Association of American*



- Geographers Annual Meeting*, Pittsburgh, Pennsylvania, March.
- 1999 Cova, T.J., and Church, R.L., "Exploratory spatial optimization and site search: a neighborhood operator approach," *Geocomputation '99*, Mary Washington College, Fredricksburg, Virginia.
- 1999 Cova, T.J., and Church, R.L., "Integrating models for optimal site selection with GIS: problems and prospects," *Association of American Geographer Annual Meeting*, Honolulu, Hawaii, March 29.
- 1998 Cova, T.J., and Church, R.L., "A spatial analytic approach to modeling neighborhood evacuation egress," *Association of American Geographers Annual Meeting*, Boston, Massachusetts.
- 1997 Church, R.L., and Cova, T.J., "Location search strategies and GIS: a case example applied to identifying difficult to evacuate neighborhoods," *Regional Science Association Annual Meeting*, November, Buffalo.
- 1997 Cova, T.J. and Church, R.L., "An algorithm for identifying nodal clusters in a transportation network," *University Consortium for Geographic Information Science (UCGIS) Summer Retreat*, Bar Harbor, June.
- 1996 Cova, T.J., Church, R.L., "A spatial search for difficult neighborhoods to evacuate using GIS," *GIS and Hazards Session, Association of American Geographers Annual Meeting*, Charlotte, April.
- 1995 Cova, T.J., Church, R.L., "A spatial search for neighborhoods that may be difficult to evacuate," *GIS/LIS '95*, Nashville, November.
- 1995 Goodchild, M.F., Cova, T.J. and Ehlschlaeger, C., "Mean geographic objects: extending the concept of central tendency to complex spatial objects in GIS," *GIS/LIS '95*, Nashville, November.
- 1994 Cova, T.J. and Goodchild, M.F., "Spatially distributed navigable databases for intelligent vehicle highway systems," *GIS/LIS '94*, Phoenix, November.

## Grants

### Externally funded

- 2024 - Cova, T.J. (Collaborative research) *Household Response to Wildfire: Integrating Behavioral Science and Evacuation Modeling to Improve Community Wildfire Resilience*. NSF, Division of Civil, Mechanical & Manufacturing Innovation (CMMI): Humans, Disasters & the Built Environment (HDBE), \$20,260.

- 2021 - 2023 Zhao, X. and Cova, T.J. (PI). *Determining Optimal Protective Actions in Earthquakes with Data Science Techniques*. National Science Foundation and USGS. \$146,137.
- 2021 - 2023 Collins, T.W., Grineski, S.E., Cova.T.J (PI), REU Supplemental Funds (Grant: Enabling the Next Generation of Hazards Researchers). NSF, Division of Civil, Mechanical & Manufacturing Innovation (CMMI): Humans, Disasters & the Built Environment (HDBE), \$16,000.
- 2019 -2023 Cova, T.J. (PI), Collins, T.W., Grineski, S.E., Norton, T., *Enabling the Next Generation of Hazards Researchers*. National Science Foundation. Division of Civil, Mechanical & Manufacturing Innovation (CMMI): Humans, Disasters & the Built Environment (HDBE), \$480,634.
- 2018 -2023 Smith, K. (PI), Cova, T.J., Waitzman, N., Perlich, P., Kowaleski-Jones, L. Research Data Center: Wasatch Front Research Data Center. National Science Foundation, Division of Social Economic Sciences, \$298,625.
- 2017 - 2019 Shoaf, K. (PI) and Cova, T.J. *RAPID: Evacuation Decision-making process of Hospital Administrators in Hurricane Harvey*. National Science Foundation, Civil Mechanical and Manufacturing Innovation – Infrastructure Management and Extreme Events, \$49,301.
- 2011 - 2015 Cova, T.J. (PI), Dennison, P.E. and Drews, F.A., *Protective action triggers*. National Science Foundation, Civil Mechanical and Manufacturing Innovation – Infrastructure Management and Extreme Events, \$419,784.
- 2012 - 2014 Cova, T.J. (PI), *State Hazard Mitigation Mapping II*. Utah Division of Emergency Management, \$51,608.
- 2011 - 2012 Cova, T.J. (PI), *State Hazard Mitigation Mapping*. Utah Division of Emergency Management, \$51,608.
- 2007 - 2010 Cova, T.J. (PI) and Drews, F.A. *Protective-action decision making in wildfires*. National Science Foundation, Civil Mechanical and Manufacturing Innovation – Infrastructure Management and Extreme Events, \$288,438.
- 2004- 2006 Yuan, M. (PI), Goodchild, M.F., and Cova, T.J. *Integration of geographic complexity and dynamics into geographic information systems*, National Science Foundation, Social and Behavioral Science—Geography and Spatial Sci., \$250,000.
- 2003- 2004 Cova, T.J. (PI) *Mapping the 2003 Southern California Wildfire Evacuations*, National Science Foundation, Small Grants for Exploratory Research (SGER), CMMI-IMEE, \$14,950.
- 2003 -2008 Dearing, M.D. (PI), Adler, F.R., Cova, T.J., and St. Joer, S. *The effect of anthropogenic disturbance on the dynamics of Sin Nombre*, National Science Foundation and NIH, Ecology of Infectious Diseases, \$1,933,943.
- 2000-2004 Hepner, G.F. (PI), Miller, H.J., Forster, R.R., and Cova, T.J. *National Consortium for Remote Sensing in Transportation:*

