



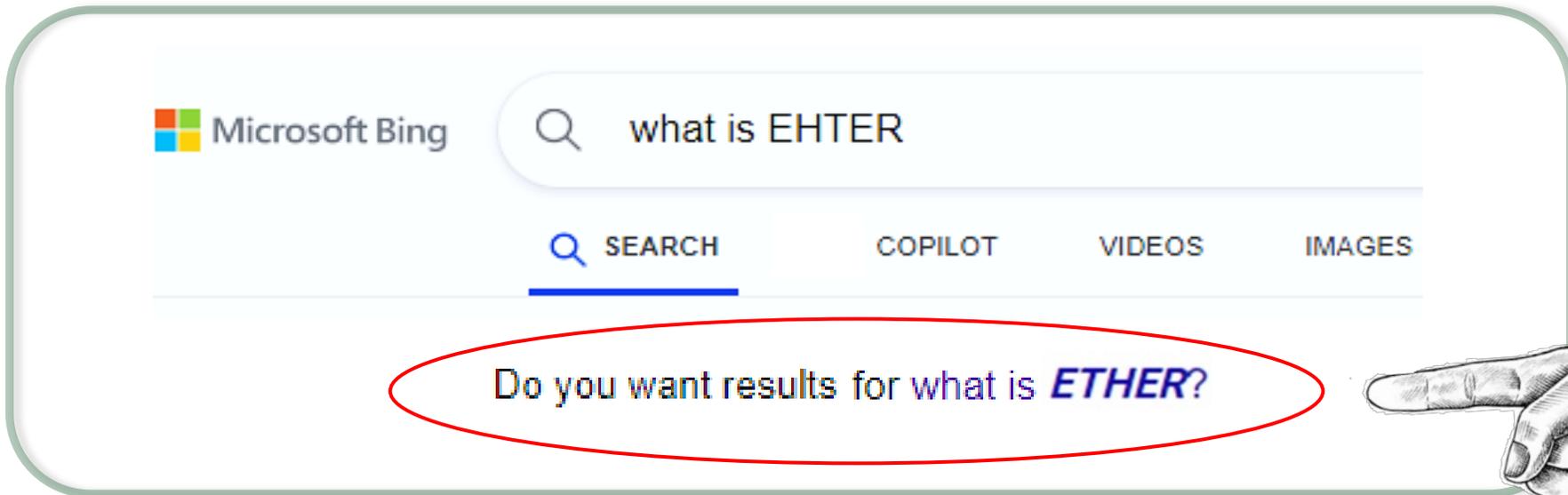
Principles of EHTER

Environmental Health Training in Emergency Response

Hoa Tan, REHS; Natalia Deardorff
Session TU-13 February 27, 2024



26th California Unified Program
Annual Training Conference
February 26-29, 2024



Did this happen
to you, too?



Environmental Health is the branch of public health that is concerned with all aspects of the natural and built environment that may affect human health.

Environmental Health Training in Emergency Response (EHTER) prepares Environmental Health Professionals to respond to emergencies in multifaceted ways in addition to their specialized skillset.

Principles of EHTER

Who is Environmental Health?

What does Environmental Health do?

When disaster strikes, how can Environmental Health help?

Where does Environmental Health fit in Emergency Response and Recovery?

Why is it crucial to include Environmental Health in Emergency Planning?

How do we support the Environmental Health Workforce?

WHO IS ENVIRONMENTAL HEALTH?

You're the ones with the clipboards, right?



Who is Environmental Health?

“Environmental health professionals are the second largest part of the local public health workforce, behind nursing.”

