ATAK

Atmosphere

Plug-in Version: 0.21
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Overview

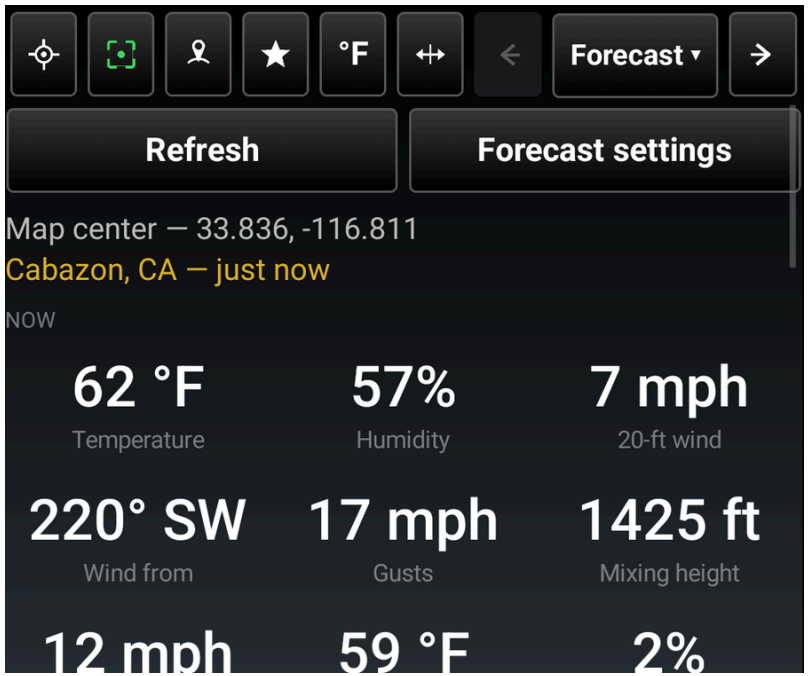
Atmosphere is the weather on the ATAK map for fire and hazmat crews: the forecast at a point, the fire weather planning forecast for a zone, the readings from the stations, gauges and buoys around you, and the pictures the weather services publish - radar, satellite, wind, rain, smoke, air quality, lightning, outlooks, the Santa Ana wildfire threat, power shutoffs, flooding, the sea and snow - each one a layer you switch on when you need it.



Open it from the ATAK toolbar, or from Tools if it is not on the bar.

Everything it shows is read by this device from public services and stays on this device. Nothing is published to a server or to anyone else's map. The forecast asks the National Weather Service for the point you are reading; every map layer asks you once, naming its server, before it talks to the network. Warnings, watches and advisories are not here on purpose: they are the IPAWS Alerts plugin's job, and the two are meant to run side by side. The one exception is fire: a fire weather zone under a Red Flag Warning or a Fire Weather Watch is shaded, and the zones page lists them.

The first time

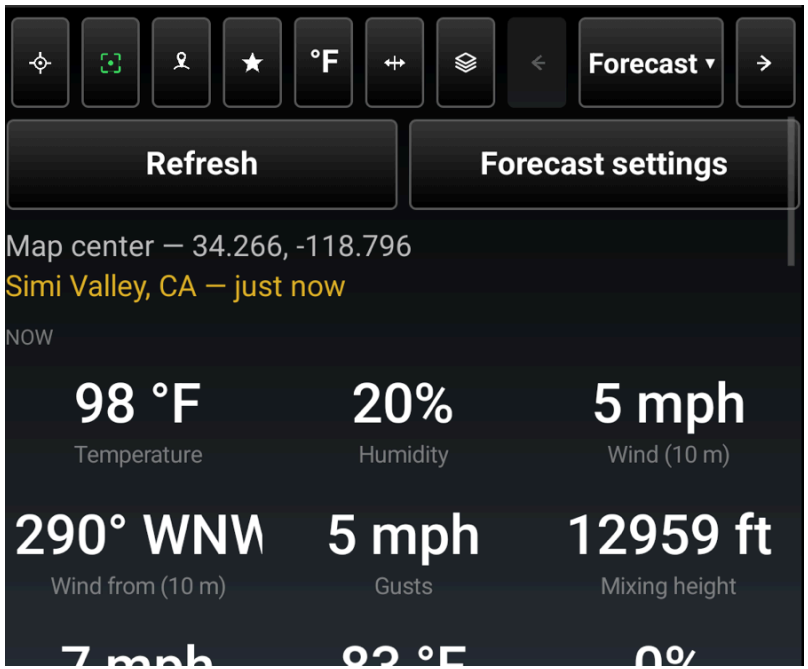


A new install: the forecast from NWS, in US units.

There is nothing to set up. Atmosphere reads the forecast from the National Weather Service (**NWS**) as soon as it opens, for the point you are reading, rounded to about 100 m.

Outside the US, open **Forecast settings** and tap **Forecast from Open-Meteo**.

The pane

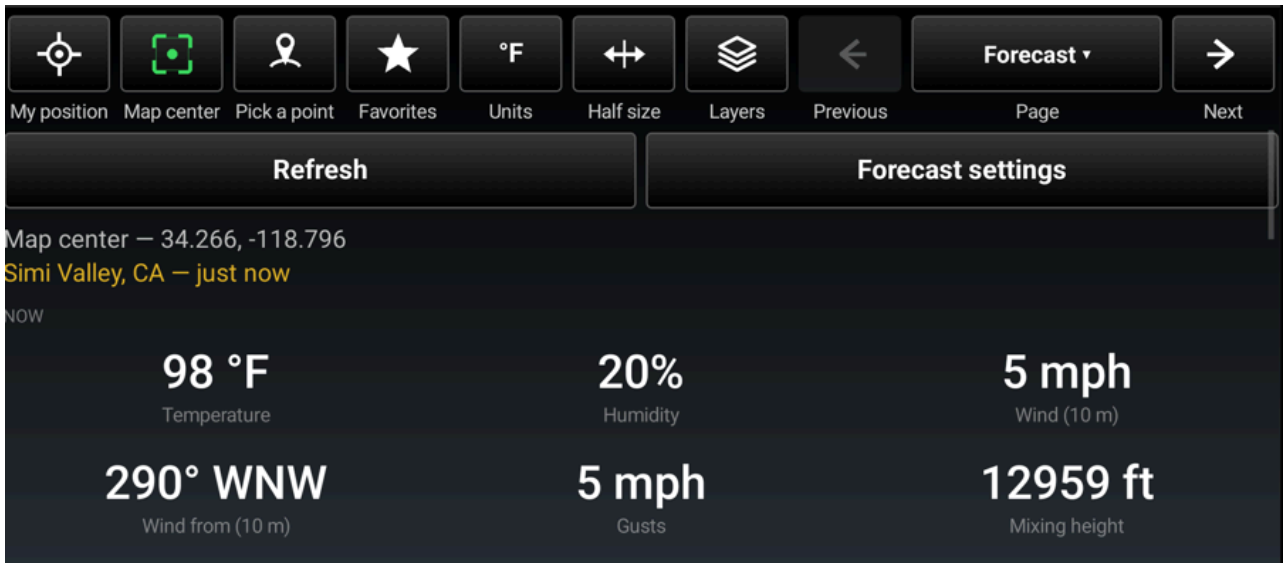


The pane opens at half width. The top row is the same on every page:

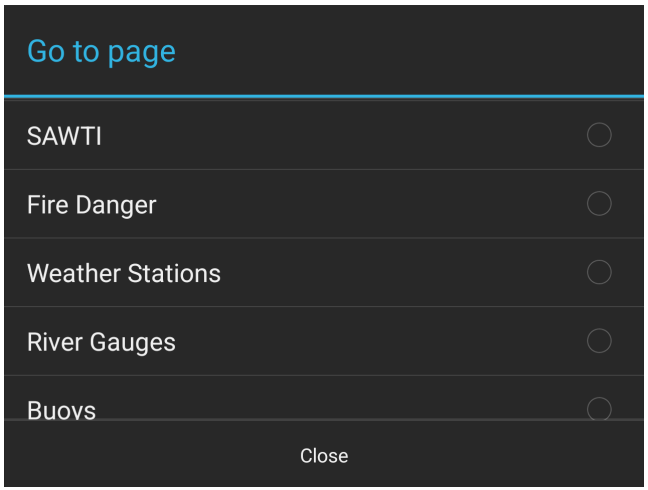
- **My position**, **Map center** and **Pick a point** choose the point every reading is for. The one in use is green. Map center follows the map: the forecast and the fire weather zone are read again when the map stops. The Weather Stations, River Gauges and Buoys lists are measured from this point too, nearest first, and say which point in their status line.
- The star is **Favorites**: places kept by name.
- **Units** switches every number between US, metric and aviation units.
- **Full size** makes the pane full width and back.
- The stacked sheets are **Layers**: straight to the Layers page from any page. It is green while Layers is showing.
- The arrows step through the pages; the name between them opens a list of all nine.

Back closes the pane, or narrows a full-size one first.

Full size, and the pages



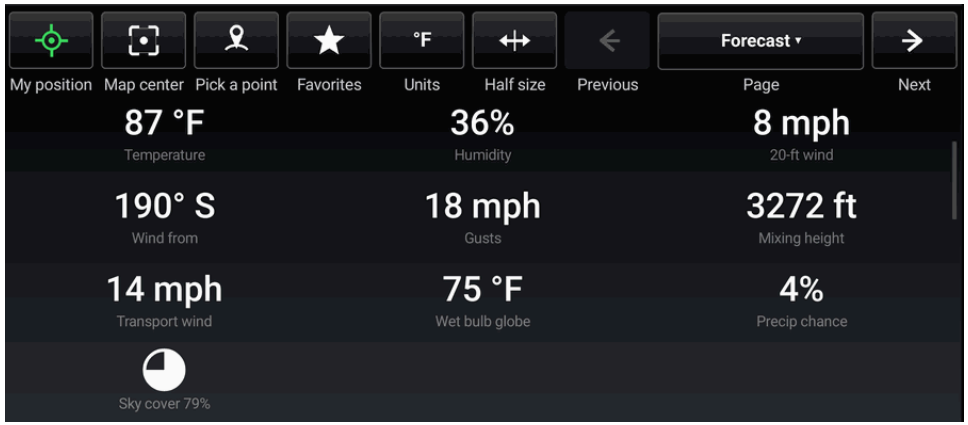
At full size every button in the top row has its name under it.

