



Welcome!
We'll be starting the presentation soon...

Dirty Work - Disaster Cleanup

April 24, 2024

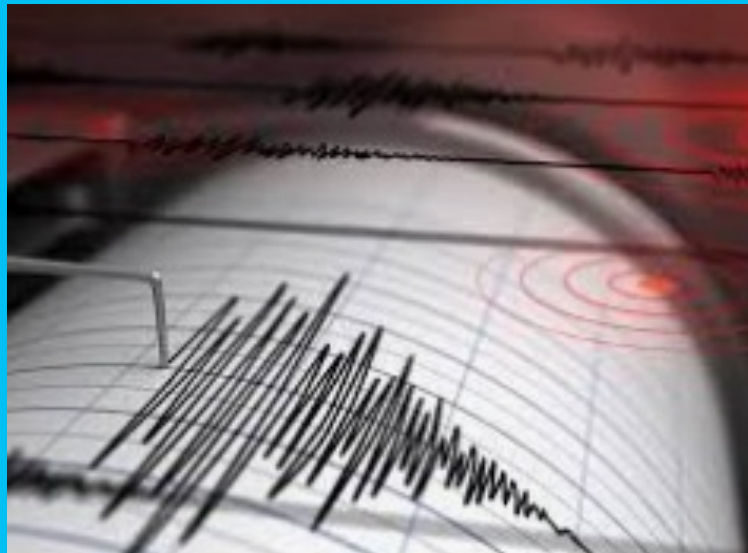
Marsha Hovey 408-722-1210
marsha@cadresv.org



Housekeeping

- Put your name and organization in the chat
- Otter A.I. and Zoom captioning are turned on.
- Ask questions at any time
- Reference materials are on the CADRE website ([link](#))