- National Environmental Health Association Survey of COVID Workforce, 2020

Environmental Health Jurisdictions

- Local department
- Headed by an Environmental Health Director and
- Staffed by Registered Environmental Health Specialists (REHS)



Registered Environmental Health Specialists

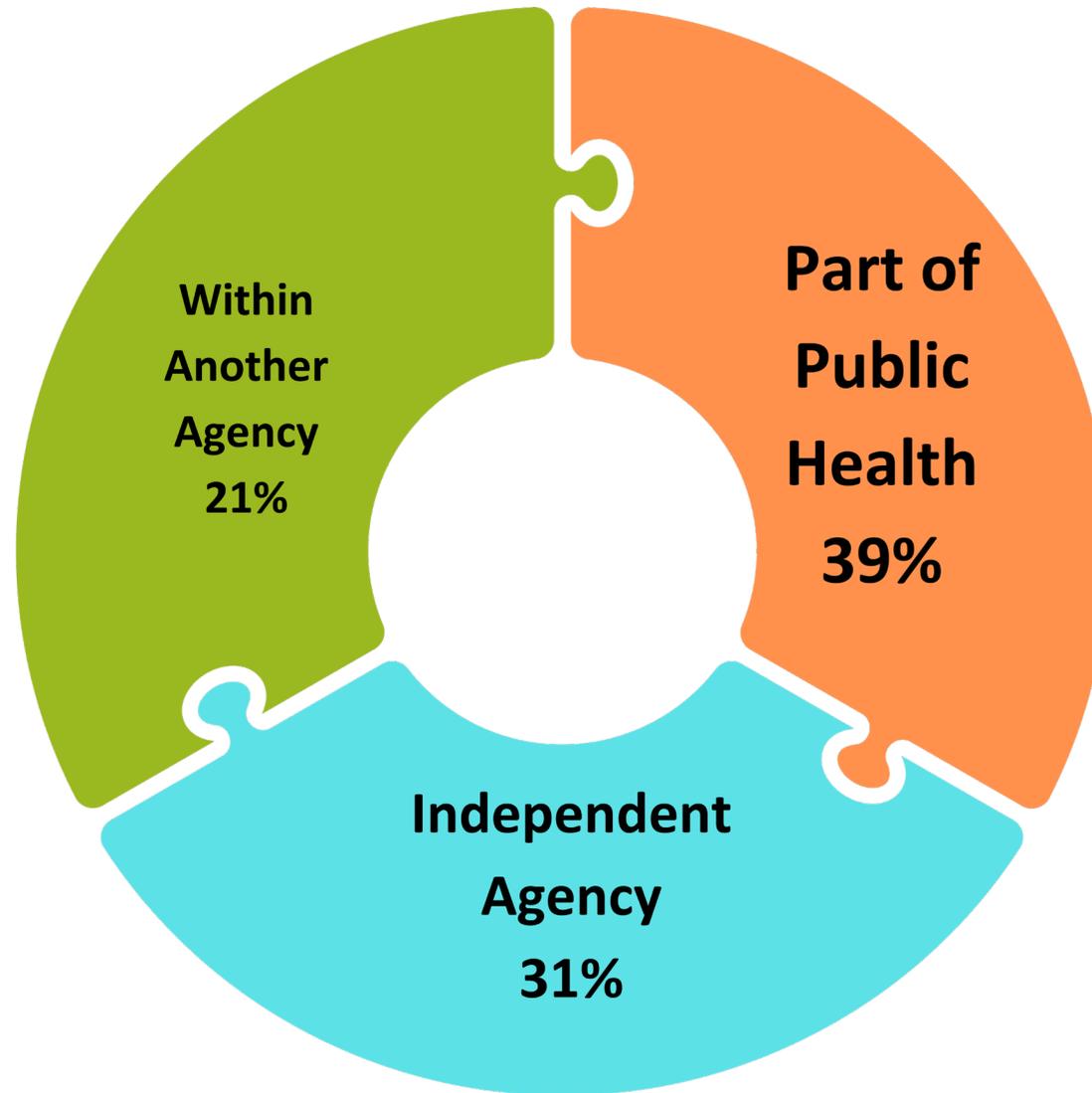
REHS: Field Inspectors that protect human health and uphold health and safety regulations.