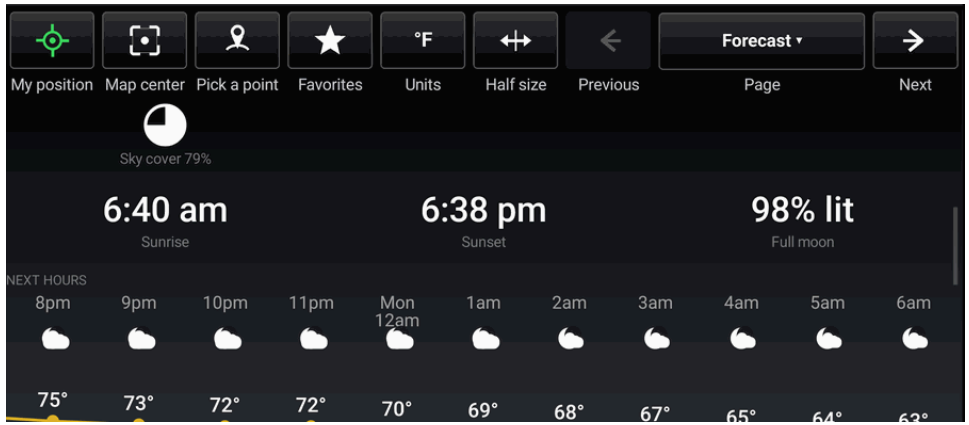


Tap the page name for the list.

There are eleven pages: **Forecast**, the readout for a point; **Layers**, every map layer with its switch and settings; **Spot Weather Forecast**; **Fire Weather Zones**; **SAWTI**; **Fire Danger**; **Weather Stations**, **River Gauges** and **Buoys** as lists; **Storm Reports**; and **Rain Gauges**. Swipe, use the arrows, or pick from the list. A page whose data is a map layer starts with that layer's switch, the same as on the Layers page: turn it on or off from either.

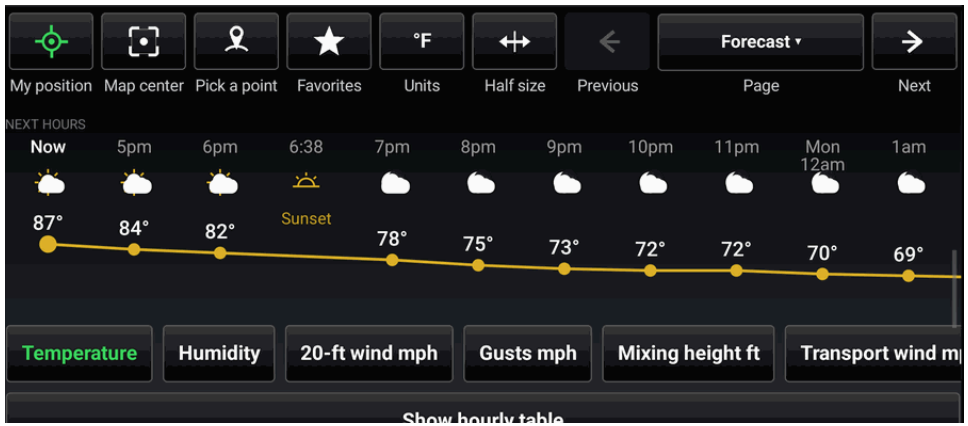
Forecast: now



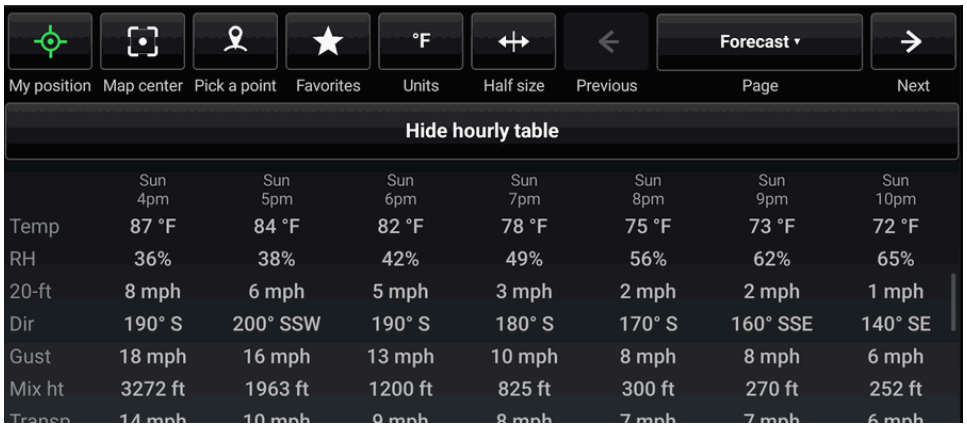


The first page is the forecast for one point: your position, the map center, a point you tap on the map, or a favorite. The top line names the point and how old the reading is. **Now** is the numbers a briefing asks for, one glance each: temperature, humidity, the 20-foot wind and where it is from, gusts, mixing height, transport wind, wet bulb globe temperature and the chance of rain. Under them, the sky cover, then sunrise, sunset and the moon for the point. An element the forecast office does not issue says so. **Refresh** reads the forecast again.

Forecast: the hours ahead



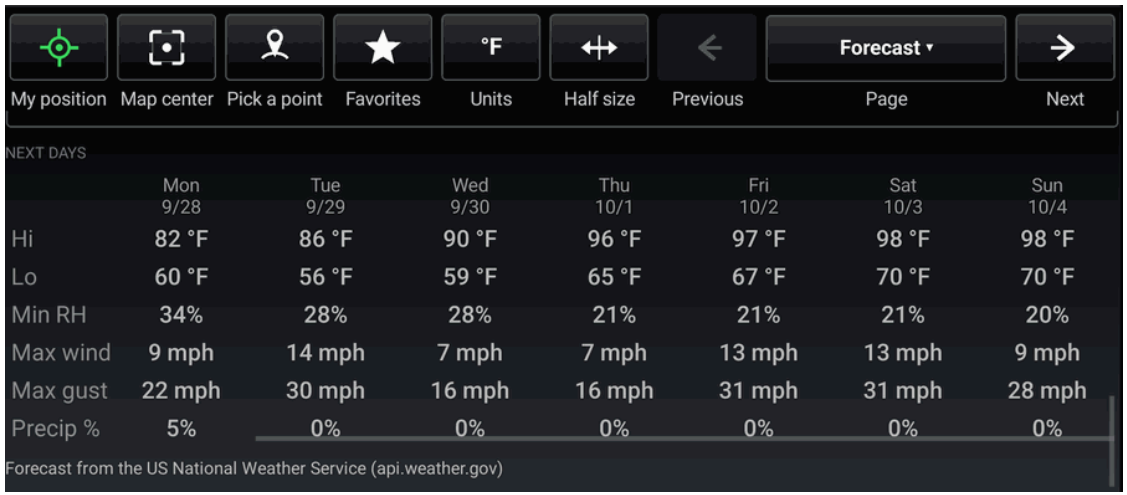
Next hours: one value at a time, picked with the buttons under it.



Show hourly table opens every value, hour by hour.

Next hours draws the next day and a half as a line with the sky above it and sunrise and sunset marked. The buttons under it pick which value the line shows. **Show hourly table** opens the whole table; **Hide hourly table** folds it away again, and it stays the way you left it.

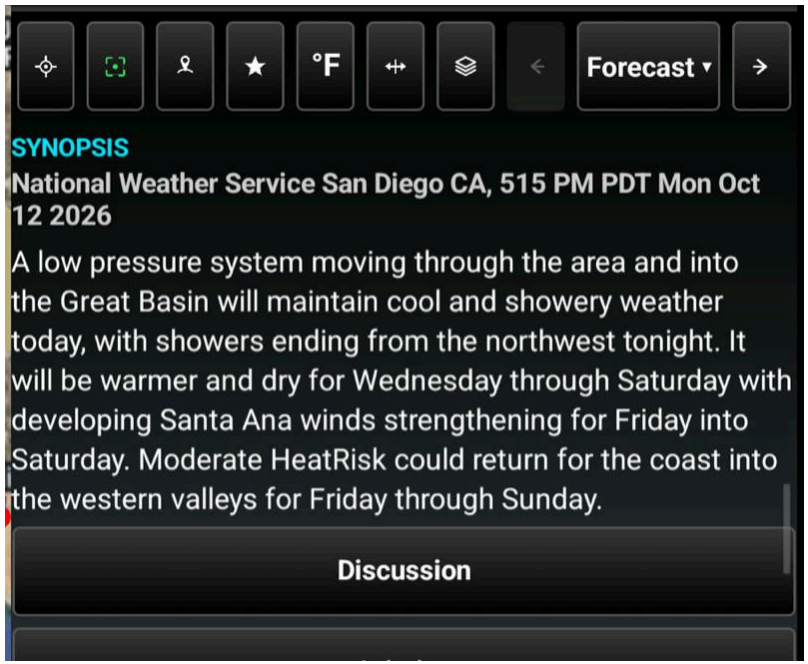
Forecast: the days ahead



Next days folds the hours into days, the numbers a shift is planned on: the high and the low, the lowest humidity, the strongest wind and gust, and the highest chance of rain.

The service it came from is credited under the table.

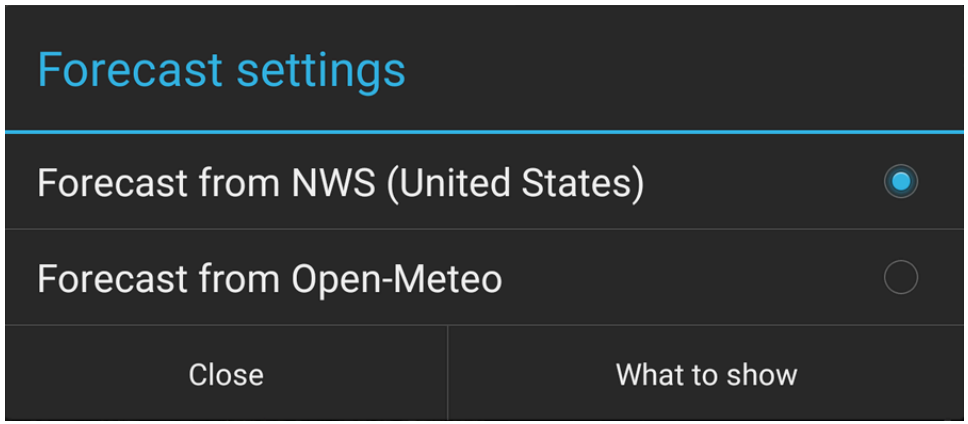
The forecaster's synopsis



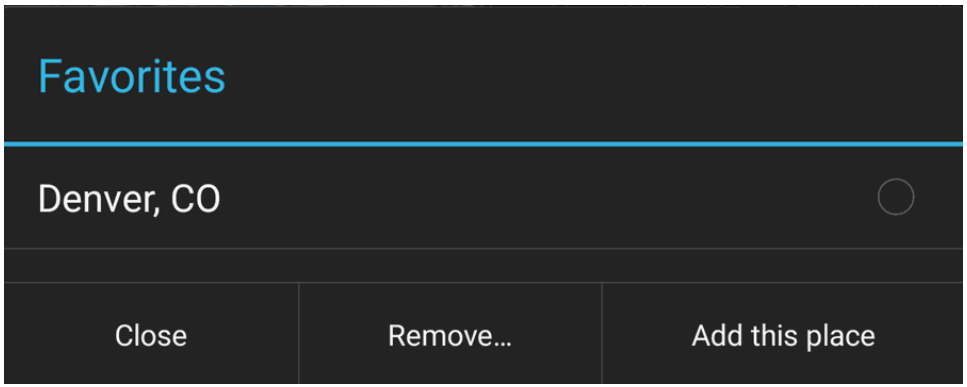
Under the days, the forecaster's own words: the Area Forecast Discussion for the office covering the point, its **Synopsis** open and the other sections the office writes (Short Term, Long Term, Discussion, Aviation, Marine, Fire Weather) each behind a button that opens it in place.