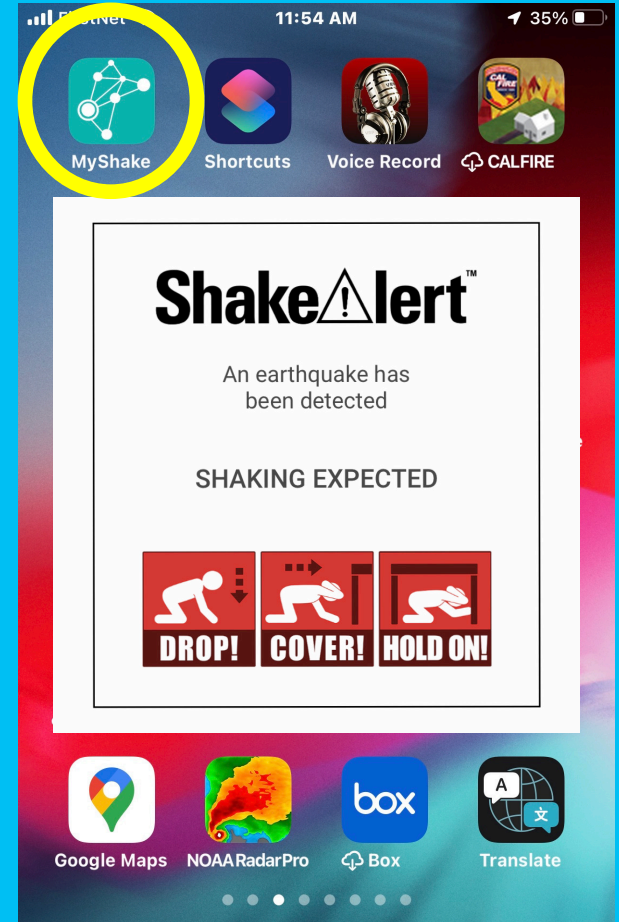
MyShake™ App



iPhone



Android

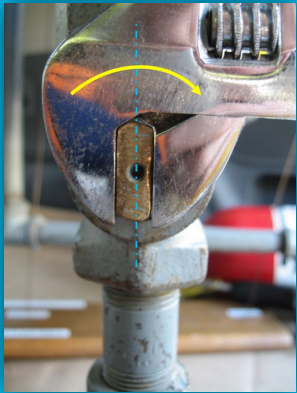




When Seconds Count Earthquake Safety for the Home



Resources:
www.cadresv.org/earthquake



Train the Trainer available

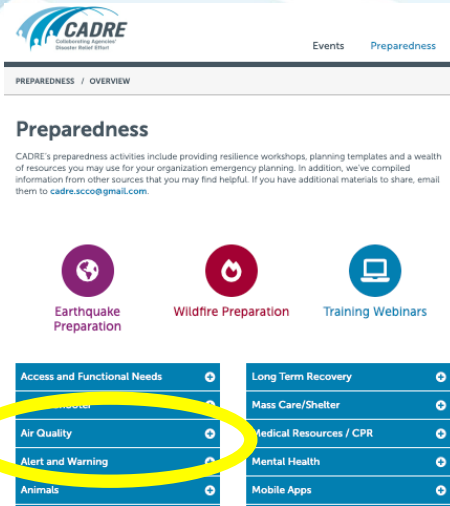


408-577-2175



English | ASL | Spanish | Vietnamese | Korean | Tagalog | Chinese |
Amharic | Hindi | Portuguese | Russian and more!

Wildfire Air Quality



Air Quality

Resources for Air Quality

Here are a number of good resources for Air Quality. Find the resources that work best for your situation.

California Air Resources Board website has a lot of good educational materials.

Air Now

- [California Air Resources Board](#)
- [Emergencies and Indoor Air Quality](#)
- [California Smoke Information](#)
- [Purple Air](#)
- [Bay Area Air Quality Management District](#)
- [County Public Health DIY Filter Fan](#)
- [DIY Air Filter/Fan combo](#)

- ✓ BAAQMD
- ✓ EPA
- ✓ CA Air Resources

School Air Quality Activity Recommendations

PROTECT STUDENT HEALTH DURING POOR AIR QUALITY

Air quality is an important consideration for schools when planning student activities. The Bay Area Air Quality Management District is available to assist schools with understanding local air quality and actions to take to protect student health. To find out more, visit www.BAAQMD.gov or call 415-749-4900.



The following school activity recommendations are based on consultation with health researchers and several important principles drawn from recent studies.

Activity	Air Quality Level				
	LEVEL 1 AQI 0-50 PM _{2.5} 0-12 µg/m ³	LEVEL 2 AQI 51-100 PM _{2.5} 13-35 µg/m ³	LEVEL 3 AQI 101-150 PM _{2.5} 36-55 µg/m ³	LEVEL 4 AQI 151-200 PM _{2.5} 56-150 µg/m ³	LEVEL 5 AQI 201 or higher PM _{2.5} 151-500 µg/m ³ <small>School districts may consider closures based on site-by-site concerns.</small>
Recess (15min)	No restrictions	Ensure that sensitive individuals are medically managing their condition.*	Sensitive individuals should exercise indoors or avoid vigorous outdoor activities.*	Exercise indoors or avoid vigorous outdoor activities. Sensitive individuals should remain indoors.*	No outdoor activity. All activities should be moved indoors.
P.E. (1hr)	No restrictions	Ensure that sensitive individuals are medically managing their condition.*	Sensitive individuals should exercise indoors or avoid vigorous outdoor activities.*	Exercise indoors or limit vigorous outdoor activities to a maximum of 15 minutes. Sensitive individuals should remain indoors.*	No outdoor activity. All activities should be moved indoors.



DIY Air Filter



Wildfire Safety

Wildfire Preparedness

Page Under Construction

WILDFIRE ALERTS    Funded by

If you think you're in danger, don't wait for an alert, leave immediately!

-  **RED FLAG WARNING - BE ALERT.**
Fire conditions (dry, hot, windy) are occurring. 
-  **EVACUATION WARNING - GET READY TO LEAVE.**
Fire is close. Leave now if you need extra time. 
-  **EVACUATION ORDER - LEAVE IMMEDIATELY.**
Fire is here, you are in danger! 



Learn more about alerts and preparing for wildfire: Cadresv.org/Wildfire



- Translations
- English
 - Chinese
 - Hindi
 - Japanese
 - Korean
 - Spanish
 - Tagalog
 - Tamil
 - Vietnamese

Red Flag Warning from the National Weather Service	+
Evacuation Warning - Alert	+
Evacuation Order - Alert	+
Prepare Before Wildfire	+
After Wildfire Recovery	-
All Local Trusted Information Sources	+
Returning Home After Wildfire	+
Wildfire Smoke Safety *NEW*	+

- Mini Videos
- Wildfire Alerts
- Evacuations
- What to Expect
- Immigrant Support
- Access and Functional Needs

WILDFIRE READINESS   More Info: cadresv.org/wildfire

Fire is HOT!
Heat is more dangerous than flames. Room temperatures can rise to 600 degrees at eye level. Inhaling this super-hot air will scorch your lungs and melt clothes to your skin.