- Science backgrounds
- Professional license requirements
- Can specialize in certain fields

Environmental Health in Your Community

62 Environmental Health Jurisdictions in California





Types of Environmental Health Professionals

- REHS
- Hazmat Specialists
- Drinking Water Treatment/Distribution Operators
- Wastewater Treatment Plant Operators
- Microbiologists
- Epidemiologists
- Health Educators
- Health Physicists
- Industrial Hygienists
- Public Health Veterinarians
- Environmental engineers
- Environmental Scientists
- Toxicologists
- Chemists
- Laboratorians
- Policy specialists/Lawyers
- Research Scientists



Environmental Health Agencies at State Level

CDPH

- Environmental Management Branch
- Food and Drug
- Radiological Health
- Environmental Health Investigations
- Occupational Health
- EHLB (Lab) sampling

CalEPA

- DTSC (Hazmat)
- CalRecycle (Debris)
- SWRCB (Water)
- CARB (Air)
- Refinery Safety and Emergency Response
- DPR (Pesticides)
- Unified Program
- OEHHA (Toxicology, Epi)

WHAT DOES ENVIRONMENTAL HEALTH DO?

You look at restaurants, right?

Protecting where we live, work, and play



Local Environmental Health Activities



Solid Waste



Wastewater



Drinking
Water



Food Safety



Water Wells



Tattoo/ Body
Art



Recreational
Health



Hazardous
Materials



Hazardous/
Medical Waste

WHEN DISASTER STRIKES

How can Environmental Health help?



Blue Sky Capabilities Morph Into....

Local Environmental Health Activities



Solid Waste



Wastewater



Drinking Water



Food Safety



Water Wells



Tattoo/ Body Art



Recreational Health



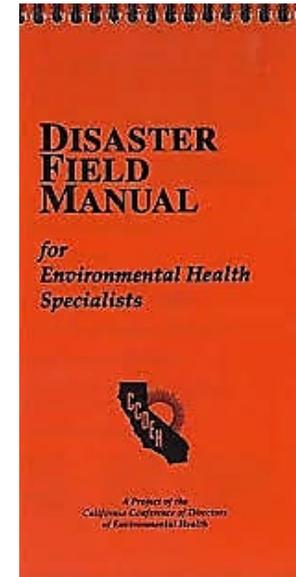
Hazardous Materials



Hazardous/ Medical Waste



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Grey Sky Environmental Health Plan



Environmental Health Disaster Response: Food Safety



Routine: food facilities, grocery stores, restaurants, mobile food trucks, temporary special events



Mass feeding operations
Food safety guidance



Closing/ keeping open
Food facilities

Environmental Health Disaster Response: Drinking Water



Routine:

Drinking Water Safety
Water sampling
Well permits
Guidance



- Damage assessment,
- Sampling/ testing
- Arranging alternative water sources
- Guidance to private well owners, water system operators
- Public Notifications – Boil Water, Do Not Drink, Do Not Use

Environmental Health Disaster Response: Wastewater



Routine:

Permit onsite treatment systems

Respond to spills/complaints

Site evaluations

Technical communication



- Damage assessment
- Sampling/ testing
- Creating alternative wastewater solutions

- Guidance to operators, community
- Public Notifications and Advisories
- Responder Safety

Environmental Health Disaster Response: Debris Management & Haz Mat



Routine:

