

Leveraging Mobile Apps for Safety and Emergency Response

Wisconsin Safety Council Conference
Session #44
April 15, 2026

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FREE Applications



Emergency Response Guidebook (ERG)
Department of Transportation (DOT)



NIOSH Heat Index



NIOSH Pocket Guide
Centers for Disease Control (CDC)



NIOSH Sound Level Meter



CAMEO Chemicals
National Oceanic and Atmospheric Administration (NOAA)



NIOSH Ladder Safety

WISER: Discontinued. Still available if previously downloaded, but no longer being supported or updated.

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"I'm fuzzy on the whole good/bad thing"

-Dr. Peter Venkman (Ghostbusters)

Pros

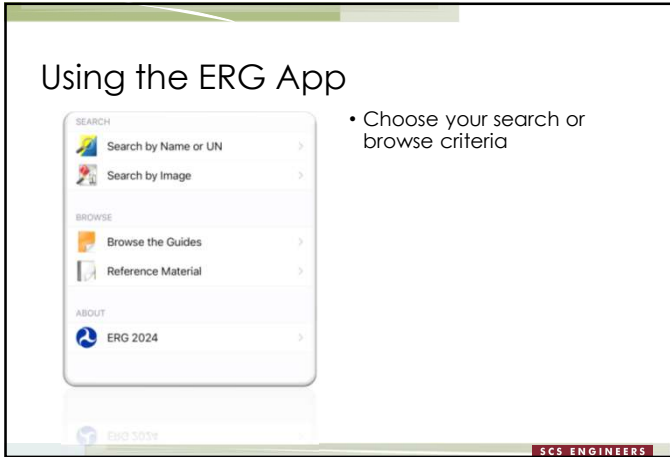
- We almost always have our phones with us
- Quick access to emergency response information
- Mapping capabilities
- Sharing options
- Automatic updates

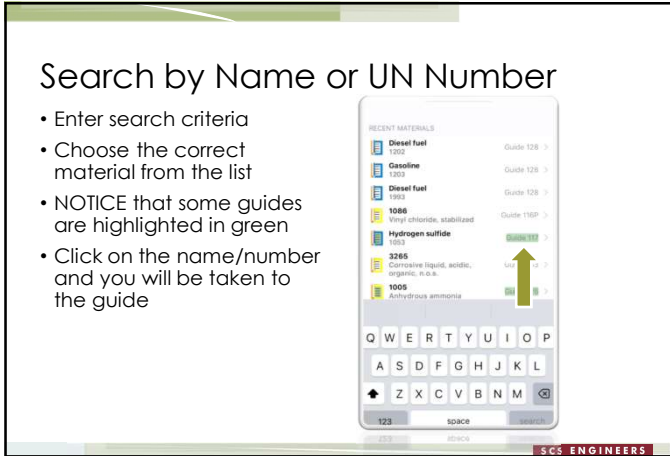
Cons

- Emergency may happen away from cell towers
- Cell towers may become overloaded during a crisis
- Dead batteries

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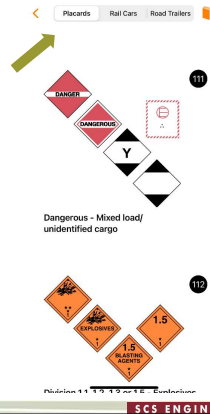






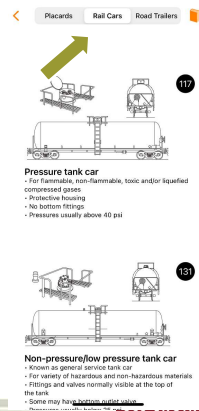
Search by Image

- Toggle between image type
 - Placard
- For Android – swipe left



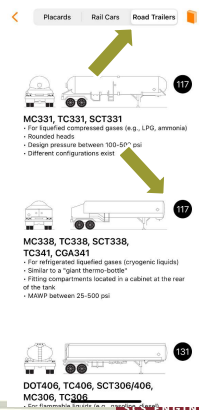
Search by Image

- Toggle between image type
 - Placard
 - Rail Car



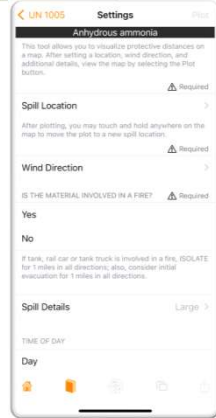
Search by Image

- Toggle between image type
 - Placard
 - Rail Car
 - Road Trailer
- Click on the guide number in the circle and you will be taken to the guide