- Hazards (NCRST-H)*, U.S. Department of Transportation, \$437,659.
- 2000–2001 Cova, T.J. (PI) *Modeling human vulnerability to environmental hazards*, Salt Lake City and Federal Emergency Management Agency (FEMA), \$20,000.

#### Internally funded

- 2004 Cova, T.J. (PI) and Sobek, A. *DIGIT Lab GPS Support*, U. of Utah Technology Instrumentation Grant, \$15,000.
- 2003 Cova, T.J. (PI) *New methods for wildfire evacuation analysis*, Proposal Initiative Grant, College of Social and Behavioral Science, University of Utah, \$4000.
- 1999 Cova, T.J. (PI) *Microscopic traffic simulation of regional evacuations: computational experiments in a controlled environment*, Faculty Research Grant (FRG), University Research Committee, University of Utah, \$5980.
- 1999 Cova, T.J. (PI) *Regional evacuation analysis in fire prone areas with limited egress*, Proposal Initiative Grant, College of Social and Behavioral Science, University of Utah, \$4000.

#### **Media Outreach**

- 2023 Simon, M. "Cities Aren't Supposed to Burn Like This Anymore—Especially Lahaina." *WIRED Magazine*. Aug 15.
- 2023 Nyce, C.M. "Maui's Fire Risk Was Glowing Red." *The Atlantic*, Aug 19.
- 2023 Cagle, S. "The quest to build wildfire-resistant homes." *Technology Review*. April 18.
- 2023 Hirji, Z. "Protective steps could help reduce wildfires." *Star Advertiser in Hawaii*, Sept 2.
- 2022 Chen, I. "The terrifying choices created by wildfires." *The New Yorker*. September 6.
- 2022 Nyce, C.M. "The world needs to start planning for the fire age." *The Atlantic*. July 28.
- 2022 Staff. "Human remains found near suspected origin of Colorado Wildfire." *The Guardian*, Jan. 5<sup>th</sup>.
- 2022 Prentzel, O. and Najmabadi, S. "After-action report finds numerous shortcomings in Marshall Fire emergency communications." *The Colorado Sun*, June 21.
- 2022 Najmabadi, S. and Prentzel, O. "Emergency alerts were a problem long before the Marshall Fire, reports show." *The Colorado Sun*. Feb. 21.
- 2022 Miller, J. "In a major wildfire: how would Park City evacuate?" *Salt Lake Tribune*, July 28.
- 2022 Anderson, S.S. and Geiger, G. "Planned Greek refugee camp is in high-risk fire zone next to landfill." *OpenDemocracy.net*, Feb. 15.