Solid waste

Household haz waste

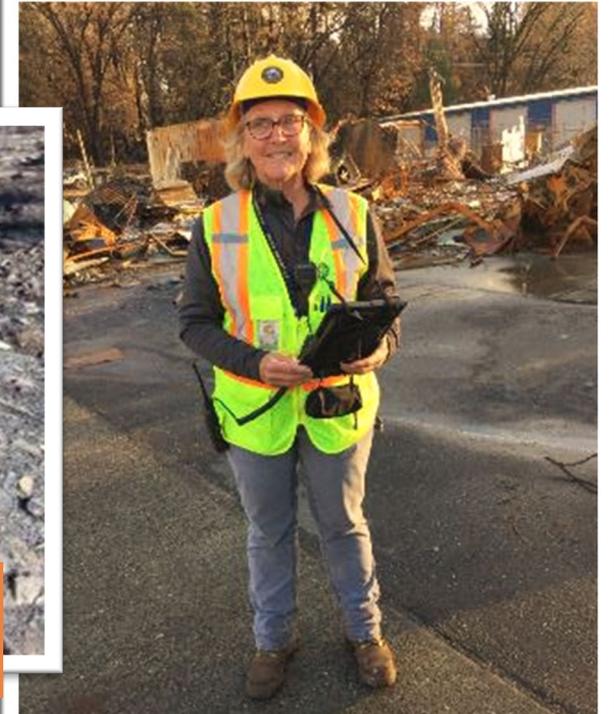
Housing/ building
health & safety

Hazardous Waste Mgmt

- Household Haz waste
- Illegal substances
- Combustion products



- Site assessments
- Health and safety



- Debris /ash –monitor characterization, collection, transport, disposal
- Soil contamination/ cleanup
- Air quality monitoring

EH Disaster Response: Community Safety, Health Education, and Resiliency



Routine:

Health Education
Public Messaging
Site assessments
Suite of EH skills

Infection control & prevention



Vectors and Pests

Shelter assessments



EOC



Community Reception Centers for Radiological Emergencies



Environmental Health Disaster Response Deployment:

Susan Leland, REHS,
Placer County

Mutual Aid Deployments:

- November 2017 –Sonoma County –
Tubbs Fire –7 weeks
- August 2018 –Shasta County –Carr
Fire –5 weeks
- November 2018 –Butte County –
Camp Fire –10 weeks

Total: 5 ½ months



Top Environmental Health Activities in Concurrent Disasters Nationwide

Mission Task	Respondents
Public Relations and Communication	62%
Engaged in the Emergency Operations Center	58%
Provide food protection measures/safe food supply	54%
Decision or policy making efforts	54%
Support in resolving conflicting health guidance/balancing disaster risks	41%

Source: [*Concurrent Disasters Needs Assessment Report 2022*](#),
[National Environmental Health Association](#)



WHERE DOES ENVIRONMENTAL HEALTH FIT IN EMERGENCY RESPONSE AND RECOVERY?

And how do I ask for resources?

Emergency Support Functions & Environmental Health

ESF #	California ESF	Environmental Health
5	Management	
6	Care & Shelter	Shelter/Housing, Mass Feeding
7	Resources	
8	Public Health & Medical (CDPH)	All hazards
9	Search & Rescue	
10	Hazardous Materials (CalEPA)	Debris, Radiation, Toxics
11	Food & Agriculture	Food Safety
12	Utilities	Water Safety, Power, Wastewater Treatment
13	Law Enforcement	
15	Public Information	Public and regulated facilities messaging

KEY PARTNERS



LOCAL/
REGIONAL

Environmental Health
Public Health
OES
Public Works
Public Utilities
Building Dept.