Mapping

- Click "Map" on top of screen
- Choose a location
 - Current location
 - Or enter city/address



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Mapping

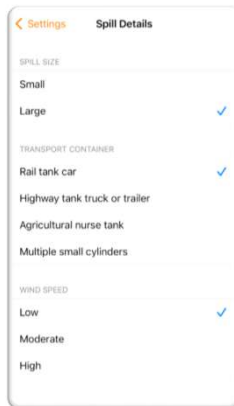
- Enter the wind direction
 - **Manual:** move the directional pointer; or
 - **Compass:** hold your phone horizontally and point the top in the direction the wind is coming from; press "Select Wind Direction"



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Mapping

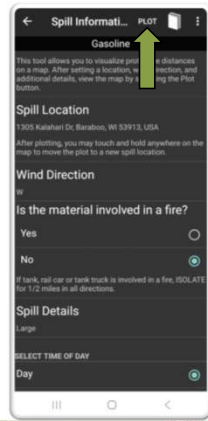
- Choose the spill size
 - Small = single container ≤ 55 gallons or single cylinder
 - Large = tank, trailer, or multiple containers/cylinders



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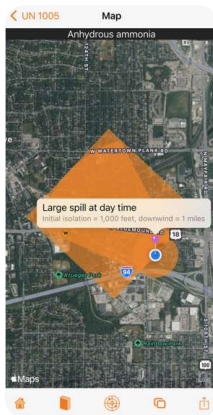
Mapping

- Scroll down to add
 - Day/Night
 - Map Type
 - CLICK Plot



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Mapping



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Mapping

- If location was a city, app will map at the city center.
- If you choose "use current location," app will map spill with you as epicenter.
- How do I get the isolation and downwind evacuation at the actual spill?
- Tap and hold actual spill location on screen to move the spill.

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ERG App in Action

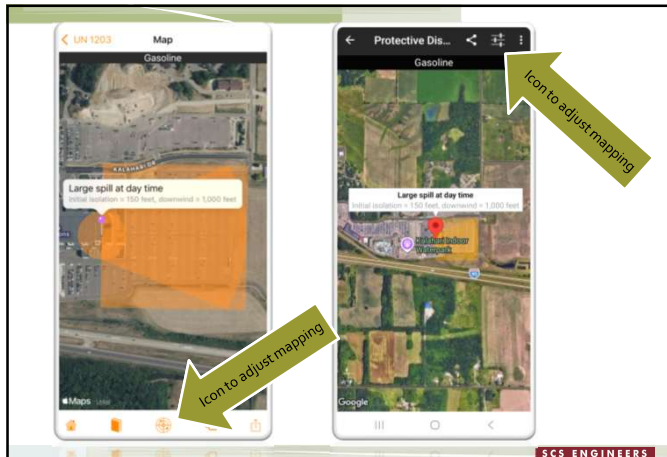
❖ **A tanker truck carrying gasoline was just in an accident near the gas station at the end of Kalahari Drive.**

❖ **Gas is pouring out of a tear in the side of the tank.**

Plot the spill:

- Use our current location
- Not involved in a fire
- Gentle wind from the west
- Hybrid map