It follows the point in the top row: Map center in another office's area brings that office's discussion. The watches and warnings list stays with IPAWS. It needs NWS as the forecast service.

Forecast settings and favorites



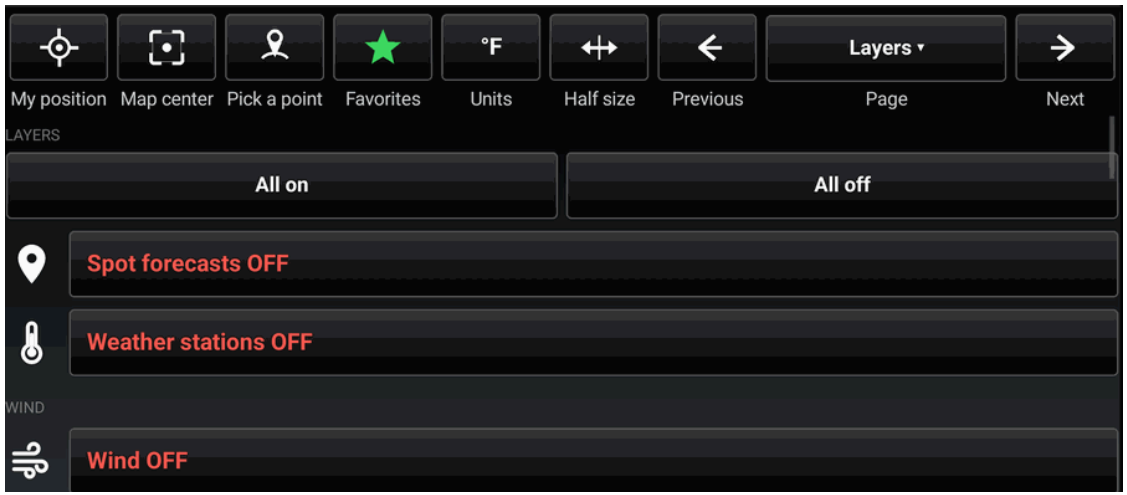
Forecast settings.



Favorites.

Forecast settings holds everything about the forecast: where it comes from, **NWS (United States)** or **Open-Meteo** for anywhere else, picked with one tap, and **What to show** in the Now tiles and the table. **Favorites** keeps places by name: **Add this place** saves the point being read, and picking one later reads the forecast there.

Layers

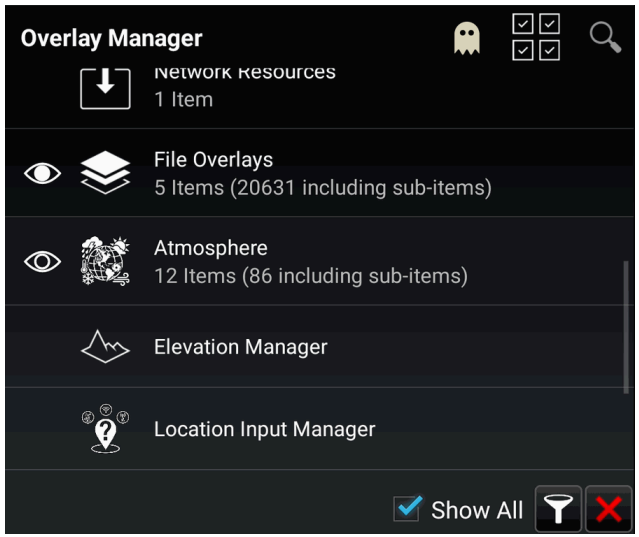


The **Layers** page lists every map layer under a heading for what it is about: **Wind**, **Storms**, **Fire**, **Rain and rivers**, **Ocean**, **Snow** and **Ground**, with **Spot Weather Forecast** and **Weather Stations** at the top. Each row is a switch that shows its state, green ON or red OFF, with the layer's icon beside it. **All on** and **All off** switch every allowed layer at once.

A layer that is ON grows an arrow at the end of its row: tap it for the layer's settings, its map key, and a status line that says what is on the map and what is not. The first time a layer is switched on it asks once, naming the server and what is sent: the area of the map, never your position.

Tap anything Atmosphere draws and it opens straight away: a zone, spot request, gauge or buoy opens its page, anything else its details; a Fire Danger area opens from its name. There is no radial menu on Atmosphere's items. Labels stay level when you turn the map; a station's wind barb turns with it, because it is a direction.

In ATAK's Overlay Manager

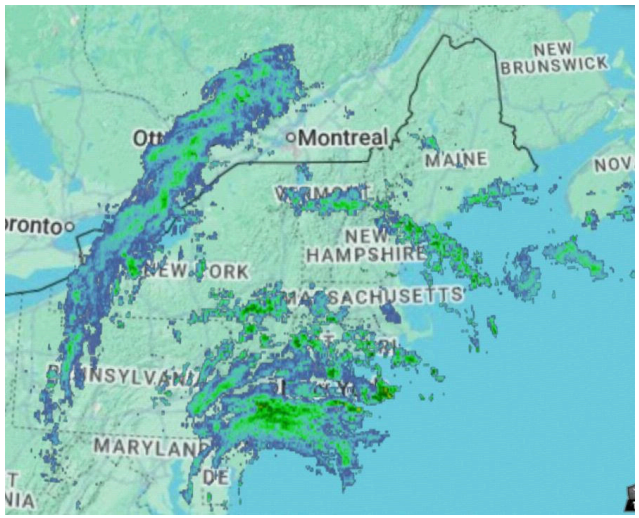


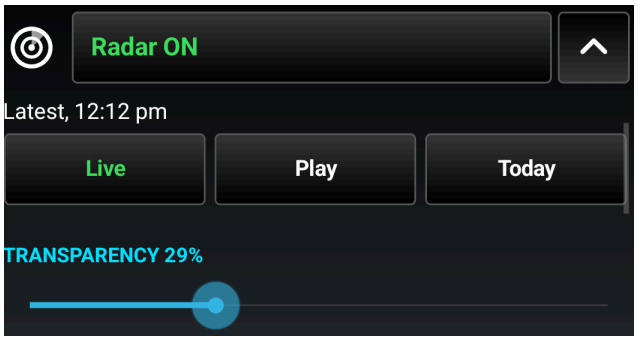


Every Atmosphere layer that draws on the map is a row inside one **Atmosphere** row in ATAK's **Overlay Manager**, each with its own icon.

The eye beside a row hides that layer, or all of them at once, without opening the plugin. A layer that is off shows 0 items.

Radar



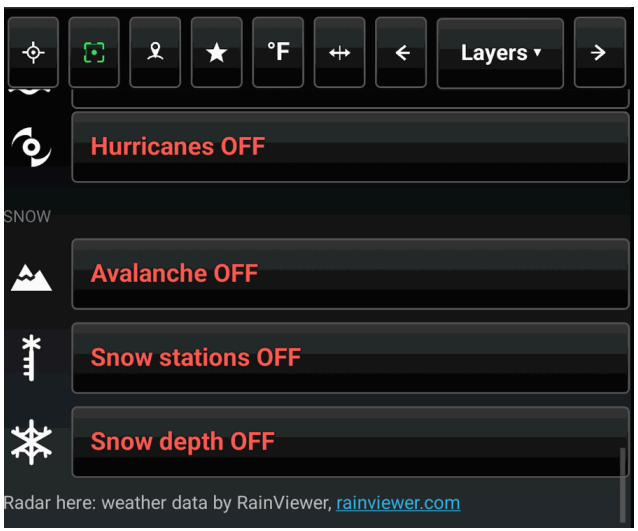


Radar draws the radar mosaics of the National Weather Service over the United States, Alaska, Hawaii, Puerto Rico and Guam, and Environment Canada's over Canada. It picks the right one by itself as the map moves.

The time strip under it scrubs back through the last two to three hours of frames. **Live** follows the newest. **Play** runs those hours as a loop, to show which way the storm cells move; **Stop** or any time picked ends it. The **Transparency** slider lets the map show through.

Radar around the world

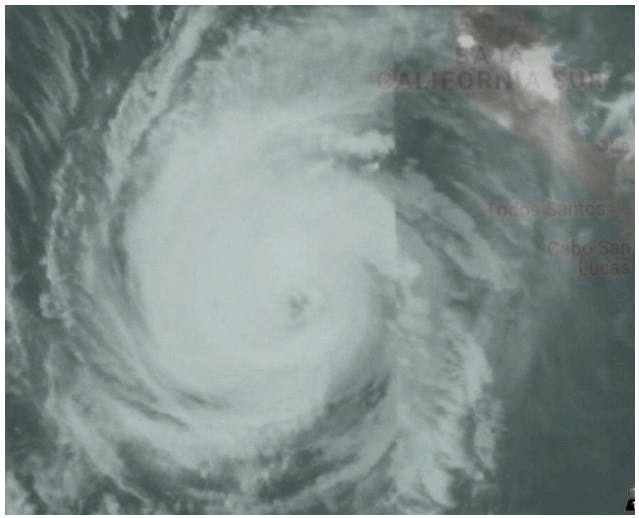


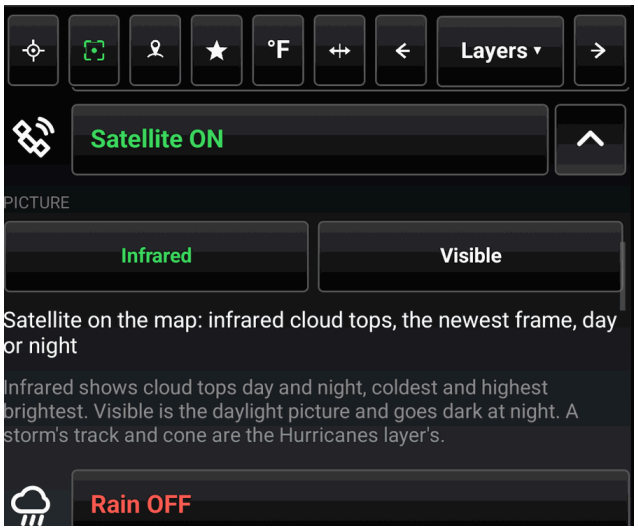


Everywhere else - Mexico past the border radars, Central America, the Caribbean beyond Puerto Rico, Europe, wherever a country publishes its radar - the picture is RainViewer's composite of the world's public weather radars. Frames are ten minutes apart, and the credit at the bottom of the Layers page says so while it is drawn.