Fire is FAST!
In less than 30 seconds a small flame can turn into a major fire. In minutes a house can be engulfed in flames.

Fire is DARK!
Fire starts bright, but quickly produces black smoke and complete darkness.

Fire is DEADLY!
Smoke and toxic gases produced by fires kill more people than flames do, with asphyxiation being the leading cause of fire deaths.

Remember, leave immediately if you feel you're in danger, don't wait for an alert or warning!

WILDFIRE ALERTS AND WHAT YOU SHOULD DO:

<p>Red Flag Warning – Stay Alert Fire conditions are occurring (dry, hot, windy).</p> <ul style="list-style-type: none"> Stay alert to your surroundings via news, government websites, and Alert SCC, the county's alert system. Sign up: www.alertsccc.com Have phone volumes turned up to ensure you hear alerts. Check with your city to learn about their evacuation plans and where you should go. 	<p>Evacuation Warning – Be Ready. Fire is close.</p> <p>Leave now if you're sensitive to air quality, need extra time, or have large animals.</p> <ul style="list-style-type: none"> Prepare animals and children for evacuation. Coordinate with family members who aren't at home and warn your neighbors. Have bags packed with essential documents and items to meet personal needs. 	<p>Evacuation Order – Leave now!</p> <p>Fire is here, you are in danger. You no longer have time to pack or prepare, get out of the area now!</p> <ul style="list-style-type: none"> Close doors and windows on your way out. Make your house visible for fire fighters by leaving lights on inside and outside the house.
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Session Objectives

Provide an overview of the challenges and requirements of debris cleanup (Government and Community Support)

Learn about the capabilities of local partners in disaster cleanup

Identify opportunities to collaborate

Provide resources for planning and coordination



Today's Presenters

**American Red Cross
CalRecycle**

Catholic Charities Santa Clara County

Crisis Cleanup

Team Rubicon

Tzu Chi Foundation

Emergency Coordination

Private/Nonprofit/Faith

Government



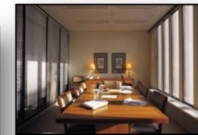
The 5 Levels of SEMS



Field (IC)



Local Government /City



Operational Area/County



OES Region



State

"All disasters start and end at the local level"



Support Organizations

All Hands and Hearts
Americorp
Cajun Navy Ground Force
Cal Vol Disaster Services Unit
Christian Action (Southeast)
Christian Aid Ministries
Convoy of Hope
Fuller Center
Hope Crisis Response Team
Hope Force International
ICNA Relief
Latter Day Saints (LDS)
Lions Club International
Lutheran World Relief
Mennonite Disaster Services (MDS)



Support Organizations

Nazarene

Nechama

Newcastle Delaware

Operation Blessing

Reach Out Worldwide

Rebuild Together

Samaritan's Purse

Sister Corp

Southern Baptist Disaster Relief

UMCOR/UMC

United Way

Week of Compassion



**CRISIS
CLEANUP**

Aaron Titus

Executive Director

www.crisiscleanup.org



CalRecycle



Amber Lane
Associate Safety Engineer
Disaster Debris Recovery Operations (DDRO)
California Department of Resources
Recycling and Recovery
<https://calrecycle.ca.gov/>

Amber Lane

Associate Safety Engineer
CalRecycle DDRO



Disaster Debris Recovery Operations

Objectives

Who is CalRecycle?

Order of Engagement

How does it work?

Future Partnerships



Who is CalRecycle?

Resource Reduction, Reuse,
and Recycle

Environmental Education

Transition to a Circular
Economy

Disaster Recovery



Local Response

A Proclamation of a **Local Health Emergency**

What kind of HELP is needed?