Air Districts
Water Districts
Mosquito Control
Fire/Hazmat/LE
Human Svces



STATE

CDPH/ CDOs
CalEPA / BDOs
CDFA
CDFW
CNRA

CalOES LE/Fire/Hazmat
Cal Natl Guard CST 9th
and 95th



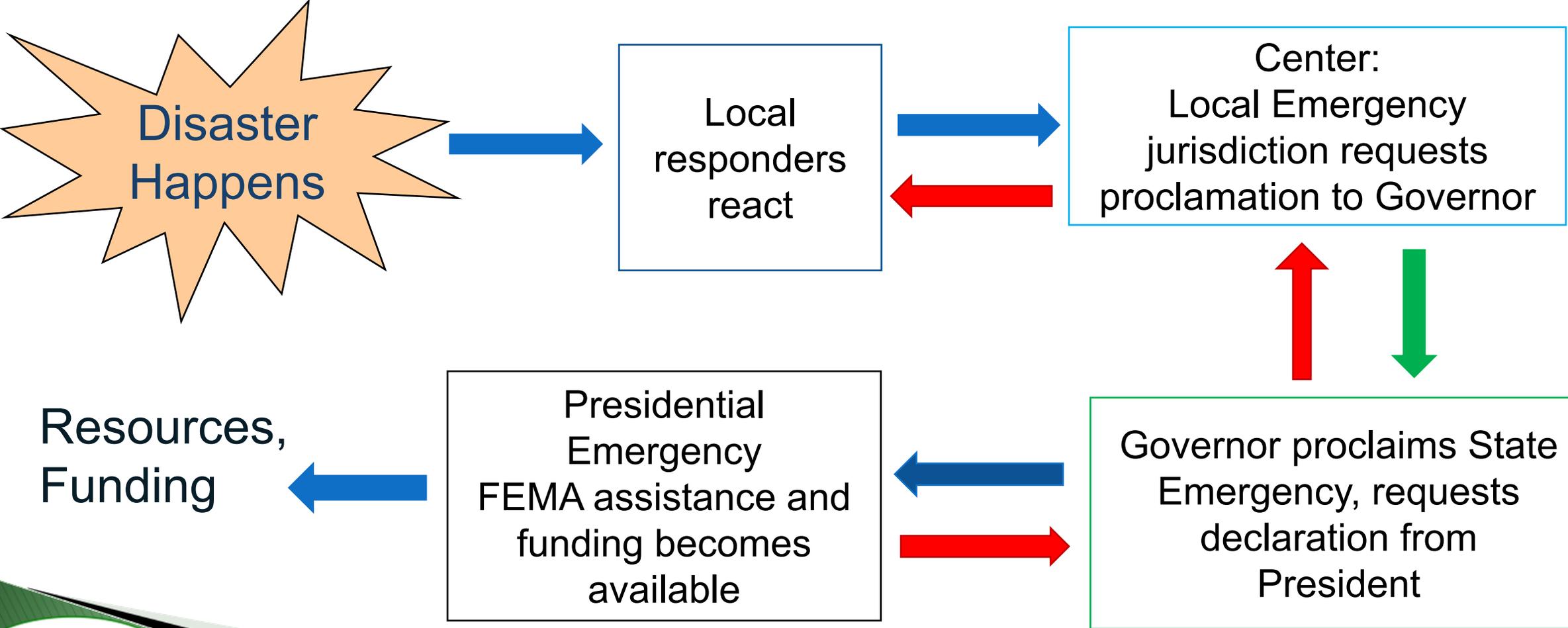
FEDERAL

CDC
US HHS
US EPA
US FDA
USDA

FEMA
Homeland Security
DOD
Dept Of Energy