Far out at sea no radar reaches: that is what Satellite and Rain are for.

Satellite

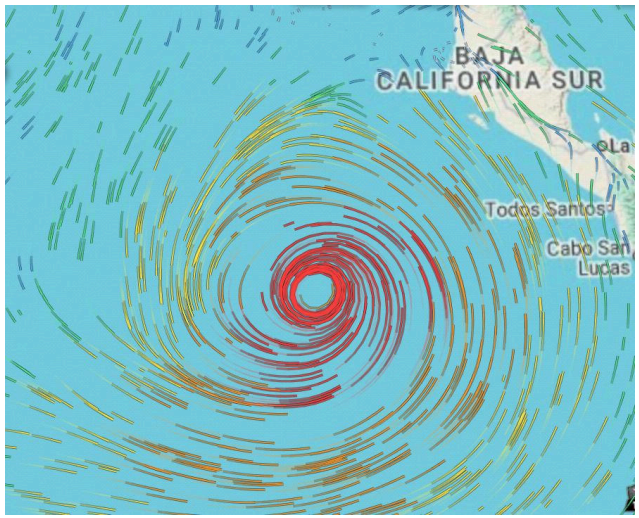


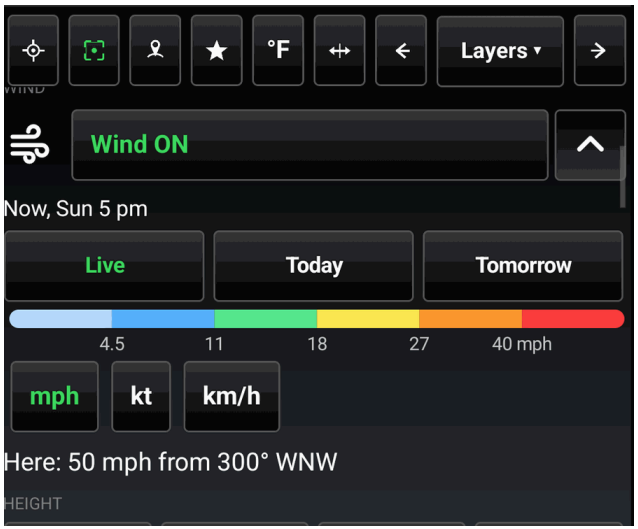


Satellite draws the newest GOES picture, about ten minutes old. **Infrared** shows the cloud tops day and night, brightest where they are highest and coldest. **Visible** is the daylight picture and goes dark at night.

It reaches where no radar does - the open Pacific and Atlantic - which is where a hurricane at sea is read from.

Wind





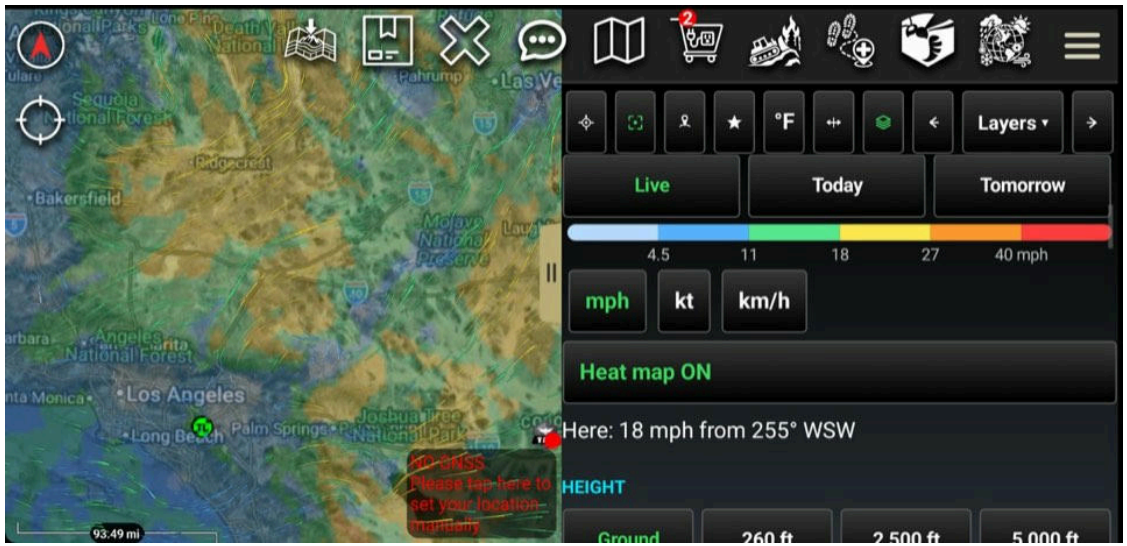
Wind draws the forecast wind as moving streaks colored by speed, with the key under the time strip in mph, kt or km/h. **Heat map** under the key draws the same speed as a colored field beneath the streaks, in the key's colors. Wind and **Radar** can be on together, the time strip under the one switched on last; the heat map would paint over the radar, so turning one on turns the other off.

The line under it reads the wind **Here**, at the pane's point: speed and where it comes from. Outside the area being drawn it says so.

In 3D the streaks lie on the ground and follow it over ridges and down into valleys, around the point the map looks at and out to a few screen widths; the ground farther toward the horizon is left clear.

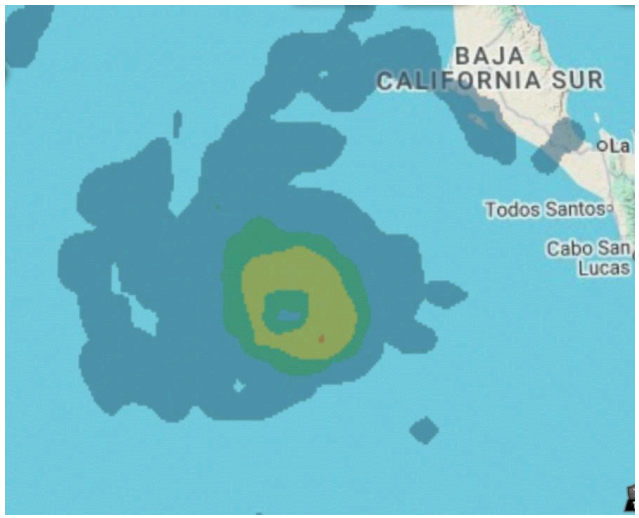
The height buttons further down draw the wind from 10 m up to the jet stream.

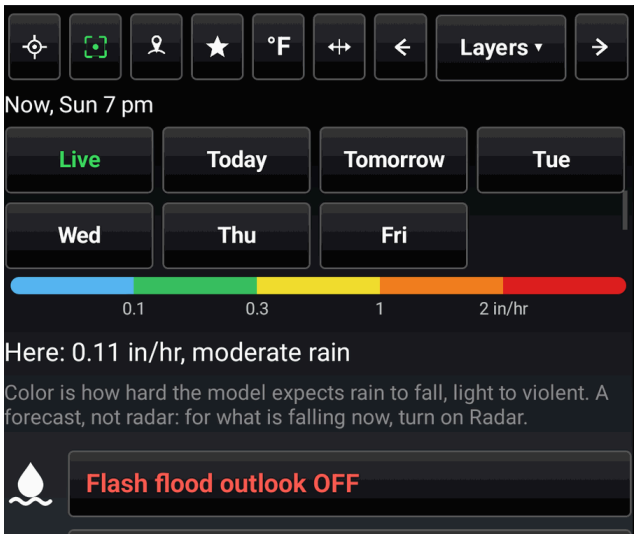
The wind as a heat map



Heat map under the Wind key paints the speed the streaks are drawn from as a colored field beneath them, in the key's own colors, for the hour on the time strip and the height picked. Off by default; the switch remembers.

Rain

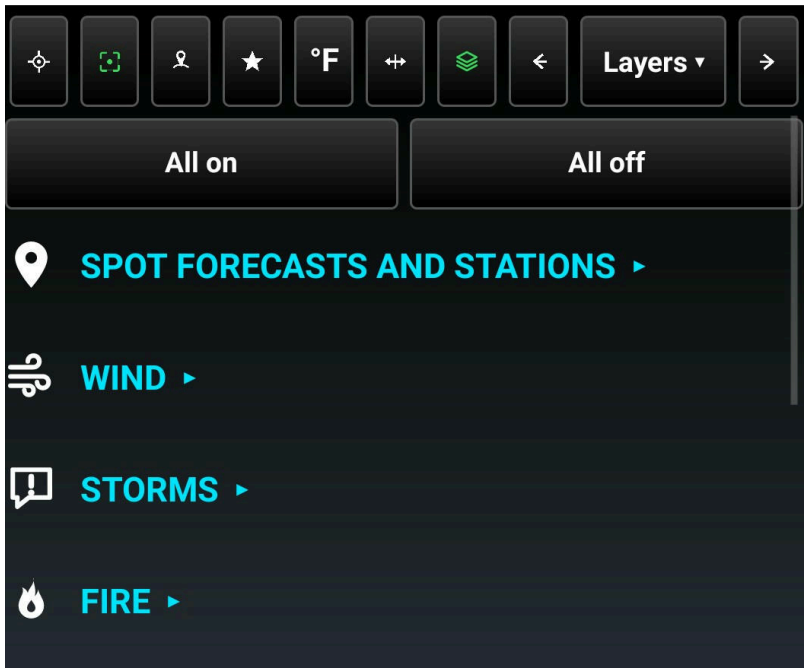




Rain draws how hard the forecast model expects rain to fall, light to violent, hour by hour for five days, everywhere on the map including far out to sea, with the rate **Here** at the pane's point.