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ERG App in Action

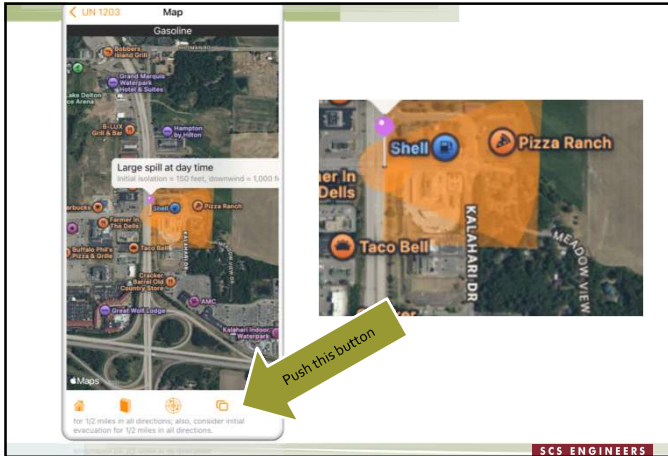
❖ **A tanker truck carrying gasoline was just in an accident near the gas station at the end of Kalahari Drive.**

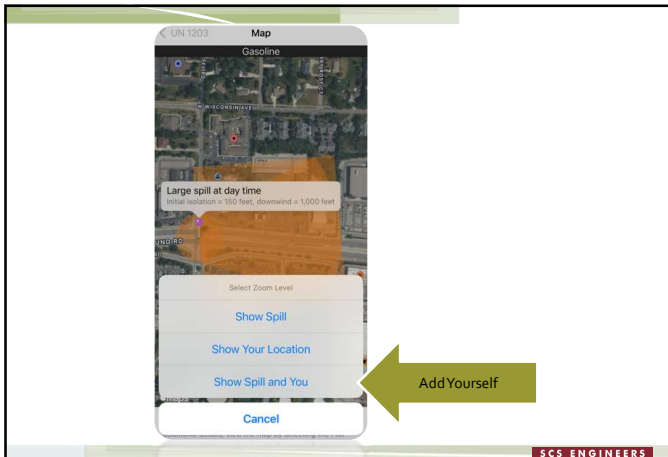
❖ **Gas is pouring out of a tear in the side of the tank.**

Plot the spill:

- Move the spill to the intersection of Hwy 12 and Meadowview Drive.

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ERG App in Action

- What areas need to be evacuated?
- Where will you station roadblocks, if needed?
- Will any waterways need protection?
- Should you evacuate or shelter in place?
- Where would you shelter displaced people?
- What other considerations are necessary to minimize impact of the release?

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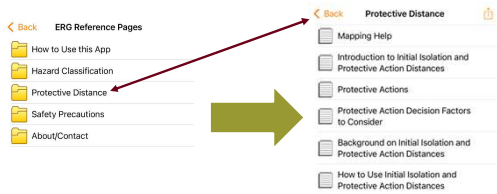
ERG App in Action

- Site safety plans
 - Storage tanks
 - Dock areas – site of potential fuel leaks
- Training tool for spill response team
- Unexpected releases from delivery vehicles carrying chemicals that you aren't familiar with

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ERG App Resources

- Use the ERG 2024 button on the upper left-hand side of the screen to return to the homepage
- Choose "Reference Material"

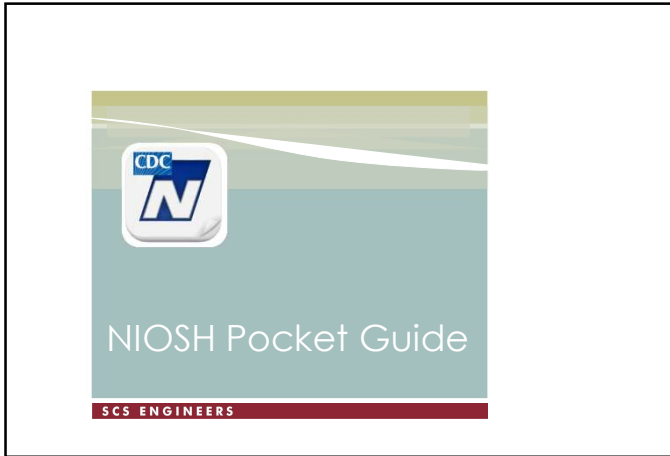


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ERG App

Protective Action Decision Facto...	
Consider Evacuation:	Consider Sheltering-in-place:
Vapors are flammable.	Vapors are toxic, and people are likely to be exposed by evacuating.
Buildings cannot be closed tightly.	Buildings can be quickly sealed by closing all windows and ventilation systems, if applicable.
The vapors are continuously generated and will hug the ground, or it will take a long time for the vapors to clear the area.	The vapors will quickly rise in the air column or rapidly dissipate.
For anyone outdoors.	For anyone already indoors.
There are few people to evacuate.	There are too many people to evacuate for current available resources.
The threat seems stable but long-lasting.	Circumstances are changing too quickly to evacuate