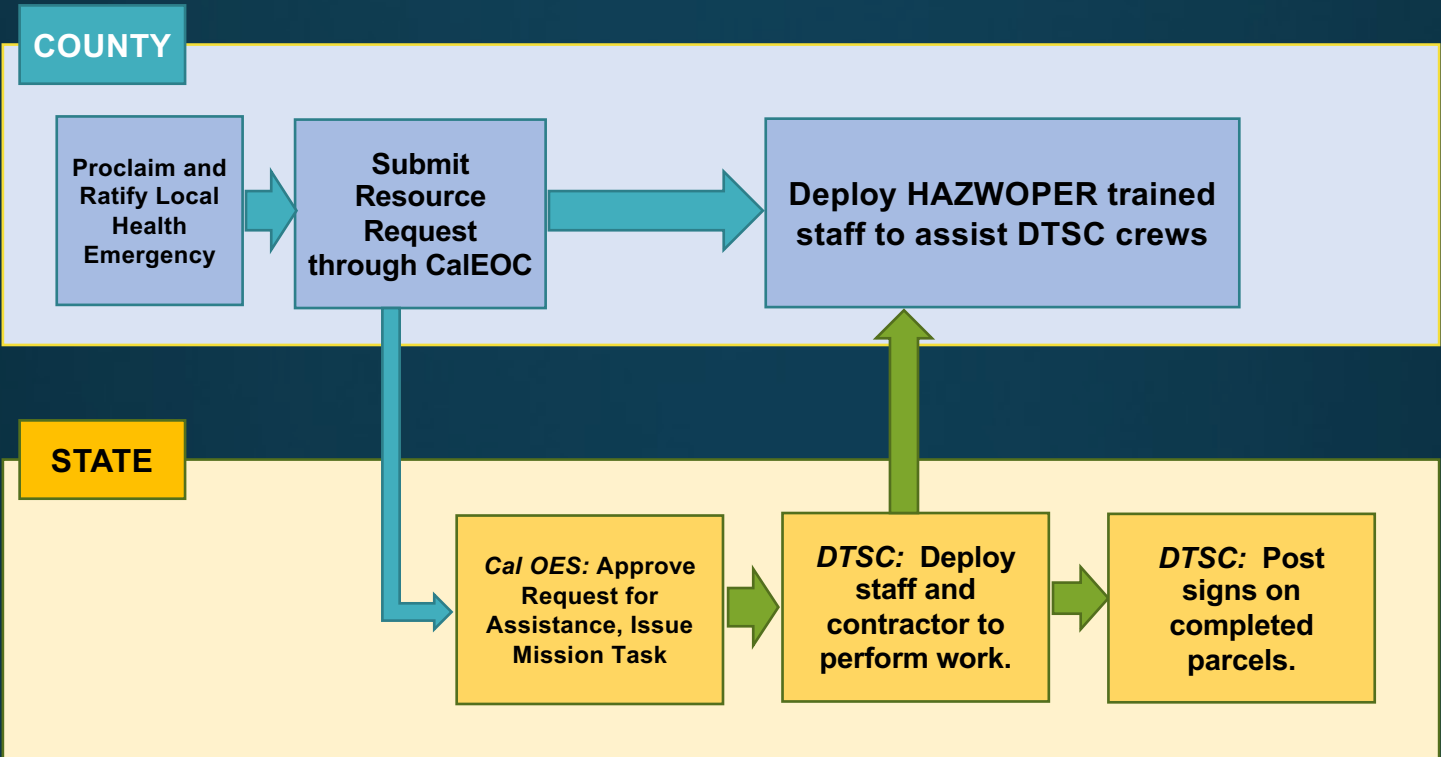
Proclaim a local state of emergency

Request State/Federal Assistance

Request Private Property Debris Removal

Urgency Ordinance

Proclaim a Local Health Emergency



Request Process

County Continues Engagement



Proclaim a Local Health
Emergency for the City/County



Collect, review and approve Right
of Entry (ROE) forms



Coordinate with local, state, and
federal agencies regarding
regulatory requirements for
debris operations.



Organize Non-Governmental
Organizations (NGO)



Review completed work for each
APN to verify all work is completed
and sign off so that APN can be
returned to Homeowner.

CALIFORNIA WILDFIRES

	Year	Properties	Tonnage
North Bay Fires (Sonoma, Napa, Lake, Mendocino)	2017	4,563	2,000,000
Camp (Butte)	2018	14,700	3,660,000
Woolsey (Ventura & LA)	2018	933	419,000
2020 Statewide Fires	2020	3,827	863,042
Dixie Fire	2021	735	151,566
Caldor Fire	2021	774	173,724

All Hazards Debris





Disaster Debris Types

- **PHASE I: HHW**
 - Paints
 - Cleaners
 - Fuel
 - Acute asbestos
 - Lithium-ion batteries
- **PHASE II: Ash & Debris**
 - Asbestos
 - Construction / Concrete / Household Contents
 - Electronics
 - Vehicles & Tires
 - Remains
 - Unexploded Ordinance (UXO)



Other Types of Debris: Vegetation, Sediment, Dead animals

Debris Related Health & Safety Concerns



3 Paths to Human Exposure



Ash & Debris



Where Might Asbestos Be in the Home?