It is a forecast, not radar. Radar is what is falling now where a radar can see it; Rain is what the model expects where nothing can.

The Layers page folds



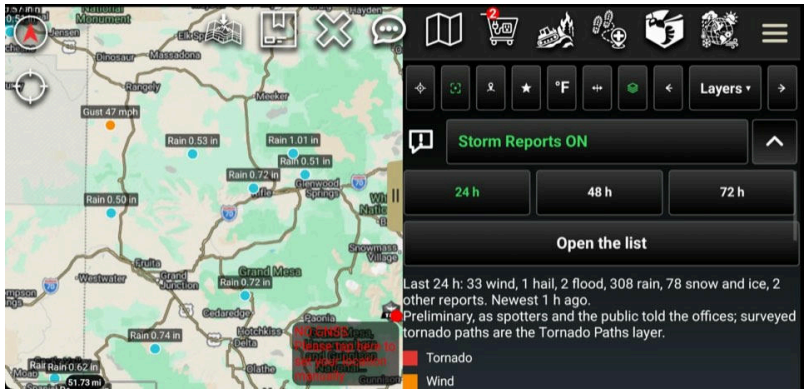
Each group on the Layers page folds to one line when its heading is tapped, and stays folded until tapped again. A heading turns green with a count when any layer under it is on, so a folded group still says what it is drawing. **All on** and **All off** at the top switch every layer at once.

Storm Reports

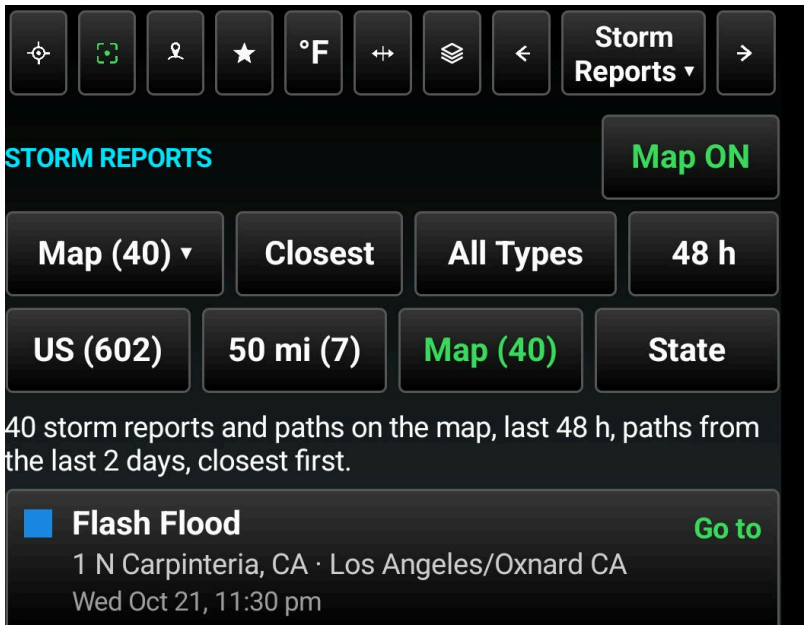


Storm Reports draws every report the NWS offices logged in the last three days: a dot in its family's color (tornado red, wind orange, hail green, flood blue, rain teal, snow and ice violet, landslide and debris flow brown, other grey) with the NWS type and size in the pill: "Hail 1.75 in", "Gust 66 mph", "Tornado". The row under the switch picks 24, 48 or 72 hours.

Tap a dot for where, when, the office and its remarks. They are preliminary, as spotters and the public told the offices; the surveyed tornado paths are the next layer.

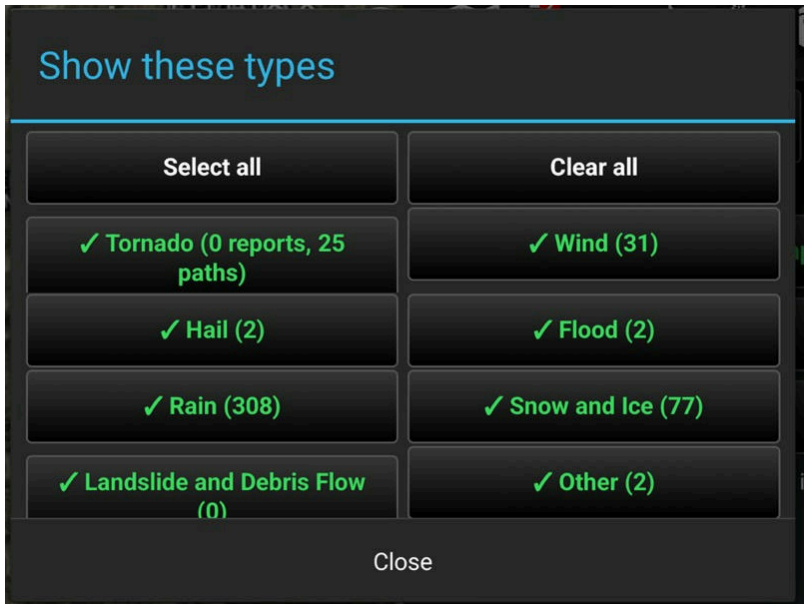

Layers
Storm Reports ON
24 h
48 h
72 h
Open the list
Last 24 h: 33 wind, 1 hail, 2 flood, 308 rain, 78 snow and ice, 2 other reports. Newest 1 h ago.
Preliminary, as spotters and the public told the offices; surveyed tornado paths are the Tornado Paths layer.
Tornado
Wind
Gust 47 mph
Rain 0.53 in
Rain 1.01 in
Rain 0.51 in
Rain 0.72 in
Rain 0.50 in
Rain 0.72 in
Rain 0.74 in
Rain 0.62 in
Grand Mesa
Grand Junction
Glenwood Springs
Meeker
Rangely
Massadona
Dinosaur
Craig
Steamboat Springs
Kremmling
Granby
Winter Park
Fraser
Fairplay
Leadville
Aspen
Snowmass Village
Basalt
Carbondale
Glenwood Springs
Rifle
Parachute
Battlement Mesa
Silt
New Castle
Rifle
Gateway
Palisade
Clifton
Fruita
Grand Junction
Redlands
Loma
Mack
Westwater
Cedaredge
Paonia
Hotchkiss
Delta
Crawford
Olathe
Montrose
Ridgway
Telluride
Ouray
Silverton
Lake City
Gunnison
Crested Butte
Monarch
Salida
Buena Vista
Poncha Springs
Saguache
Del Norte
Monte Vista
Alamosa
Creede
South Fork
Pagosa Springs
Bayfield
Durango
Ignacio
Cortez
Dolores
Mancos
Rico
Dove Creek
Pleasant View
Dolores
Naturita
Nucla
Norwood
Egnar
Placerville
Ophir
Telluride
Ridgway
Ouray
Silverton
Lake City
Gunnison
Crested Butte
Monarch
Salida
Buena Vista
Poncha Springs
Saguache
Del Norte
Monte Vista
Alamosa
Creede
South Fork
Pagosa Springs
Bayfield
Durango
Ignacio
Cortez
Dolores
Mancos
Rico
Dove Creek
Pleasant View
Dolores
Naturita
Nucla
Norwood
Egnar
Placerville
Ophir

The Storm Reports page

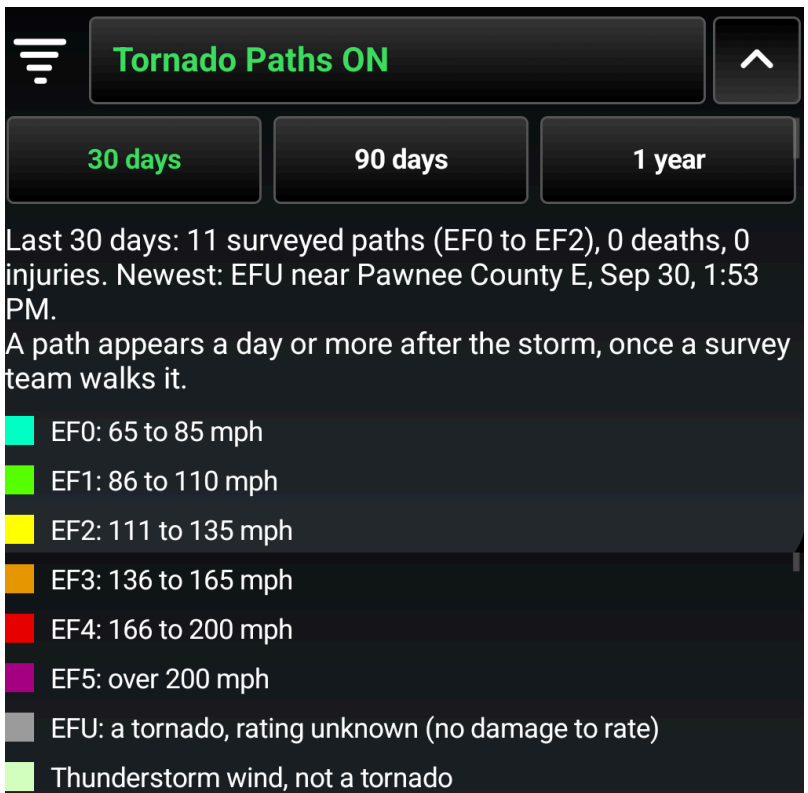


The **Storm Reports** page lists the reports and the tornado paths together, under one row of buttons. The first reads where the list looks and how many it holds, and opens the choices beneath it: **US**, **Near** the point in the pane's top row, on the **Map** as it sits (read again whenever the map settles), or by **State**. The next flips between **Newest** and **Closest** first. **All Types** is a picker of switches for any mix of the eight families and **Tornado**, which covers the dots and the paths; what you tick is what the map draws. The last steps through the window: **24 h**, **48 h**, **72 h**.

A row flies the map to the report and opens its details in one tap. **Open the list** under the layer's switch jumps here.