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NIOSH Pocket Guide-Printed

Gasoline	Formula: C₈H₁₈	CAS#: 101-74-9	RTECS#: [X3300000]	IDLH: Ca (N.D.)
Conversion: 1 ppm = 4.5 mg/m ³ (approx)	DOT: 1203 128	References the UN/NA number and ERG Guide Number		
Synonyms/Trade Names: Motor fuel, Motor spirits, Natural gasoline , Petrol (Note: A complex mixture of volatile hydrocarbons (paraffins, cycloparaffins & aromatics))				
Exposure Limits: NIOSH REL: Ca OSHA PEL: none	See Appendix A	Measurement Methods (see Table 1): OSHA P1/2028		
Physical Description: Clear liquid with a characteristic odor.				
Chemical & Physical Properties: MW: 110 (approx) BP: 102°F Sol: Insoluble PLF: -45°F IP: 7 Sp. Gr(60°F): 0.72-0.76 VP: 38-300 mmHg FRZ: 7 LEL: 7.6% LEL: 1.4%	Personal Protection/Sanitization (see Table 2): Skin: Prevent skin contact Eyes: Prevent eye contact Wash skin: When contam Remove: When wet (flamm) Change: N/A Provide: Eyewash Quick drench	Respirator Recommendations (see Tables 3 and 4): NIOSH R: ScbaF Pd Pp/ScalF Pd Pp/ASoba Escape: Gmf/Cv/ScbaE		
Class IB Flammable Liquid				
Incompatibilities and Reactivities: Strong oxidizers such as peroxides, nitric acid & perchlorates				
Exposure Routes, Symptoms, Target Organs (see Table 5): ER: Inh, Abs, Ing, Con SY: Irrit eyes, skin, muc memb; derm: head, lass, blurred vision, dizz, slurred speech, conf, convuls; chemical pneu (aspir liquid); possible liver, kidney damage [carc] TD: Eyes, skin, resp eye, CNS, liver, kidneys [in animals: liver & kidney cancer]			First Aid (see Table 6): Eye: Irr immed Skin: Soap flush immed Breath: Resp support Swallow: Medical attention immed	

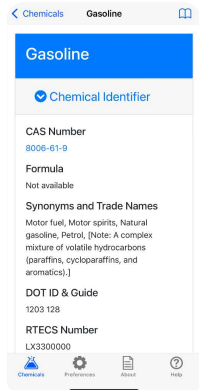
Uses abbreviations and point to tables in the front of the book

NIOSH Pocket Guide App

- Phone actually fits in your pocket
- Search by:
 - Name
 - CAS Number
 - DOT UN/NA Number
- Not available for all phones
- On-line version at <https://www.cdc.gov/niosh/npg/>
- Downloadable PDF version

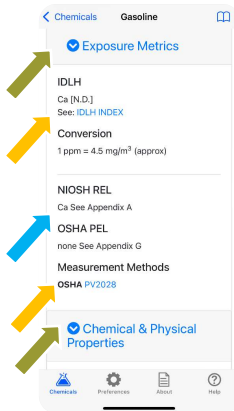
NIOSH App

- App brings in information found in printed version
- Fewer abbreviations



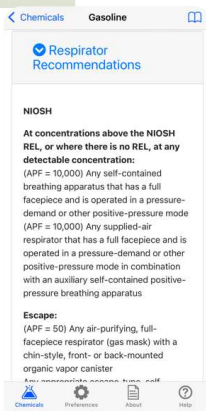
NIOSH App

- Drop-down boxes for each "section"
- References to appendices within the app
- Hyperlinks to information on the web