- 2022 Peipert, T. "Remains found, yet most people escaped Colorado fire." *ABC news*, Jan. 5.
- 2021 Beck, M. "Community wildfire plans don't reflect stronger, faster wildfires." May 26.
- 2021 Najmabadi, S. "4000 cars, one exit: residents in growing neighborhoods worry their new neighbors could crowd wildfire escape routes." *The Colorado Sun*, Nov. 30.
- 2021 Glen, S. "Think outside the box: U of U researchers look at wildfire evacuations." May 25.
- 2021 Williams, C. "Is Utah prepared for a major wildfire?" *KSL news*, June 5.
- 2021 Shinn, M. "Long wildfire evacuation delays for parts of Colorado Springs shown in models." *Colorado Springs Gazette*, Nov 22.
- 2020 Harris, J. "Dangerous conditions, stretched resources worry firefighters in the West." Sep 11.
- 2020 Carlson, C. "COVID-19: With wildfires, California evacuation shelters may look more like a campground." *Ventura County Star*, May 14.
- 2019 Loenard, D. "As Australian bushfires rage: country offers lessons for the wildfire prone western U.S." *Washington Post*, Nov 23.
- 2019 Marshall, A. "The Delicate Art—and Evolving Science—of Wildfire Evacuations." *WIRED magazine*, Oct. 31.
- 2019 Cagle, S. "California's fire season has been bad. But it could have been much worse." *The Guardian*, Nov. 1.
- 2019 Mooallem, J. "We have fire everywhere." *NY Times*, July 31.
- 2019 Krieger, L., "Camp Fire: when survival means shelter." *San Jose Mercury News*, Feb. 3.
- 2018 Romero, S., Arango, T., and Fuller, T. "A frantic call, a neighbor's knock, but few official alerts as wildfire closed in." *New York Times*, Nov. 21.
- 2018 Serna, J., St. John, P., Lin, R-G. "Disaster after disaster, California keeps falling short on evacuating people from harm's way." *Los Angeles Times*, Nov. 28.
- 2018 Simon, M. "How California needs to adapt to survive future fires." *Wired Magazine*, Nov. 15.
- 2018 O'Neill, S. "Year-round wildfire season means always living evacuation ready." *Morning Addition, National Public Radio*, Sep. 25.
- 2017 Mortensen, M. "System used for Amber Alerts can also warn of other emergencies." *Utah Public Radio*, Dec. 19.
- 2013 Ryman, A. and Hotstege, S. "Yarnell evacuation flawed and chaotic, experts say." *Arizona Republic and USA Today*, Nov.
- 2013 Bryson, D., and Campoy, A. "Quick fire response pays off: Colorado credits early alerts with limiting deaths from state's worst-ever blaze." *The Wall Street Journal*, June 17.

2013 Beri, A. "Due to the sequester: people are going to be unsafe, homes are going to burn." *Tampa Bay Times*, Feb.

2012 Zaffos, J. "What the High Park Fire can teach us about protecting homes." *High Country News*, July.

2012 Meyer, J.P. and Olinger, D., "Tapes show Waldo Canyon fire evacuations delayed two hours." *The Denver Post*. July.

2011 Siegel L, and Rogers, N. "Monitoring killer mice from space." *USA Today, SLTribune, Fox 13 News, KCPW*, Feb. 15.

2010 Cowan, J., "Esplin defends stay or go policy." *Australian Broadcast Corporation (ABC)*, April 30.

2010 Bachelard, M., "Should the fire-threatened stay or go? That is still the question." *The Age*, Australia, May 2.

2008 Boxall, B., "A Santa Barbara area canyon's residents are among many Californian's living in harm's way in fire-prone areas." *Los Angeles Times*, July 31.

2007 Welch, W.M. et al., "Staggering numbers flee among fear and uncertainty." *USA Today*, Oct. 24.

2007 Krasny, M., "Angora Wildfire Panel Discussion." *KQED Radio*, San Francisco, June 27.

2004 Wimmer, N., "Growing number of communities pose fire hazard." *KSL Channel 5*, Salt Lake City, July 22.

2004 Disaster News Network, "The face of evacuation procedures might be changing as a result of lessons learned from last year's fierce wildfires in California."

2004 Perkins, S., "Night space images show development." *Science News*, Week of April 3rd, 165 (14): 222.

2003 Keahey, J., "Canyon fire trap feared." *SL Tribune*, June.

## **TEACHING AND MENTORING**

### **Undergraduate Courses**

Geoprogramming (~30 students)  
 Introduction to Geographic Information Systems (~60 students).  
 Human Geography (~40 students).  
 Geography of Disasters and Emergency Management (~20 students).  
 Methods in GIS (~40 students).  
 Business & Disaster Management (~70 students)

### **Graduate Courses**

GIS & Python (~20 students)  
 Spatial Databases (~30 students)  
 Seminars: Hazards Geography, Transportation, Vulnerability, GIScience.