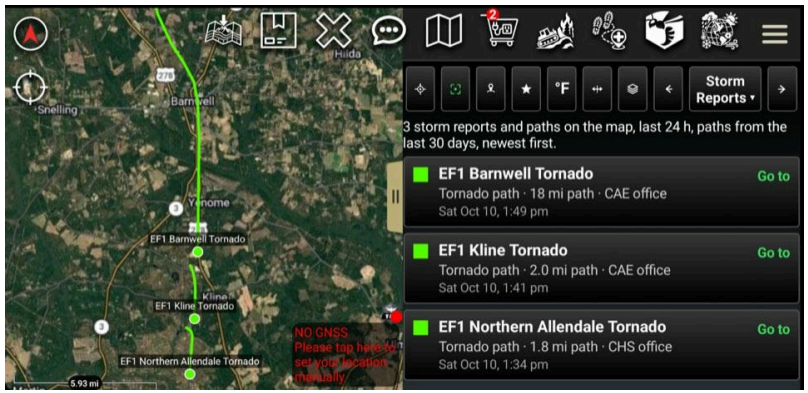

Show these types
Select all
Clear all
✓ Tornado (0 reports, 25 paths)
✓ Wind (31)
✓ Hail (2)
✓ Flood (2)
✓ Rain (308)
✓ Snow and Ice (77)
✓ Landslide and Debris Flow (0)
✓ Other (2)
Close

Tornado Paths

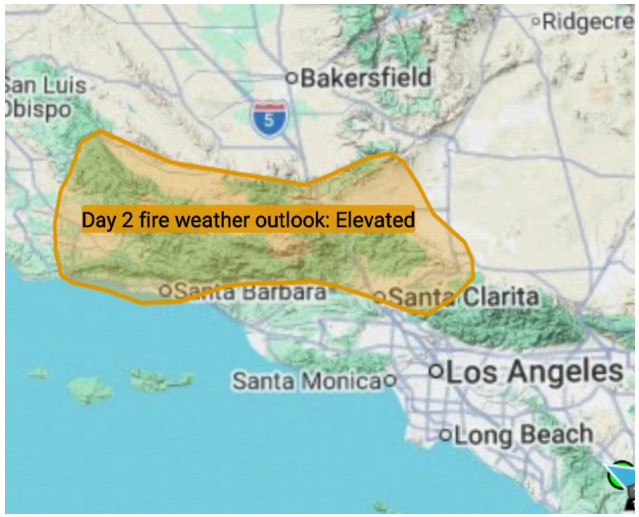


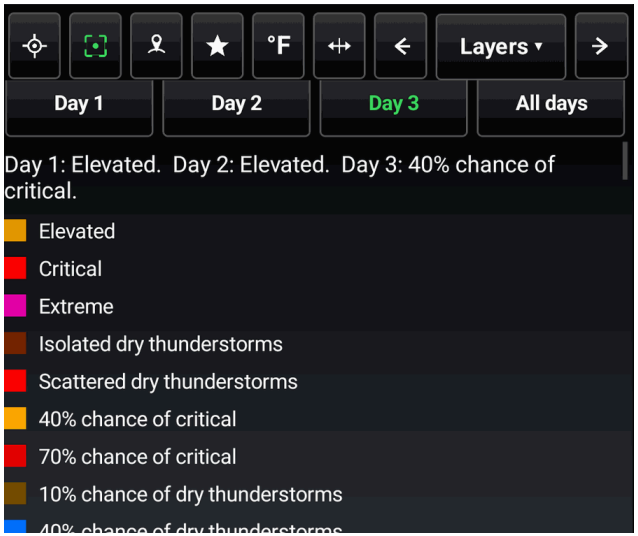
Tornado Paths draws the track a survey team walked after a tornado, as a line in the Damage Assessment Toolkit's color for its EF rating, EF0 aqua to EF5 purple, EFU grey for a tornado with nothing to rate, with a level pill at the touchdown. The row picks the last 2 days, 7 days, 30 days or year.

Tap a line for the rating, the office, when it was on the ground and for how long, the path's length and width, the peak wind the damage implies, injuries and deaths, and the survey team's words. A path appears a day or more after the storm, once the office has walked it.


Storm Reports
3 storm reports and paths on the map, last 24 h, paths from the last 30 days, newest first.
EF1 Barnwell Tornado
Tornado path · 18 mi path · CAE office
Sat Oct 10, 1:49 pm
Go to
EF1 Kline Tornado
Tornado path · 2.0 mi path · CAE office
Sat Oct 10, 1:41 pm
Go to
EF1 Northern Allendale Tornado
Tornado path · 1.8 mi path · CHS office
Sat Oct 10, 1:34 pm
Go to
Barnwell
Snelling
Hilda
Denmark
Kline
EF1 Barnwell Tornado
EF1 Kline Tornado
EF1 Northern Allendale Tornado
NO GNSS
Please tap here to set your location manually
5.93 mi

Fire Weather Outlook

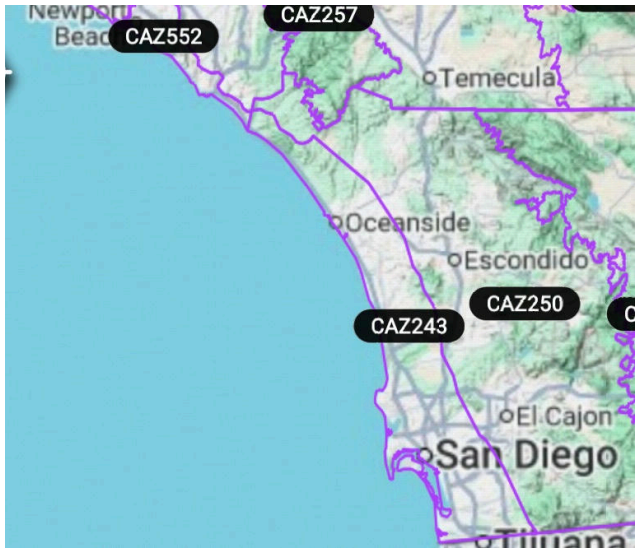


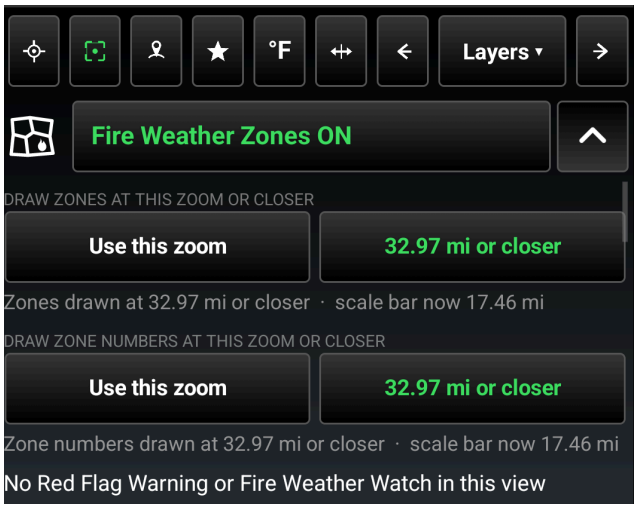


Fire Weather Outlook draws where the Storm Prediction Center expects elevated, critical or extreme fire weather, and dry thunderstorms, one day at a time: **Day 1**, **Day 2**, **Day 3** or **All days**. Every area carries its label in the middle of it.

From Day 3 the center gives a chance instead of a category: a 40% or 70% chance of critical fire weather, a 10% or 40% chance of dry thunderstorms.

Fire Weather Zones



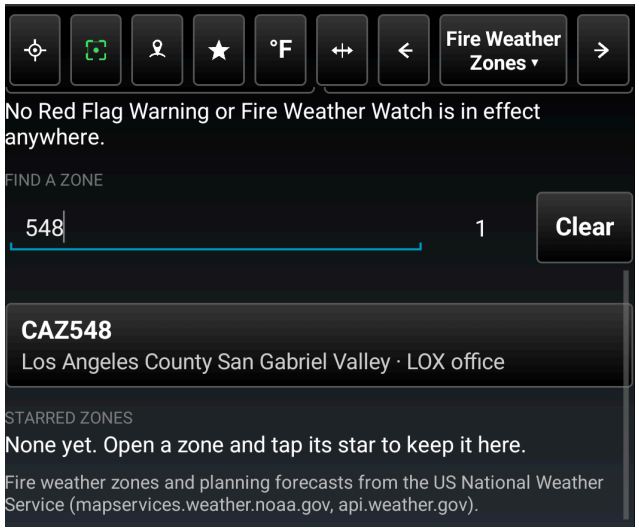


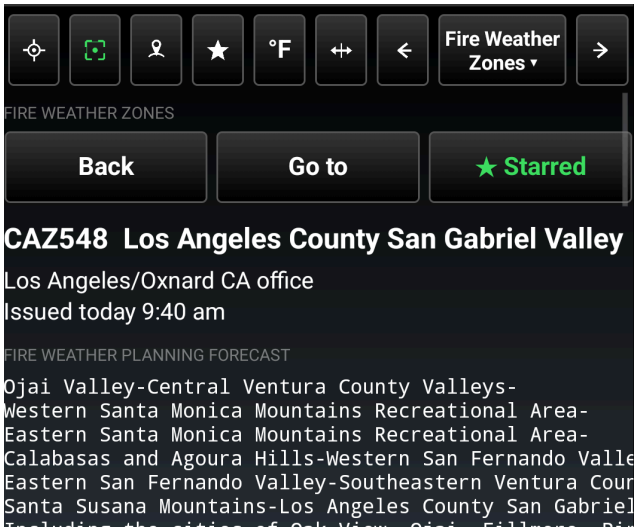


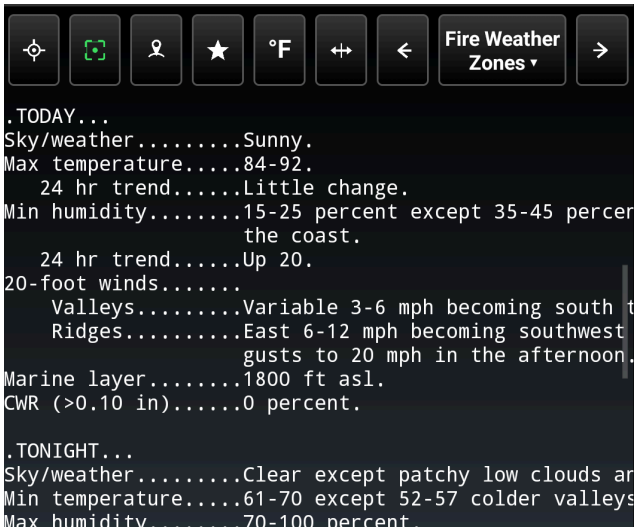
Fire Weather Zones draws the National Weather Service's fire weather zones in the map view: purple outlines, each with its zone number, a starred zone in yellow, a zone under a Red Flag Warning filled pink and one under a Fire Weather Watch beige. Tap a zone for its forecast.

The two zoom settings under the layer's arrow decide when the zones and their numbers draw; a view wider than a few states says to zoom in.