SEMS Resource Requesting Pathway



Public Health & Medical Mutual Aid

SEMS Level

Coordination Function

Field

Local Government

Operational Area

Mutual Aid Region

State

Public Health Officer

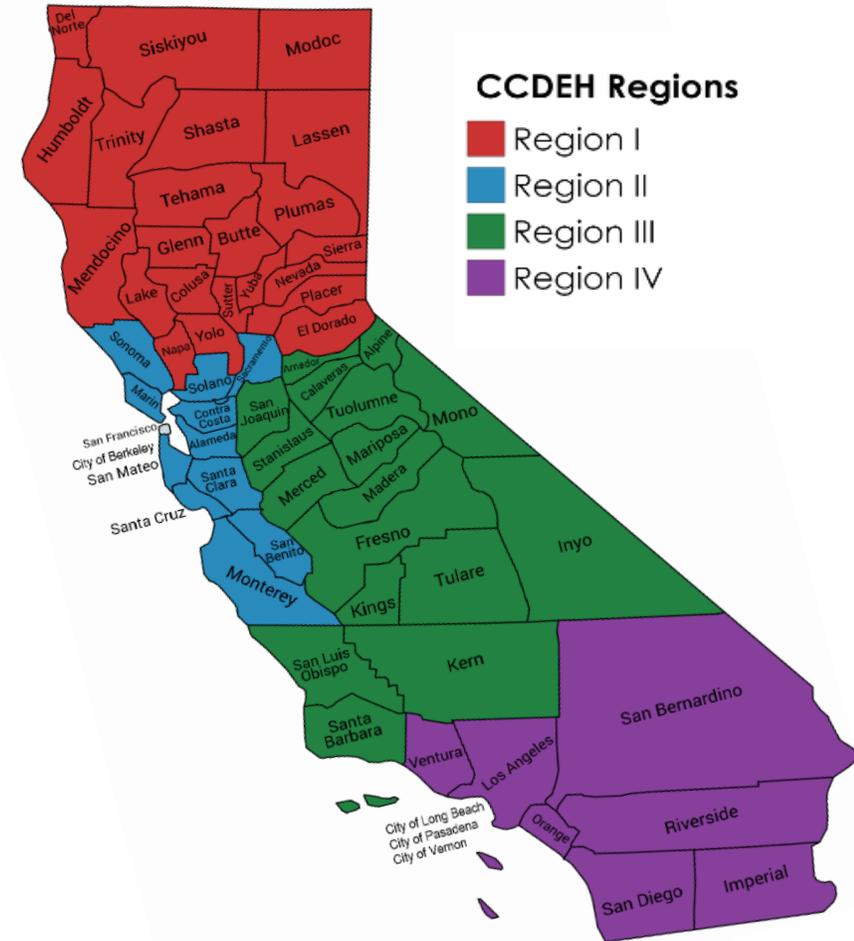
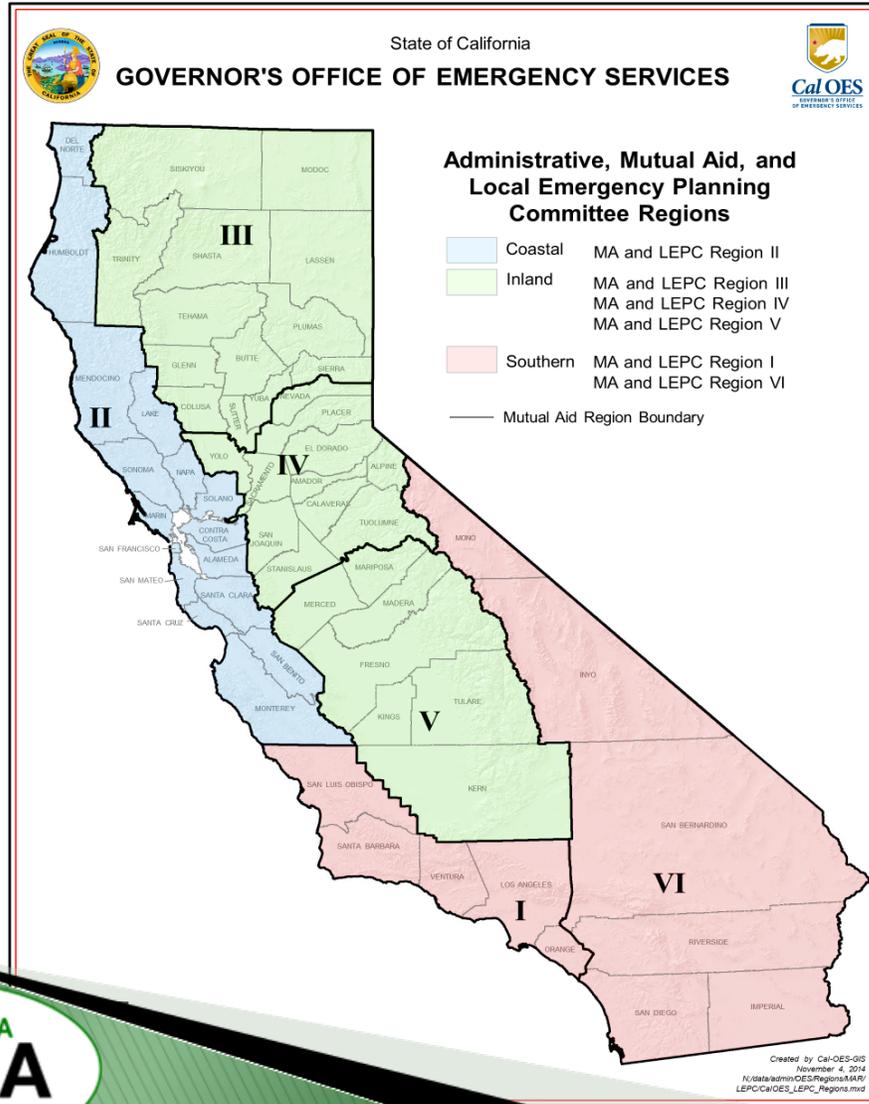
Medical & Health Operational Area
Coordinator (MHOAC)