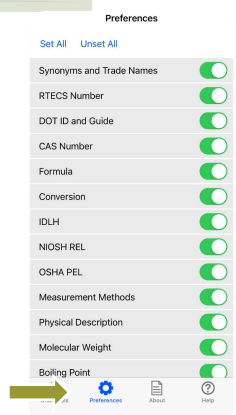
NIOSH App

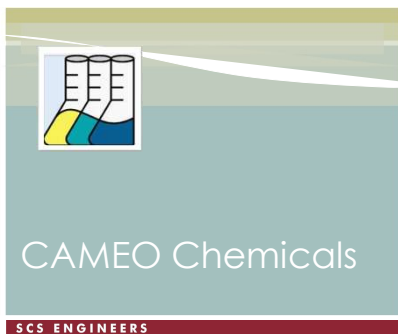
- No more tables to list respirator abbreviations



NIOSH App

- Set preferences
- Removes "clutter" to help you find information critical to you more quickly



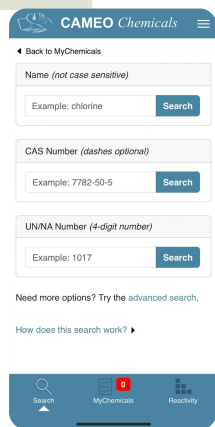


CAMEO Chemicals

Computer Aided Management of Emergency Operations

Search by

- Name
- CAS Number
- UN/NA Number



CAMEO vs. NIOSH

CAMEO Chemicals

- Thousands of chemicals
- Data sheets
- Links to other resources (including ERG and NIOSH Pocket Guide)
- Reactivity predictions
- Sharing options

NIOSH Pocket Guide

- 677 Chemicals
- Good source for basic chemical information, respirator selection, first aid, and chemical compatibility
- Easier to use

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CAMEO

Find CAMEO data sheets
Click Here
Links to data sheets

Provides general information

Link to synonyms

DOT ERG information

Search Results
 Name contains **gasoline** matched 11 datasheets
GASOLINE
 A clear colorless to amber col...
 DOT Hazard Label: Flammable Liquid
 Flash Point: 38°F
 Lower Explosive Limit (LEL): 1.4 %
 ERPG-3: 4000 ppm
 CAS Number: 8008-81-9, 86290-81-5
 UNNA Number: 1203
 This chemical is also known as:
UNNA 1203
 Response Guide 128: Flammable Liquids (Water-Immiscible)
 Hazard Class: 3 - Flammable liquid
 Matching ERG or 48CFR proper shipping

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CAMEO

DOT diamond

Drop-down boxes with details

Send to...

"ADD" to My Chemicals

GASOLINE
 ADD
 Send to...
 Chemical Identifiers
 Synonyms
 Physical Properties
 Regulatory Information
 Alternate Chemical Names

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CAMEO NIOSH Link

Links take you to web-based access, not to your app

The National Institute for Occupational Safety and Health (NIOSH)

Gasoline

SYNONYMS & TRADE NAMES

Motor fuel, Motor spirits, Natural gasoline, Petrol [Note: A complex mixture of volatile hydrocarbons (paraffins, cycloparaffins, and aromatics).]

CAS NO.
8006-61-9

AA | cdc.gov

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CAMEO App

Includes excerpts from ERG

CAMEO Chemicals

← Back to Search Results

Response Recommendations

What is this information? ▶

Isolation and Evacuation
Except from ERG Guide 128 [Flammable Liquids (Water-Immiscible)]:

IMMEDIATE PRECAUTIONARY MEASURE:
Isolate spill or leak area for at least 50 meters (150 feet) in all directions.

LARGE SPILL: Consider initial downwind evacuation for at least 300 meters (1000 feet).