Note: Asbestos usage has declined dramatically; some uses have been banned. Asbestos might be found in older homes and certain products. (See page 5)



A Exterior Surfaces

1. Deck Undersheating
2. Cement Asbestos Board Siding and Undersheating
3. Roof Felt and Shingles
4. Window Putty

B Automobiles

1. Brake Linings, Clutch Facings, and Gaskets

C Insulation

1. Vermiculite Attic Insulation
2. Batt Insulation
3. Vermiculite Wall Insulation

D Flooring

1. Vinyl Asbestos Sheets, Tiles, and Undersheating

E Boilers, Heaters and Piping

1. Heat Source Covering
2. Air Duct Lining
3. Door and Cover Gaskets
4. Pipe Lagging
5. Wall Gaskets and Lining

F Interior Surfaces

1. Sprayed-on Acoustical Ceilings
2. Acoustical Tiles
3. Textured Paint
4. Heat Reflectors (Woodstoves)

G Electrical Equipment

1. Lamp Sockets
2. Outlet and Switchboxes
3. Insulation on Knob and Tube Wiring
4. Recessed Lighting
5. Main Panel and Fuse Boxes

H Built-in Equipment

1. Water Heaters
2. Range Hoods
3. Clothes Dryers
4. Dishwashers

I Appliances

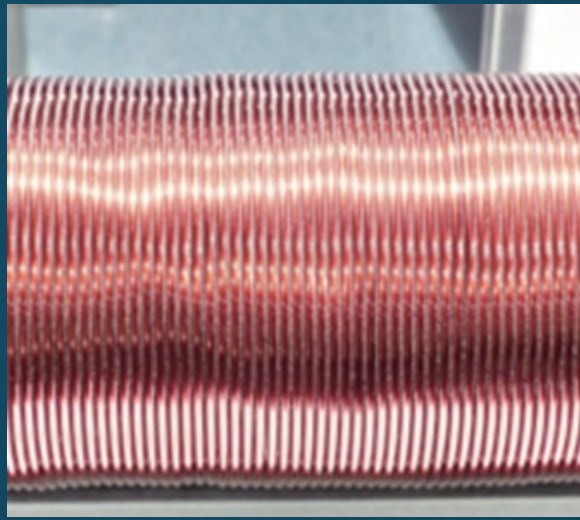
1. Refrigerators, Freezers, Portable Dishwashers, Toasters, Slow-cookers, Ovens, Hair Dryers (not shown) and Portable Heaters (not shown)

J Miscellaneous

1. Fireplace Logs
2. Asbestos Hot Pads
3. Asbestos Gloves

Toxic Metals Found in Fire Debris

- ARSENIC
- COPPER
- CHROMIUM
- LEAD



Disaster Haz Mat



Debris Streams

Landfills are reviewed and approved at the early stages of the project.

- **Asbestos**

- Must be taken to a lined Class III Landfill, permitted to accept asbestos

- **Chimneys**

- If not containing asbestos, will be removed with ash/debris
- If containing asbestos, must be taken to a permitted and lined Class III Landfill

- **Vehicles**

- Recycled as metal once the appropriate adjudication is completed

- **Metals**

- Taken to a metal recycling facility

- **Ash/Debris**

- This is disposed of at an approved landfill

- **Concrete**

- Recycled or transported to an approved landfill

- **Soil**

- Disposed of at an approved landfill

**Hazardous Materials – Sometimes not all hazardous materials are located and removed earlier in the process. If found during debris removal, these are set aside for DTSC to conduct a pick-up.*

Soil Confirmation Sampling

- Residual structural ash contains concentrated amounts of “heavy metals”, such as arsenic, beryllium, cadmium, cobalt, copper, lead, mercury, nickel, thallium, vanadium, and zinc
- Asbestos is present in older home sites pre 1985 (ish)
- Lead is prevalent in older communities pre-1978



Soil Sampling Confirmation (mg/kg)

	Sb	As	Ba	Be	Cd	Cr	Co
Regulatory Screening Levels	31	0.11	9,999	16	7.1	2,499	23
Background Level	0.38	4.9	210	0.44	1.1	51	14
Tv Area Cleanup Goal	31	4.9	9,999	16	7.1	2,499	23

Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	V	Zn
2,499	80	1	390	820	99	390	5	390	4,999
68	74	0.4	2.3	44	0.7	0.17	0.10	90	210
2,499	80	1.0	390	820	99	390	5.0	390	4,999

- DTSC, Office of Human Health and Ecological Risk Assessment, Note 3, June 2020 (HERO Note 3)
- CalEPA, Revised California Human Health Screening Levels (CHHSL), September 2010
- California Hazardous Waste Total Threshold Limits Concentration (TTLC), California Code of Regulations, Title 22, Chapter 11, Article 3
- U.S. EPA Regional Soil Levels (RSL)

Personal Protective Equipment (PPE)

- Respirator
- N-95 mask
- Gloves
- Long shirts and pants
- Shoe coverings
- Safety eyewear

***Wear
Protective
Gear***

WHO PAYS?

Public program

- Federal/State/ Local partnership
- Insurance + public disaster funding

PRIVATE (residential Phase II)

- Private/ Insurance

COMMERCIAL

- Special Inclusion request made by county
- FEMA may fund

INSURANCE**

- The County is responsible for collecting insurance
- Only collect "debris removal" portion of insurance policy (if any)
- Do not take all insurance proceeds
- No charge to Homeowner if there is no insurance

Key Takeaways



Know who and what CalRecycle does.



Who, what, when, and where partnering agencies involvement.



Who pays?



Future involvement



**Disaster Debris
Recovery Operations**

Questions?

OUR MISSION //

Team Rubicon is a veteran-led humanitarian organization that serves global communities before, during and after disasters and crises.



Suzi Lyon

<https://teamrubiconusa.org/>

Response and Recovery Capabilities

Core Operations/Debris Removal

- Muck-Out
- Structure Demolition
- Vegetative Debris Removal
- Non-Vegetative Debris Removal
- Tarping
- Window Boarding
- Sifting

Staff Augmentation

- POD Site Administration
- Logistics
- EOC Support

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Mitigation Capabilities

Wildfire Mitigation

- Defensible Space
- Fuel Break
- Fuel Reduction
- Home Ignition Zone (HIZ) Assessments

Flood Mitigation

- Sand Bagging
- Barrier Creation and Placement
- Debris Removal From Waterways
- Erosion Control



Disaster Cleanup & Repair For Your Home

Tips for reversing the damage done to your home during a disaster.

Clothing & Gear

Cleaning Supplies

Cleaning Up

Water Damage

Smoke Damage

- Detergent
- Long pants
- Bleach
- Long sleeved shirt
- TSP, if allowed in your area
- Sturdy shoes or boots (no tennis shoes or flip flops)
- Shop vac or canister vacuum
- Work gloves
- Sponges
- Buckets
- Eye protection
- Rubber gloves
- Disposable masks
- Mops and brooms
- Hard hats
- Shovels and rakes, if mud or other debris has entered your home
- Carpet knife, if wall to wall carpeting will need to be removed
- Heavy duty trash bags



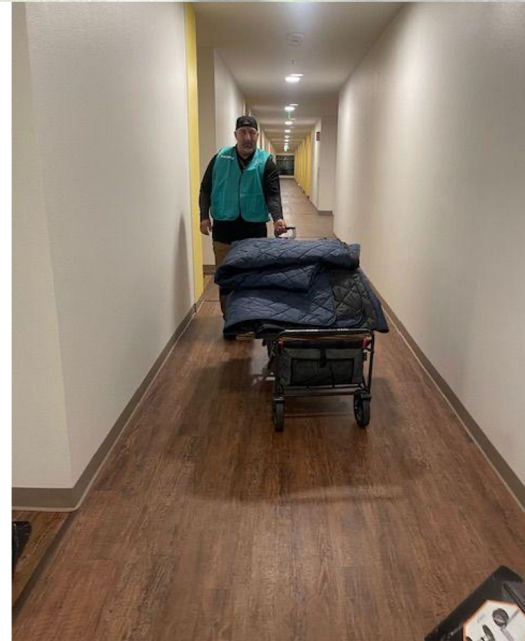
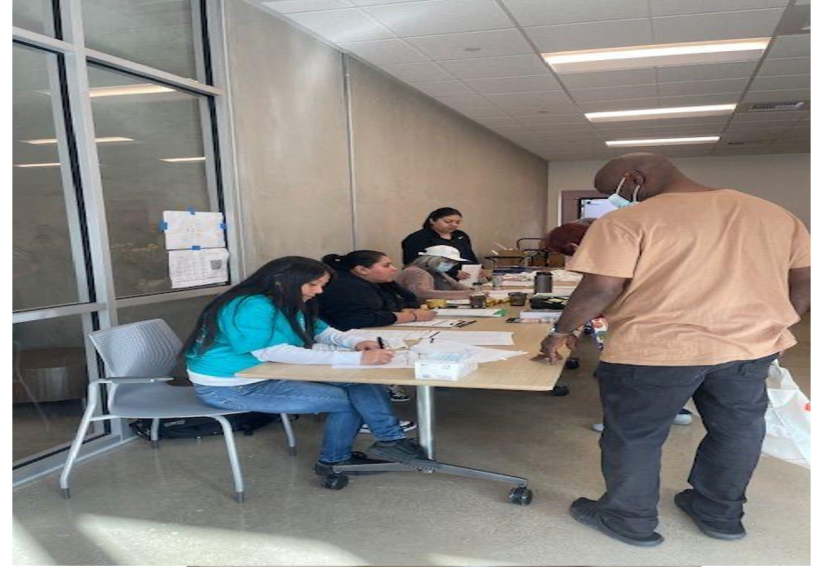