## Graduate Student Advising

### Chaired Ph.D. Committees

2021-	Mojtoba, A.R.	Hazard resilience.
2020-	Bhattari, A.	Disaster recovery for the Nepal earthquake.
2023	Wood, M.	Cascading/compound hazards and disasters.
2013	Coleman, A.	Geographic data fusion for disaster management (defended).
2016	Li, D.	Modeling wildfire evacuation triggers as a coupled natural-human system (Asst. Professor South Dakota State University)
2010	Siebeneck, L.	Examining the geographic dimensions of risk perception, communication and response during the evacuation and return-entry process. (Assoc. Professor, U. of North Texas)
2010	Cao, L.	Anthropogenic habitat disturbance and the dynamics of hantavirus using remote sensing, GIS, and a spatially explicit agent-based model. (Postdoc, Kelly Lab, UC Berkeley)

### Chaired M.S. committees

2023	Roberts, S.	Wildfire evacuation routing.
2021	Mojtoba, A.	Flood resilience in Dhaka, Bangladesh
2020	Huang, Z.	Autonomous vehicles in hurricane evacuation.
2019	Kar, A.	Optimal vehicle routing in disasters
2017	Yi, Y.	A web-GIS application for house loss notification in wildfires
2017	Latham, P.	Evaluating the effects of snowstorm frequency and depth on skier behavior in Big Cottonwood Canyon, Utah
2016	Bishop, S.	Spatial access and local demand for emergency medical services in Utah
2015	Hile, R.	Exploratory testing of an artificial network classification for enhancement of a social vulnerability index
2015	Unger, C.	Creating spatial data infrastructure to facilitate the collection and dissemination of geospatial data to aid in disaster management
2014	Klein, K.	Tracking a wildfire in areas of high relief using volunteered geographic information: a viewshed application

2012	Amussen, F.	Greek island social networks and the maritime shipping dominance they created (technical report)
2012	Martineau, E.	Earthquake risk perception in Salt Lake City, Utah
2010	Smith, K.	Developing emergency preparedness indices for local government
2010	VanDrimmelen, M.	Family gathering in emergencies: the 2007 Angora Wildfire as a case study
2007	Pultar, E.	GISED: a dynamic GIS based on space-time points
2007	Siebeneck, L.	An assessment of the return-entry process for Hurricane Rita, 2005
2007	Johnson, J.	Microsimulation of neighborhood-scale evacuations
2004	Chang, W.	An activity-based approach to modeling wildfire evacuations

#### Membership on Ph.D Committees

2024	Choi, M.	Agent-based modeling of crowds.
2023	Xiong, N.	Inequality in China.
2017	Campbell, M.	Wildland firefighter travel times
2016	Zhang, L.	Economic geography of China
2015	Huang, H.	Spatial analysis and economic geography
2014	Lao, H.	Spatial analysis, GIS, and economic geography
2013	Burgess, A.	Hydrologic implications of dust in snow in the Upper Colorado River Basin
2012	Davis, J.	
2012	Li, Y.	
2011	Hadley, H.	Transit sources of salinity loading in the San Rafael River, Upper Colorado River Basin, Utah
2009	Medina, R.	Use of complexity theory to understand the geographical dynamics of terrorist networks
2008	McNeally, P.	Holistic geographical visualization of spatial data with applications in avalanche forecasting
2008	Sobek, A.	Generating synthetic space-time paths using a cloning algorithm on activity behavior data
2007	Clay, C.	Biology
2006	Backus, V.	Assessing connectivity among grizzly bear populations near the U.S.-Canada border
2006	Atwood, G.	Shoreline superelevation: evidence of coastal processes of Great Salt Lake, Utah
2006	White, D.	Chronic technological hazard: the case of agricultural pesticides in the Imperial Valley, California



2005	Ahmed, N.	Time-space transformations of geographic space to explore, analyze and communicate transportation systems
2004	Shoukrey, N.	Using remote sensing and GIS for monitoring settlement growth expansion in the eastern part of the Nile Delta Governorates in Egypt (1975-1998)
2004	Hernandez, M.	A Procedural Model for Developing a GIS-Based Multiple Natural Hazard Assessment: Case Study-Southern Davis County, Utah
2003	Wu, Y-H.	Dynamic models of space-time accessibility
2003	Hung, M.	Using the V-I-S model to analyze urban environments from TM imagery
2002	Baumgrass, L.	Initiation of snowmelt on the North Slope of Alaska as observed with spaceborne passive microwave data