FIRE: If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions. (ERG, 2020)

Firefighting
Except from ERG Guide 128 [Flammable Liquids (Water-Immiscible)]:

Search | MyChemicals | Reactivity

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CAMEO

Add to "MyChemicals"

- Gasoline
- Chlorine
- Formaldehyde
- Water

Then click on "MyChemicals"

"ADD" to My Chemicals

Click Here

CAMEO Chemicals

← Back to Search Results

GASOLINE

ADD

Chemical Identifiers

Physical Properties

Regulatory Information

Alternate Chemical Names

Search | MyChemicals | Reactivity

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Compatibility

Add to "MyChemicals"

- Gasoline
- Chlorine
- Formaldehyde
- Water

Click here

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Compatibility

Forward a pdf or export to CSV table

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Compatibility

Open for details

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Compatibility

CAMEO Chemicals

Back to Chemical Datasheet

Incompatible Pairs: Hazard Predictions

GASOLINE mixed with CHLORINE

- Incompatible**
 - Corrosive:** Reaction products may be corrosive
 - Flammable:** Reaction products may be flammable
 - Generates gas:** Reaction liberates gaseous products and may cause pressurization
 - Generates heat:** Exothermic reaction at ambient temperatures (releases heat)
 - Intense or explosive reaction:** Reaction may be particularly intense, violent, or explosive
 - Toxic:** Reaction products may be toxic
 - May produce the following gases:**
 - Carbon Dioxide (CO₂)
 - Carbon Monoxide (CO)

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NIOSH Ladder Safety

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Ladder selection assistance

Selection Duty Rating

How much do you weigh, including tools and materials?

- 150 lbs
- 205 lbs
- 210 lbs
- 215 lbs**
- 220 lbs
- 225 lbs
- 230 lbs

Will you or the ladder be near exposed electrical conductors?

Yes No

Show me the ladder

Recommended Ladder

MINIMUM Grade Required

225 lbs.