A zone's fire weather forecast

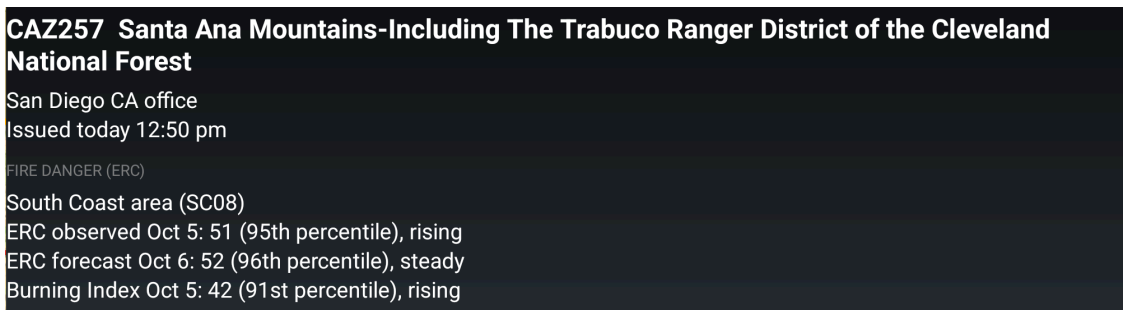






The **Fire Weather Zones** page shows the zone the point you are reading is in, the zones under a Red Flag Warning or a Fire Weather Watch anywhere, a search by zone number (CAZ548, CA548 or 548) or by name, and your starred zones. Tap one for the office's Fire Weather Planning Forecast for that zone, as the office wrote it: western offices write it by period, eastern ones as a table; slide sideways for a wide line. The star keeps the zone on the page and yellow on the map. **Show the office discussion** opens the office's discussion for the day under it. A forecast more than a day old says so.

A zone's fire danger



Under the office and issue time, **Fire danger (ERC)** gives the Energy Release Component for the area the zone is in: its name, yesterday's observed value and today's forecast with their percentiles and which way they are going, and the Burning Index.

ERC is published for these larger areas, Predictive Service Areas, not for each zone. **ERC chart and details** opens the area on the Fire Danger page.

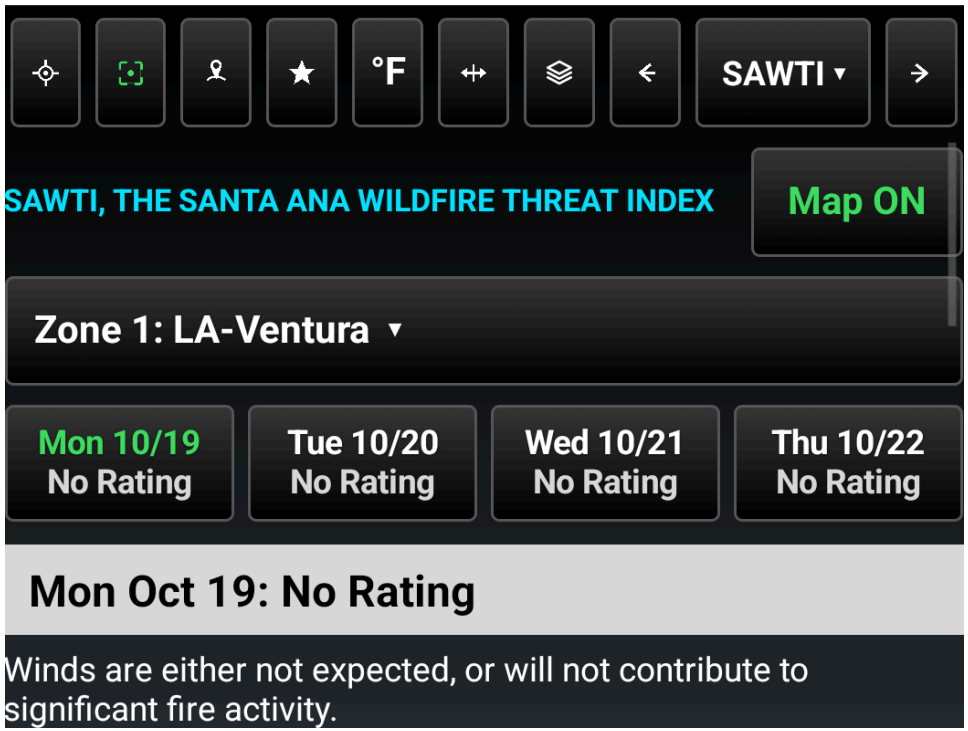
SAWTI



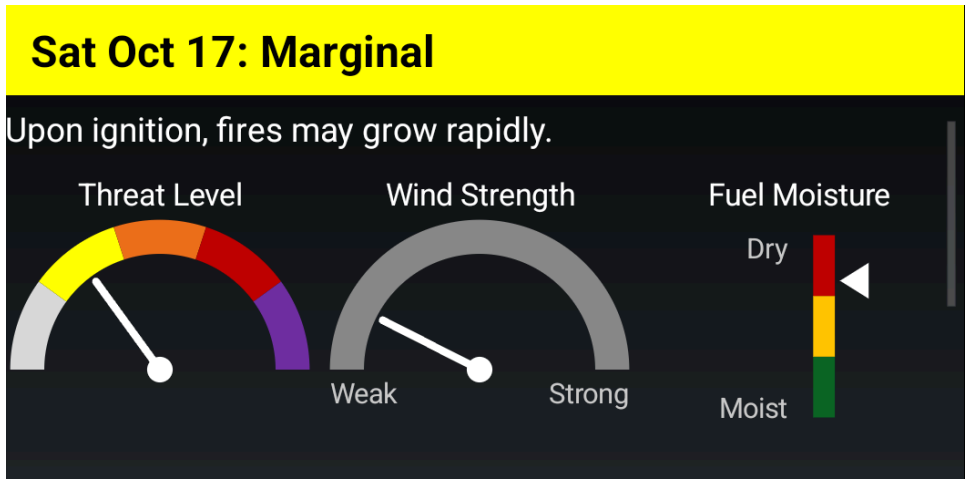


SAWTI draws the US Forest Service's Santa Ana Wildfire Threat Index for its four Southern California zones: LA-Ventura, Orange-Inland Empire, San Diego and Santa Barbara, where it rates Sundowner winds. It rates how hard a fire would be to fight if one started during an offshore wind: No Rating, Marginal, Moderate, High or Extreme. A rated zone is filled in its level's color, with its label in the same color; a No Rating zone is a blue outline. Each label starts with SAWTI, so it is not taken for another layer's area. The date buttons pick one of the four days the Forest Service shows. Tap a zone to open its page.

The SAWTI page



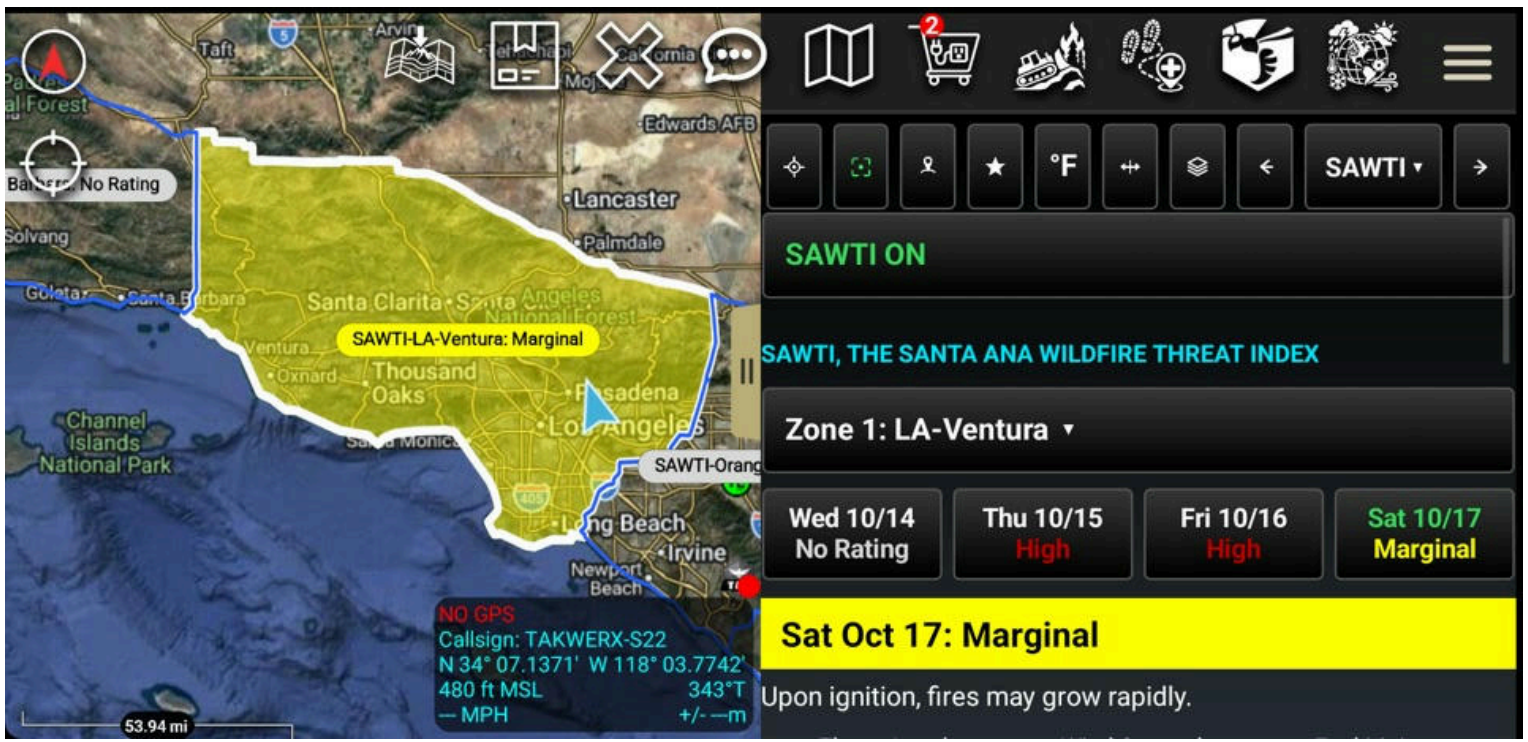
The layer switch, the zone, the four days and the day's level.



The day's level and the site's three gauges.

The **SAWTI** page is the Forest Service site's forecast page. It opens on the zone the point you are reading is in; the zone button picks another and each day button shows that day's level. Then the site's three gauges, the forecaster's **Event Description** and **Recommended Actions**, and the county links. The page and the map show the same day, picking a day turns the layer on, and while the page is open its zone has a white outline on the map.