Catholic Charities
of Santa Clara County

Araceli Gonzales

Division Director of Emergency Programs & Housing Services

agonzales2@catholiccharitiesscc.org





Disaster Cleanup Learning

Tzu Chi Foundation

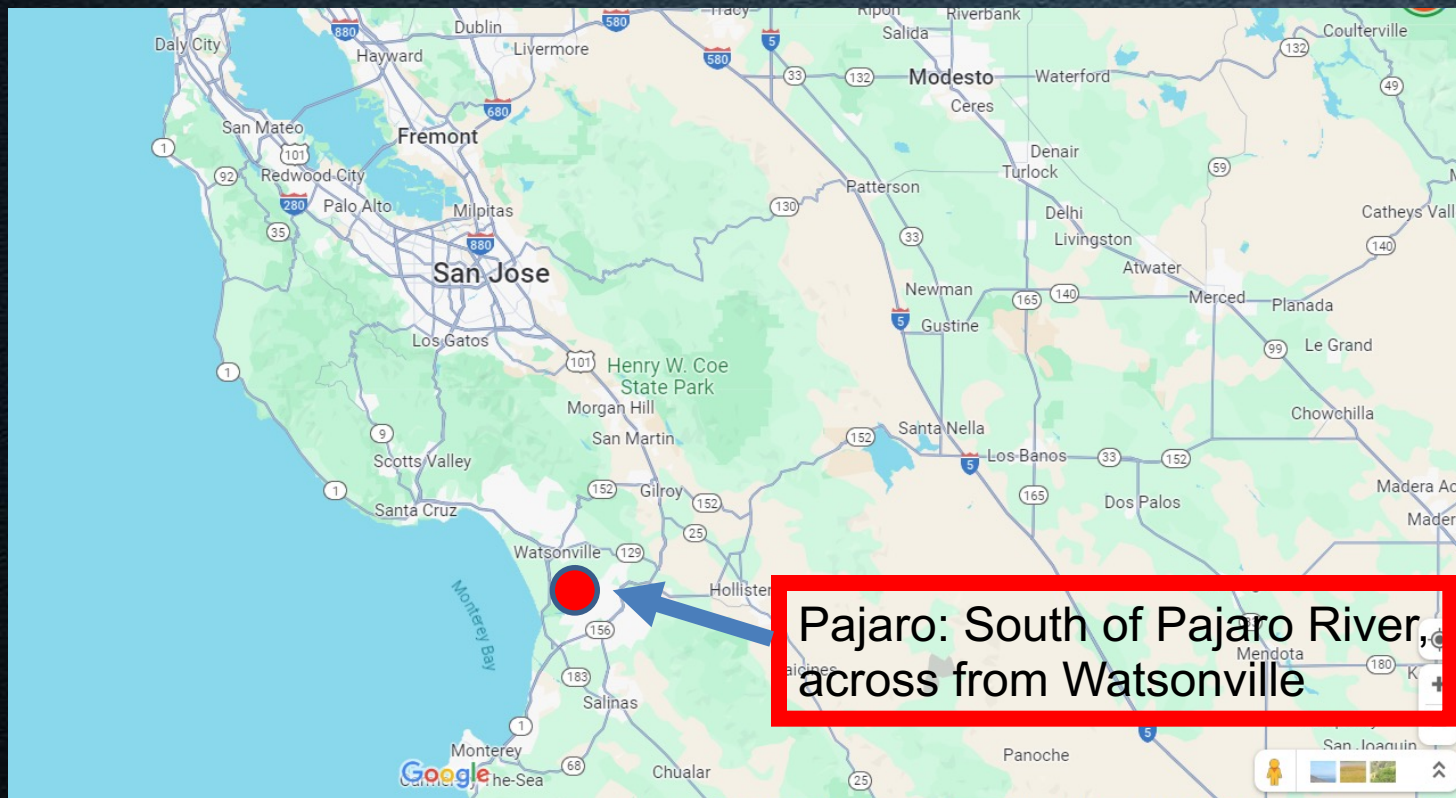
Deputy Executive Director
Minjhing Hsieh