#### Membership on M.S. Committees

2015	Farnham, D.	Food security and drought in Ghana
2015	Fu, L.	Analyzing route choice of bicyclists in Salt Lake City
2014	Li, X.	Spatial representation in the social interaction potential metric: an analysis of scale and parameter sensitivity
2013	Johnson, D.	Parks, Recreation & Tourism
2012	Fryer, G.	Wildland firefighter entrapment avoidance: developing evacuation trigger points utilizing the WUIVAC fire spread model.
2011	Groeneveld, J.	An agent-based model of bicyclists accessing light-rail in Salt Lake City
2011	Matheson, D.S.	Evaluating the effects of spatial resolution on hyperspectral fire detection and temperature retrieval
2010	Larsen, J.	Analysis of wildfire evacuation trigger-buffer modeling from the 2003 Cedar Fire, California.
2010	Smith, G.	Development of a flash flood potential index using physiographic data sets within a geographic information system
2010	Song, Y.	Visual exploration of a large traffic database using traffic cubes
2010	Evans, J.	Parks, Recreation & Tourism
2008	Naisbitt, W.	Avalanche frequency and magnitude: using power-law exponents to investigate snow-avalanche size proportions through time and space.
2008	Kim, H.C.	Civil Engineering

2007	Gilman, T.	Evaluating transportation alternatives using a time geographic accessibility measure
2004	Baurah, A.	An integration of active microwave remote sensing and a snowmelt runoff model for stream flow prediction in the Kuparak Watershed, Arctic Alaska
2004	Bosler, J.	A Development Response to Santaquin City's Natural Disasters.
2004	Bridwell, S.	Space-time masking techniques for privacy protection in location-based services
2004	Deeb, E.	Monitoring Snowpack Evolution Using Interferometric Synthetic Aperture Radar (InSAR) on the North Slope of Alaska, USA
2004	Sobek, A.	Access-U: a web-based navigation tool for disabled students at the University of Utah
2003	Barney, C.	Locating hierarchical urban service centers along the Wasatch Front using GIS location-allocation algorithms
2002	Koenig, L.	Evaluation of passive microwave snow water equivalent algorithms in the depth hoar dominated snowpack of the Kuparuk River Watershed, Alaska, USA
2002	Larsen, C.	Family & Consumer Studies
2002	Krokoski, J.	Geology & Geophysics
2000	Granberg, B.	Automated routing and permitting system for Utah Department of Transportation
2000	Bohn, A.	An integrated analysis of the Tijuana River Watershed: application of the BASINS model to an under-monitored binational watershed

Graduate student awards

2015	R. Hile., M.A. Geography: Jeanne X. Kasperson Award, Hazards, Risk & Disasters Specialty Group, Association of American Geographers.
2015	D. Li, Ph.D. Geography: Jeanne X. Kasperson Award, Hazards, Risk & Disasters Specialty Group, Association of American Geographers.
2012	K. Klein, M.A. Geography: <i>Jeanne X. Kasperson Award</i> , Hazards, Risk & Disasters Specialty Group, Association of American Geographers.
2010	L. Cao, Ph.D. Geography: <i>Student Paper Award</i> , Spatial Analysis and Modeling (SAM) Specialty Group, Association of American Geographers.
2008	L. Siebeneck, M.A. Geography: <i>Jeanne X. Kasperson Award</i> , Hazards Specialty Group, Association of American Geographers.

- 2007 E. Pultar, M.A. Geography: *Best Paper*, GIS Specialty Group, Association of American Geographers.
- 2006 J. VanLooy (not primary advisor): *Best Paper*, Rocky Mountain Regional Meeting, Association of American Geographers.

### Undergraduate Mentoring and Advising

- 2015 Mentor, Marli Stevens, Undergraduate Research Opportunity Program: "Margin of Licensed Dog and Cat Populations and Adoptions from Animal Shelters in Utah in 2013-2014."
- 2015— Advisor, Undergraduate Hazards & Emergency Management Certificate students (~10 students so far).
- 2006—2010 Advisor, Stewart Moffat, Honor's B.S. in Undergraduate Studies: Disaster Management (published journal article).
- 2005—2007 Advisor, Brian Williams, B.S. in Undergraduate Studies: Comprehensive Emergency Management.
- 2001— Advisor, Undergraduate GIS Certificate Students (> 100 students).