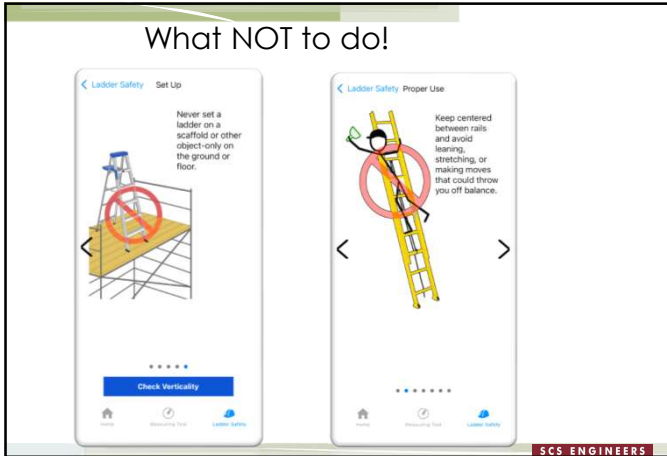
TYPE II

MEDIUM DUTY Commercial

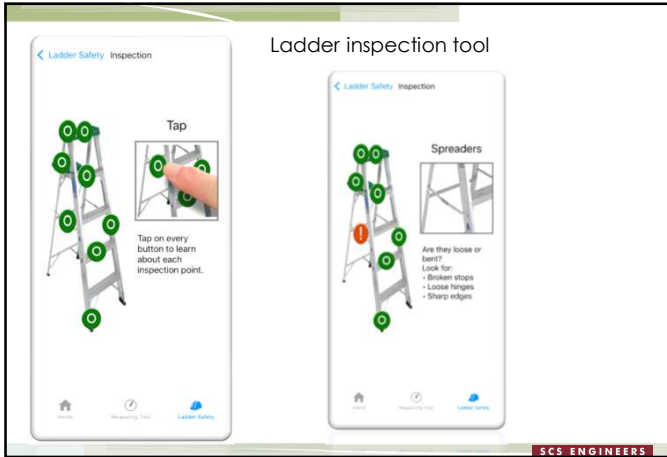
OK

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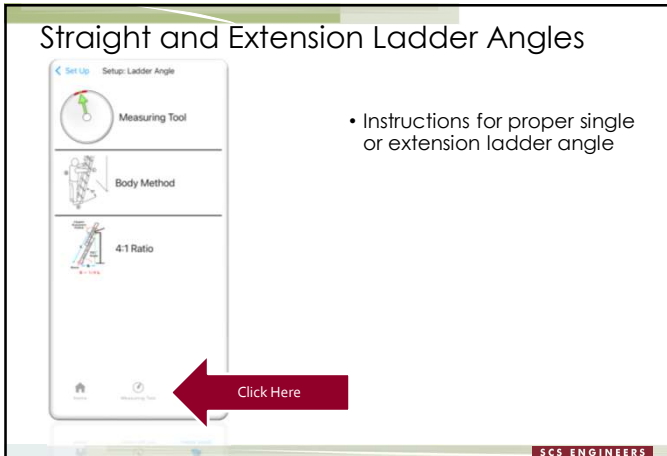
What NOT to do!



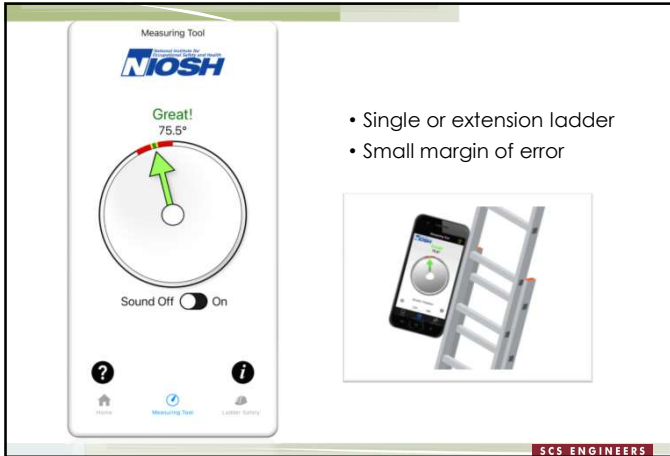
Ladder inspection tool



Straight and Extension Ladder Angles

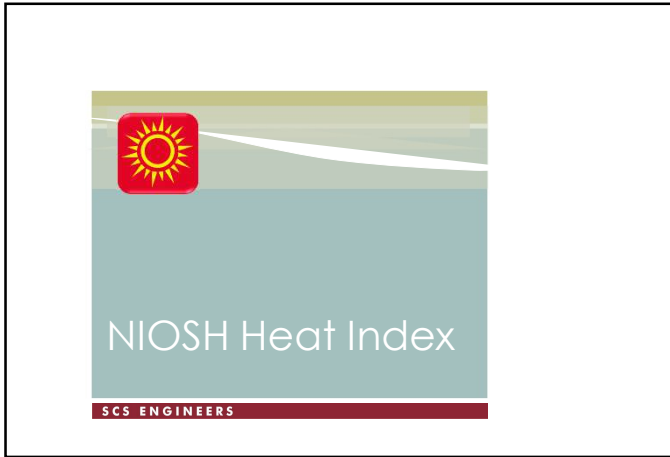


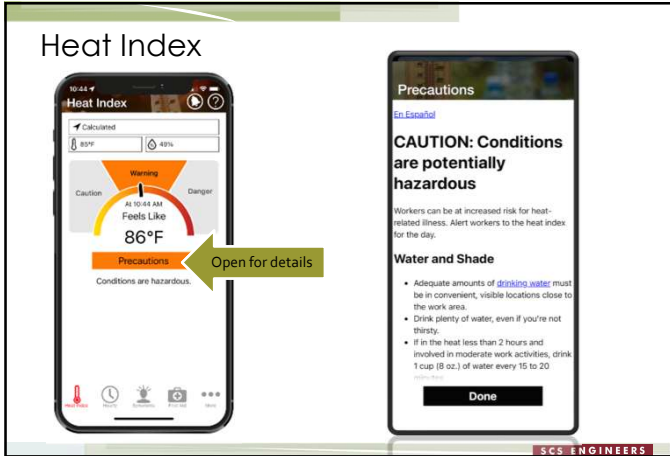
- Instructions for proper single or extension ladder angle



- Single or extension ladder
- Small margin of error







Precautions

[En Español](#)