Regional Disaster Medical Health Regional
Coordinator (RDMHC)

CDPH and EMSA Duty Officer Programs;
Medical and Health Coordination Center
(MHCC)

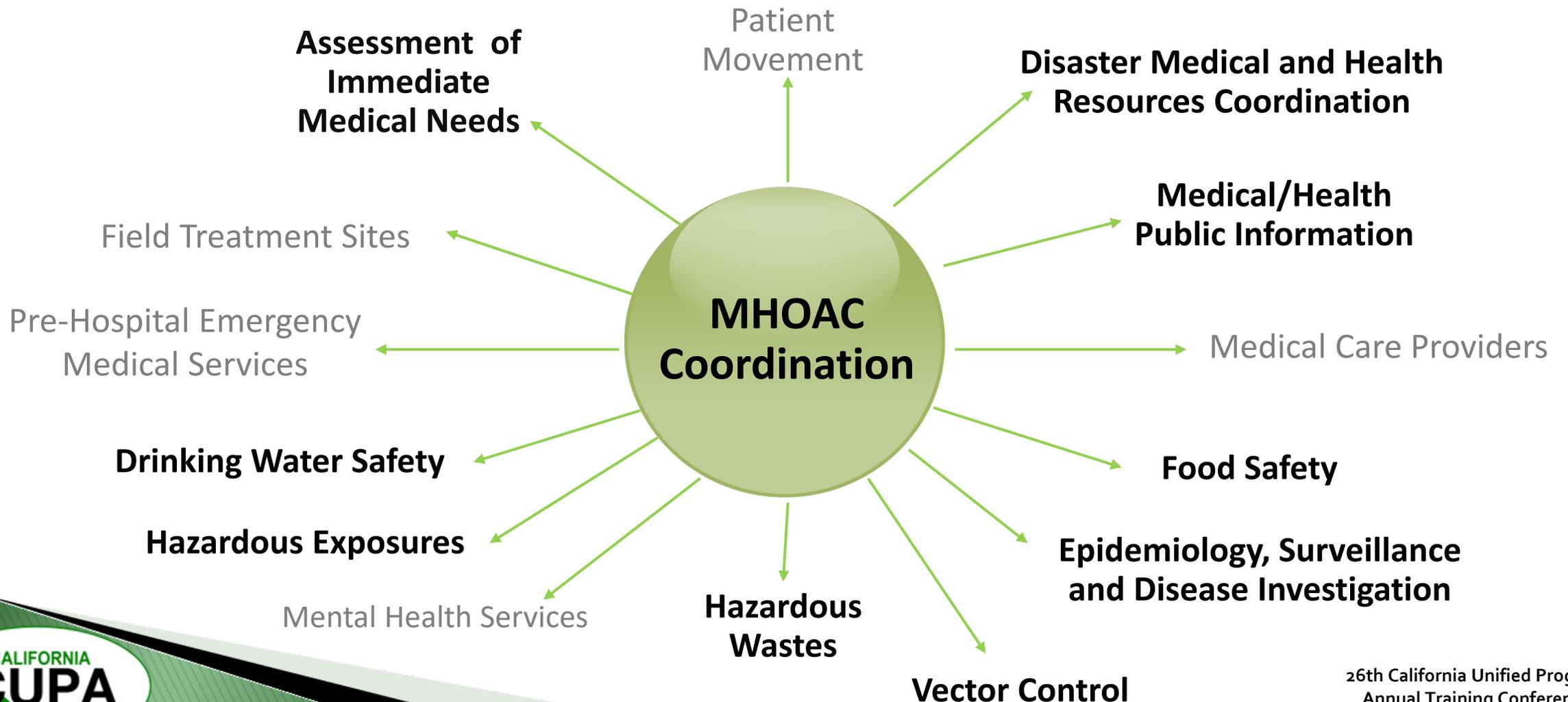


CalOES Regions vs. CCDEH Regions



Emergency Operations Manual

Environmental Health Responsibilities



Accessing Public Health & Medical Resources in CA-ESF 8

- Get to know your MHOAC!

<https://emsa.ca.gov/medical-health-operational-area-coordinator/>

- Say Howdy to Your Office of Emergency Management
- Make EH +LEPC BFFs



WHY IS IT CRUCIAL TO INCLUDE ENVIRONMENTAL HEALTH IN EMERGENCY PLANNING?

Aren't we all pretty busy already?

**Rain is coming,
grab an umbrella**



Concerns During Disaster Response & Recovery

Environmental Health can have answers before disaster strikes



Food Safety



Water Safety



Wastewater/
Sanitation



Vector Control



Debris/ Hazmat



Mass Care/
Sheltering/ Housing



EOC



Responder
Safety



How do I feed myself and my family if local restaurants and grocery stores are closed?

How do I know donated food is safe to eat?

Food Safety



How do you know if water is safe to drink?

Who collects water samples? Who will test them?

Drinking Water Safety



How do I tell the difference between rainwater & wastewater?

What do I do if I can't take a shower or flush my toilets after a disaster?

Wastewater Management



What's the difference between a sewer fly and a blow fly? What does their presence signal?



Where are the post-disaster breeding grounds for mosquitos?

Vector Control



Can I bring my pets with me to a shelter?

Who do I contact if my cot neighbor is ill with vomiting and diarrhea?

Shelters



We lost power and now my fridge is full of moldy and spoiled food. What happens now?