### Junior Faculty Mentoring

- 2017— Andrew Linke, Department of Geography, University of Utah
- 2014—2017 Ran Wei, Department of Geography, University of Utah
- 2011—2014 Steven Farber, Department of Geography, University of Utah
- 2009—2011 Scott Miles, Dept. of Geography, Western Washington U.
- 2009—2011 Timothy W. Collins, Department of Sociology, UT El Paso

## **SERVICE**

### **Referee Duties**

#### Journals

Applied Geography  
 Annals of the Association of American Geographers  
 Cartographica  
 Computers Environment & Urban Systems  
 Disasters  
 Environmental Hazards: Policy and Practice  
 Geographical Analysis  
 Geoinformatica  
 International Journal of Geographical Information Science  
 Journal of Geographical Systems

Journal of Transport Geography  
Natural Hazards  
Natural Hazards Review  
Networks and Spatial Economics  
Photogrammetric Engineering and Remote Sensing  
Professional Geographer  
Society & Natural Resources  
Transportation Research A: Policy & Practice  
Transportation Research B: Methodological  
Transportation Research C: Emerging Technologies  
Transactions in GIS

National Science Foundation Panels

Decision Risk and Uncertainty (1)  
Geography and Spatial Science, Doctoral Dissertation Improvement Grant (4)  
Civil & Mech. Systems – Infrastructure Management and Extreme Events (2)  
Civil & Mech. Systems - Rural Resiliency (1)  
NSF and NIH: Big Data (1)  
Hazards SEES: Type 2 (1)

Proposals

Center for Disaster Management & Humanitarian Assistance  
Faculty Research Grants, University of Utah (3)

External Promotional Reviews

Full Professor (5), Associate Professor (12)

**Activities at Professional Conferences**

2000 – 2020 **Paper session co-organizer, chair**, “Hazards, GIS and Remote Sensing” session, Annual Meeting of the Association of American Geographers.  
2002 – 2003 **Paper session organizer, chair, and judge**, “GIS Specialty Group Student Paper Competition,” Association of American Geographers Annual Meeting.  
1999 **Paper session organizer**, “Location Modeling and GIS,” Annual Meeting of the Association of American Geographers, Honolulu, Hawaii, March.

**University Service**

2023 - Member, Career Line Enhancement Committee. Office of the AVP for Faculty.  
2016 – 2023 Director, Environmental Track, Professional Master in Science & Technology. The Graduate School.  
2019 – 2023 Member, RPT Standards Committee, Office of the AVP for Faculty.  
2014 – 2017 Member, Academic Senate

2014 – 2017 Member, University Promotion & Tenure Advisory Committee (UPTAC)  
 2011 – Member, Social Science General Education Committee  
 1999 – 2009 Delegate, University Consortium for GIScience  
 2013 Member, Graduate Research Fellowship (GRF) Committee  
 2010 – 2012 Member Student Evaluations Committee, Undergrad. Studies  
 2009 – 2012 Member, Graduate Council, College of Soc. and Beh. Science  
 2003 – 2004 Member, Instit. Review Board (IRB) Protocol Committee  
 2001 – 2004 Member, Social Science General Education Committee

**College Service: Social & Behavioral Science**

2014 Chair, Review, Promotion & Tenure Committee  
 2012 – 2014 Member, College Review, Promotion, & Tenure Committee  
 2015 Member, Superior Teaching Committee  
 2011 – 2012 Chair, Superior Teaching Committee  
 2007 Member, Search Committee, Inst. of Public and Intern Affairs  
 2005, 2006 Member, Superior Research Committee  
 2002, 2004 Member, Superior Teaching Committee

**Departmental Service: Geography**

2023 - Chair, Review Promotion & Tenure Committee  
 2019 - 2020 Leadership Committee  
 2015 – Member, Undergraduate Committee  
 2014 –2017 Representative, University Academic Senate  
 2014 – Director, Certificate in Hazards & Emergency Management  
 2014 Author, Proposal for Cert. in Hazards & Emergency Manage.  
 2012 – 2022 Chair, Review, Promotion & Tenure Committee  
 2013 Chair, Search Committee for GIScience Position  
 2012 Co-author, proposal for MS in GIScience  
 2011 – 2012 Director of Graduate Studies  
 2010 Search Committee Chair, Human Geography Position  
 2004 – 2015 Member, Graduate Admissions Committee  
 2004 – 2008 Member, Colloquium Committee  
 2000 – Chair, Geographic Information Science Area Committee

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# STAFF REPORT

NO. 25-02

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**TO: BOARD OF DIRECTORS**

**FROM: DAVE MCQUEAD, FIRE CHIEF**

**SUBJECT: RSF FIRE STATION 4 SHIFT DUTY BATTALION CHIEFS**

**DATE: 3/19/2025**

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## INFORMATION ONLY:

The three Shift Battalion Chiefs (BC) have been officially moved from Rancho Santa Fe (RSF) Fire Station 1 located at 16936 El Fuego, Rancho Santa Fe, CA to RSF Fire Station 4 located at 18040 Calle Ambiente, Rancho Santa Fe, CA.