4/24/2024



March 11, 2023 Pajaro Flood

- Pajaro river levee broke in early Morning (mid-night) on 3/11/2023. [See youtube video](#)





March 12, 2023



- Pajaro River On-site Assessment
- Handed out blankets





April 1-14, 2023



- Door by door Assessment
- Decided to focus on the mobile home community.





April 15, 2023



- Distributed financial assistance in mobile home park.
- Looked at community in more details.
- Senior/low-income families desperately need cleanup help.
- Volunteers expressed strong wishes to help.





April 22, 2023, 1 week later



- HCRN (Hope Crisis Response Network) organized cleanup project for Tzu Chi volunteers. Thank you, Kevin Kox.
- Mobilizing compassion in times of great need, indeed.



April 22, 2023, Earth Day !



- A platoon of infantry from Tzu Chi showed up.
- Most volunteers are Silicon Valley engineers, first time doing this.



April 22, 2023



- Very physical demanding, esp. wrapped within coverall protective suits.
- **They worked really hard.**
- But very rewarding, when seeing the survivors' smiles.



Who can do cleanup?



- Samuel (40): I never knew I can do this. Let me know earlier next time !
- Rey (70): It's hot, tiring, but I am very happy I came.



Key Learning – A Joyful Day

- **Motivation** when actually seeing and feeling survivors' sufferings and needs.
- **Coordination** of locations and manpower is challenging.
- **Connection and recruiting** through community or faith based organization.
- **Trust and communication protocol** established ahead of time.
- **Safety and care:** appreciated by volunteers.
- **Team spirit:** creates sense of belonging and supporting.



Help Heal Maui Relief



Turkey Earthquake Relief



Hurricane Ian Relief



Love & Compassion
for Ukraine



Relief After
Tornadoes



2021 Haiti
Earthquake Relief



Hurricane/Tropical
Storm Ida relief



Camp Fire Relief
Mission



Tzu Chi USA

Minjhing Hsieh

<https://tzuchi.us/offices/sanjose>



Website Resources

www.cadresv.org



Events

Preparedness

Response & Relief

Recovery

About



CADRE

(Collaborating Agencies'
Disaster Relief Effort)

is a leading network of organizations that
provide community services that are
essential in times of disaster

[LEARN MORE](#)



The mission of CADRE is to strengthen coordination of the disaster response and recovery efforts of non-profit, faith-based, government, private and other disaster relief entities in Santa Clara County, through partnerships, planning, training, exercises and emergency activation.

[LEARN MORE](#)

Upcoming Events

APR 24 10:00 am - 12:00 pm
Post Disaster Cleanup

APR 25 10:00 am - 12:00 pm
Standing Together –

New Resources

Dirty Job – Post Disaster Cleanup
04/24/2024
POSTED: April 23, 2024

Watch Duty
POSTED: March 26, 2024

Announcements

CADRE Connection Newsletter April 2024
POSTED: April 11, 2024

CADRE Connection Newsletter March 2024

20 Second Survey





Next Discussions

April 25 10:00-12:00 on Zoom

Symposium Part 1

Standing Together – Creating a community disaster recovery framework

April 30 10:00-12:00 on Zoom

Extreme Heat

May 8 10:00-12:00 on Zoom

The Power of Faith – Supporting Disasters

May 14 10:00- 2:00 In Person at the Red Cross

Symposium Part 2

Standing Together – Creating a community disaster recovery framework



Thank You!

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marsha@cadresv.org



Join the CADRE Network
cadresv.org

CADRE Duty Officer 408-622-0822
CADRE Response Email cadreeoc@gmail.com is being phased out.
New email cadreeoc@cadresv.org