Is it safe to sort through ash after a wildfire to recover my things?

Debris Management and Haz Mat



Do I know where all the septic tanks are in the field?

Where do I go if I get sick or injured?

Responder Safety



What's the difference between
Public Health Officer and
Environmental Health Director?
Which one do I call?

How do I get PPE?

Emergency Management

HOW DO WE SUPPORT THE ENVIRONMENTAL HEALTH WORKFORCE?

Relationship Building & Cross-Training



Environmental Health Workforce Development for Emergency Management



The challenge: Apply Environmental Health knowledge and skills in a chaotic, intense, non-regulatory setting.



The need: Creative, flexible solutions and advice with limited resources.



The EHTER toolkit: Empowers workforce to move from regulator to educator and use their expertise to help communities in times of crisis.

Environmental Health Training in Emergency Response (EHTER)

- Builds capability & resilience
- Provides Environmental Health Specialists and professionals with an awareness of the critical roles they will play in response or recovery.
- Connects the Environmental Health and Emergency Management communities on blue sky days
- Tackles Barriers to Preparedness and Training



Photo credit: CDC

Environmental Health Training in Emergency Response (EHTER)

EHTER Classroom Courses

Lectures and tabletop exercises

EHTER Awareness

EHTER 101

EHTER Hands-on Courses

Field exercises, capstone projects

EHTER OPS

EHTER X



National EHTER:

<https://www.cdc.gov/nceh/ehs/elearn/ehter.htm>

California EHTER:

<https://www.cdph.ca.gov/Programs/CEH/Pages/EHTER.aspx>





Questions?



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