## BACKGROUND:

The Shift BC position was implemented into the Rancho Santa Fe Fire District staffing model in late 2004. The three Shift BCs reside at a fire station and use the same fire suppression shift schedule as the Captain, Engineer and Firefighter. The Shift BCs are leaders, supervisors, and managers assigned to areas of responsibility. A key responsibility is emergency response and provide command and control for critical or large incidents. These emergency response types include stabbings, shootings, air ambulance landing zone, large vehicle fire, structure fires, vegetation fires, hazardous materials and technical rescues to name a few.

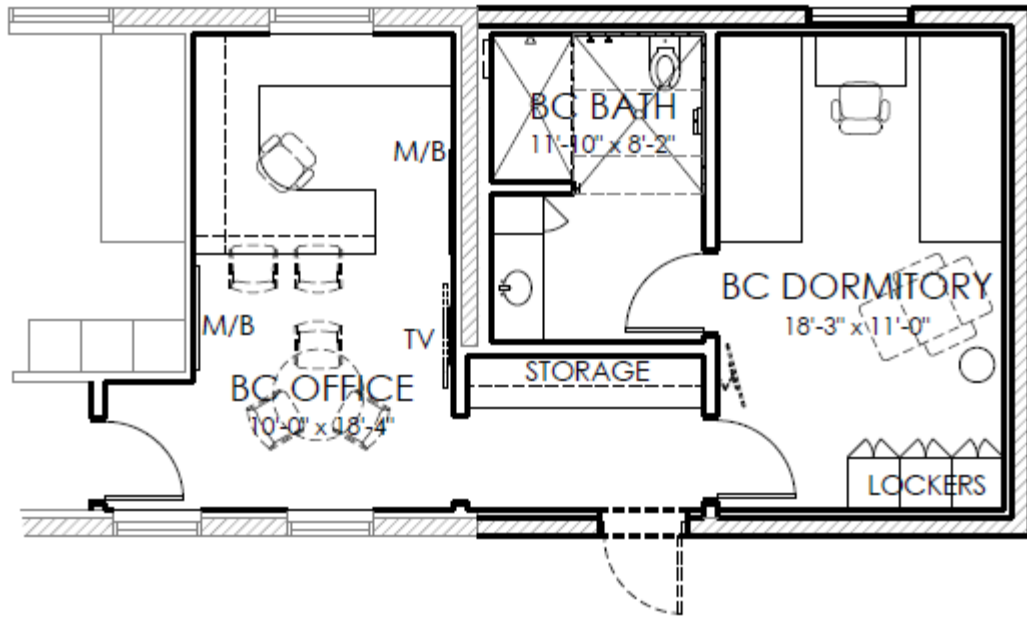
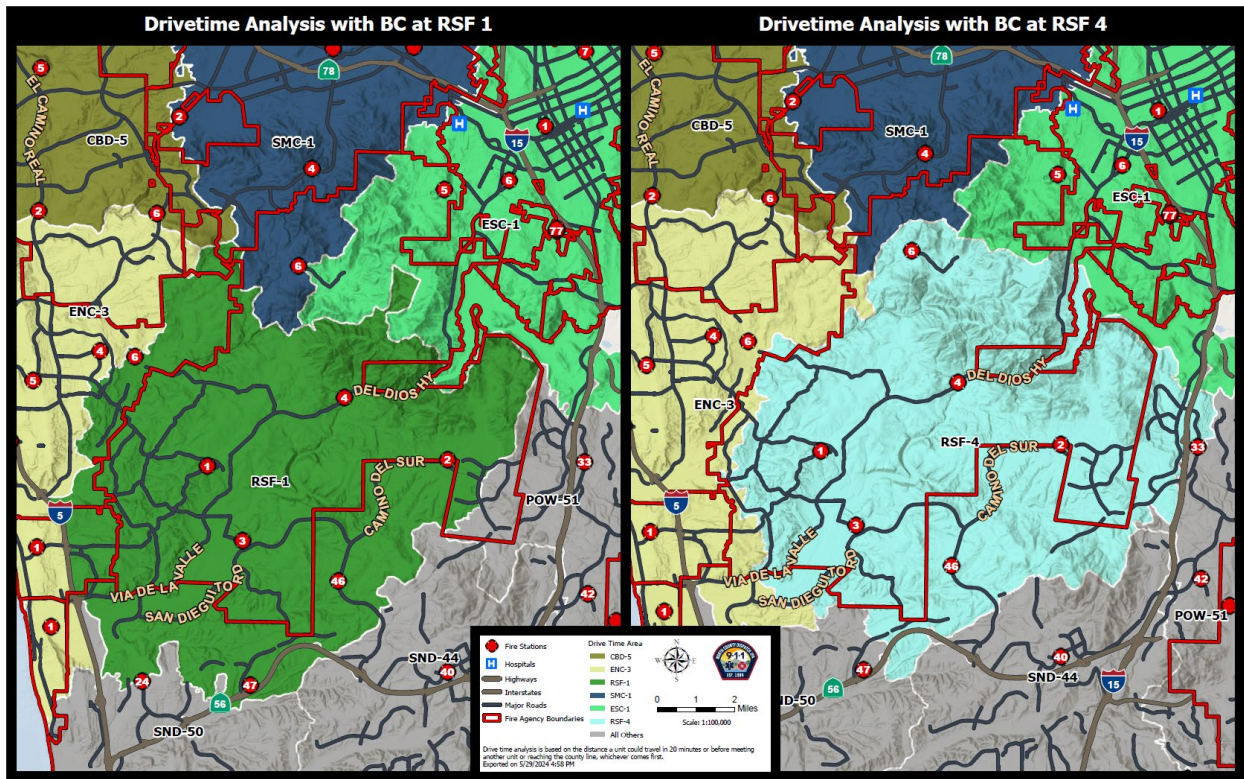
From the time of implementation, the Shift BC has been assigned to RSF Fire Station 1. This location served the fire district as a central location when the RSF Shift BC covered both the district and the coastal agencies of Encinitas Fire, Del Mar Fire and Solana Beach Fire who did not have the position of a Shift BC in place.