CAUTION: Conditions are potentially hazardous

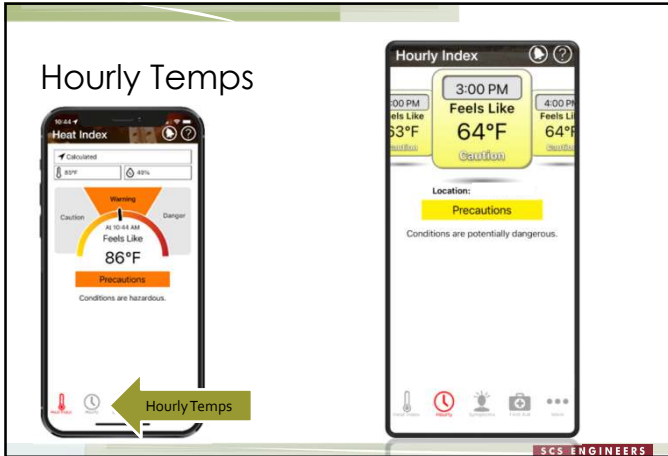
Workers can be at increased risk for heat-related illness. Alert workers to the heat index for the day.

Water and Shade

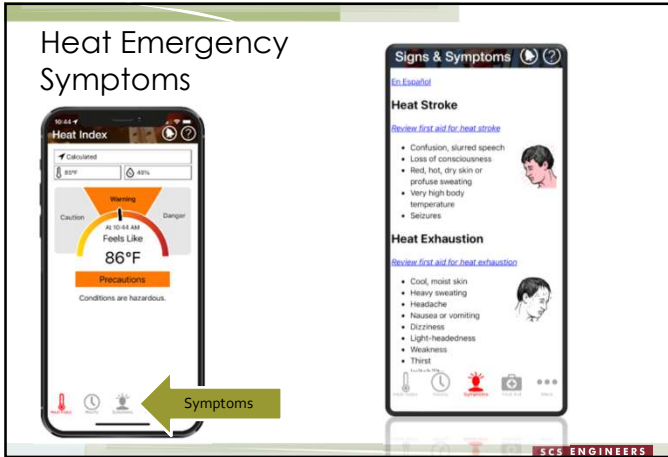
- Adequate amounts of drinking water must be in convenient, visible locations close to the work area.
- Drink plenty of water, even if you're not thirsty.
- If in the heat less than 2 hours and involved in moderate work activities, drink 1 cup (8 oz.) of water every 15 to 20 minutes.

Done

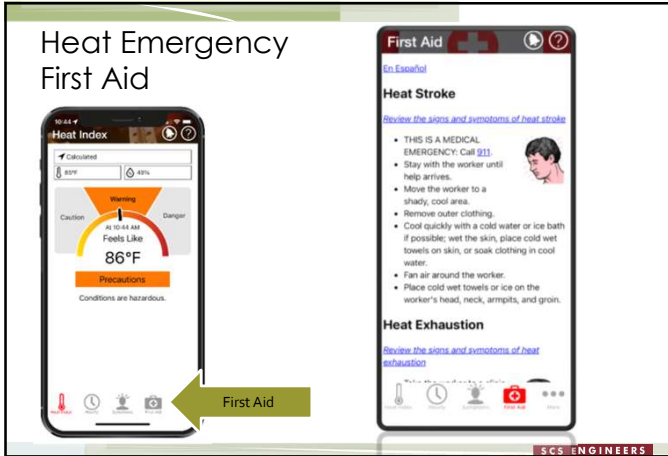
Hourly Temps



Heat Emergency Symptoms



Heat Emergency First Aid



Set Reminders



Set Reminders



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NIOSH Sound Level Meter

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Measurements

- Does not replace an OSHA-approved, calibrated meter for compliance purposes
- Point microphone at source of noise – usually on the BOTTOM of the phone
- Can record to get a TWA for informational purposes
- Scene safety assessment



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There's an app for that, too!

- NIOSH Lifting Calculator
- NFPA HazMat FLIC
- Coast Guard MIMH
- Weather app

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Questions?

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