Today, the coastal agencies implemented their own Shift BCs to cover their jurisdiction. The official decision to move the Shift BCs from RSF Station 1 to RSF Station 4 provides a more central location for internal fire district operations and automatic aid (see map) since the reorganization of Elfin Forest/Harmony Grove in 2016, and the addition of Escondido Fire to the North County Dispatch JPA in April of 2024. The current RSF Fire Station 4 accommodations are working to support the move.

## FISCAL IMPACT:

Future Budget Impact – Need for Architectural/Engineering/Building of a dedicated Office, Dorm and Bathroom remodel/addition at RSF Fire Station 4 for the Shift BCs (see floor plan).





429 SF ADDITION  
200 SF REMODEL



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# STAFF REPORT

NO. 25-03

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TO: BOARD OF DIRECTORS

FROM: DAVE MCQUEAD, FIRE CHIEF

SUBJECT: ADDITIONAL LEASE SPACE TO NCDJPA

DATE: 3/19/2025

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## RECOMMENDATION:

Staff is requesting approval from the Board of Directors to lease additional office space at Rancho Santa Fe (RSF) Fire Station 1 (16936 El Fuego Rancho Santa Fe, Ca. 92067) to the North County Dispatch JPA.

## BACKGROUND:

The operational move of the three Shift Duty Battalion Chiefs (BC) from RSF Fire Station 1 to RSF Fire Station 4 (18040 Calle Ambiente, Rancho Santa Fe, CA 92067) created 697 SQFT (yellow highlight) of vacant office space on the first floor on the north end of RSF Fire Station 1. North County Dispatch JPA currently leases 520 SQFT of the second floor on the north end since March 1, 2017.

The North County Dispatch JPA continues to grow. They added three more emergency dispatchers to handle the call volume created by Escondido Fire joining the NCDJPA in April 2024. The North County Dispatch JPA asked for the opportunity to lease the new vacant office space (mentioned above) to provide office space and dorms for their personnel.

## FISCAL IMPACT:

If approved, staff will amend the current March 1, 2017, lease of 520 SQFT to include the addition of 697 SQFT for a total of 1,217 SQFT on the north end of RSF Fire Station 1.

The Proposed Amendment will provide an additional \$2,104.94/month at \$3.02 X 697 SQFT.