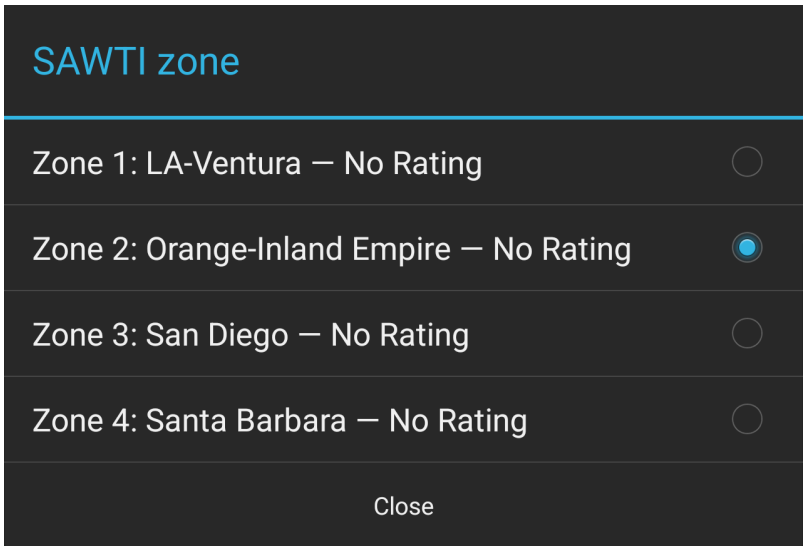
SAWTI: the page's zone on the map



While the **SAWTI** page is open, the zone it shows is outlined in white on the map and keeps its level's color, so it stands out among the others. Leave the page and the outline goes.

SAWTI: all zones

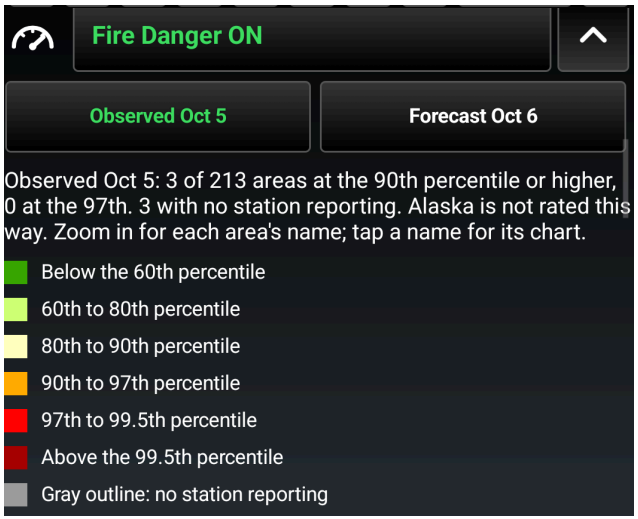




All Zones puts every zone and day side by side in the level colors; tap a square for that zone and day. The issue time is under it: the Forest Service posts a new index every morning and again when a forecaster updates it, and an issue more than a day old says so. When the wind and fuel numbers cannot be had, the gauges say **Not available** and the page asks again the next time you look.

Fire Danger

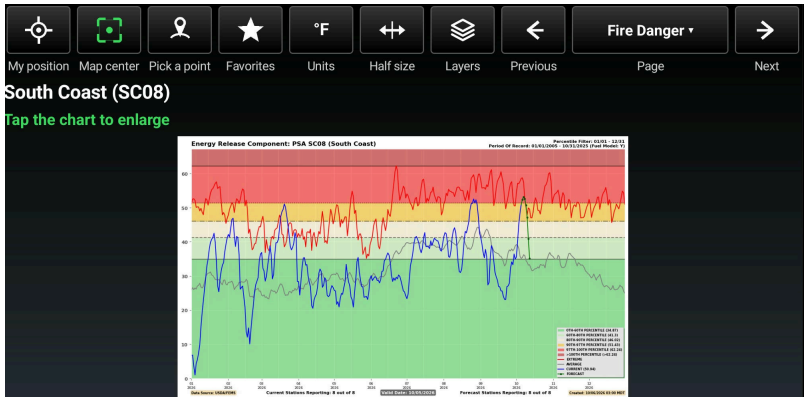


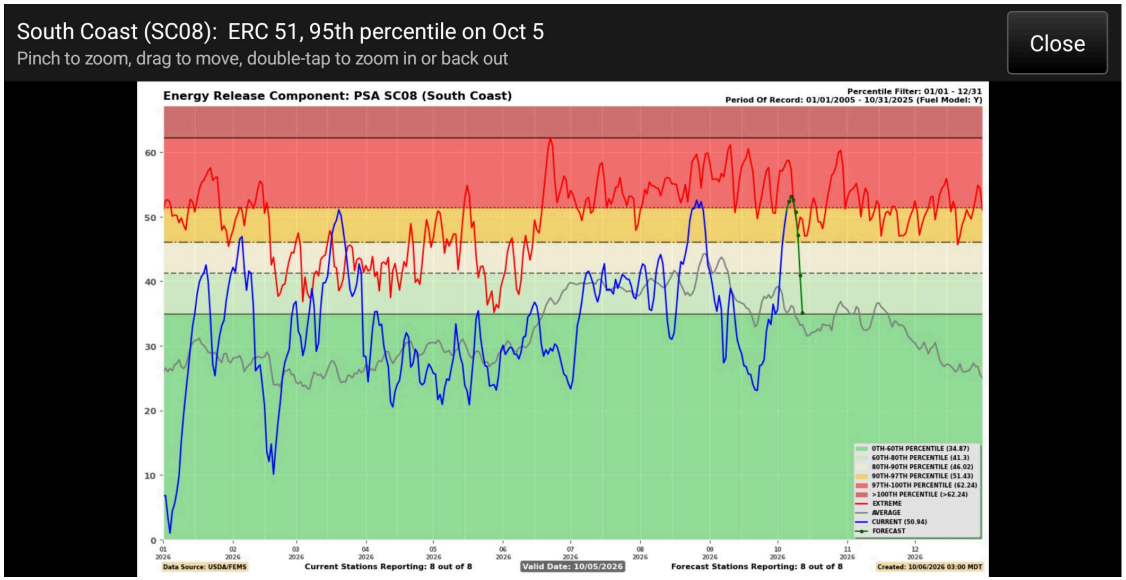


Fire Danger shades every Predictive Service Area in the lower 48 by its Energy Release Component (ERC), the index each GACC charts on its fuels page: green below the 60th percentile, up to orange from the 90th, red from the 97th and dark red above the 99.5th.

Observed is yesterday's value, **Forecast** today's; an area's value is the average of its key fire weather stations, its percentile of every day of the year, 2005 to 2022. Names show from a scale bar of about 75 miles in; tap a name for the area. Alaska is not rated this way.

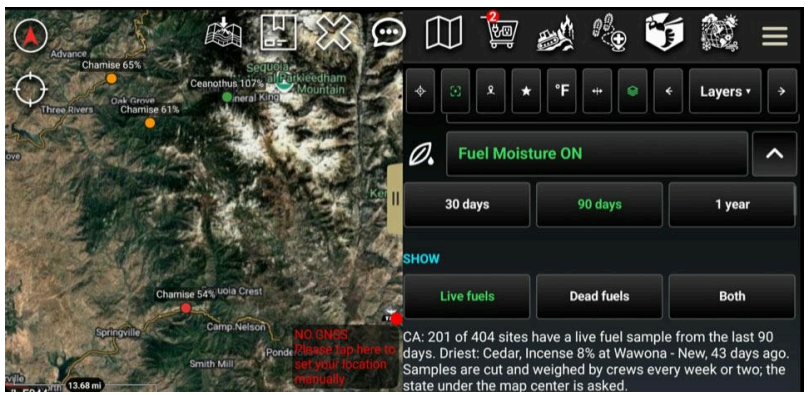
An area's ERC chart





The area opens on the **Fire Danger** page at full size: its ERC and Burning Index, observed and forecast, and its GACC's own ERC chart. **Tap the chart to enlarge** puts it on the whole screen: pinch to zoom, drag to move, double-tap to zoom in or back out. Some GACCs draw the chart's percentile bands for the fire season only, so a band there need not match the percentile above it. The Southern and Eastern Areas no longer publish ERC charts; their areas show the numbers only.

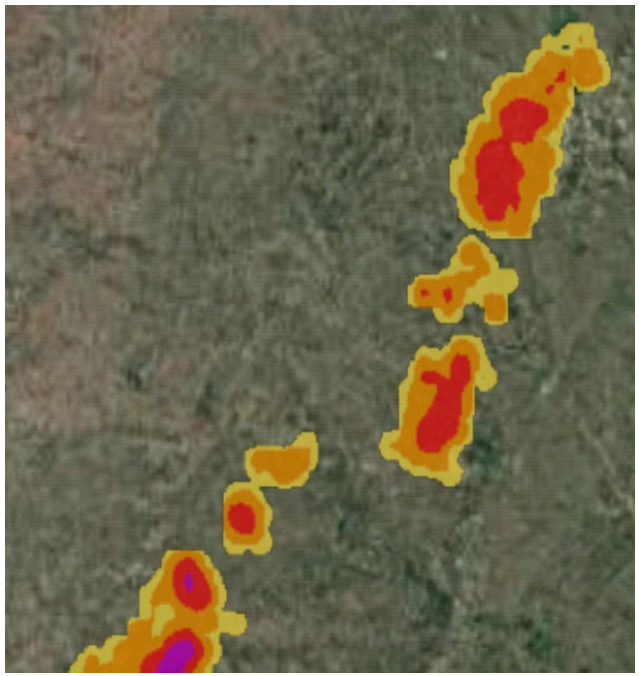
Fuel Moisture

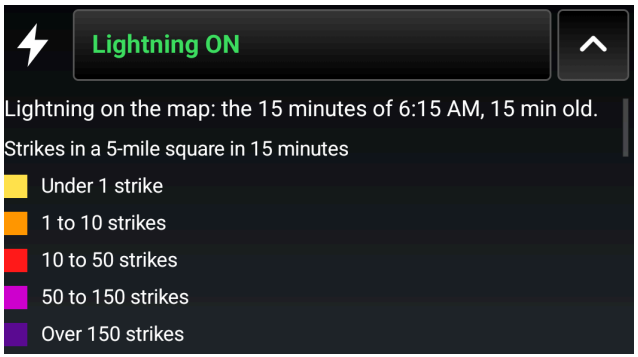


Fuel Moisture draws the fuel samples crews cut and weigh every week or two: every sampling site of the National Fuel Moisture Database in the state under the map center, a dot colored by its newest live fuel's moisture, the fuel and percent in the pill (**Chamise 58%**). Live fuel moisture is water as a percent of the plant's dry weight, so it runs past 100; the colors are the chaparral thresholds: 60% and under critical, 61 to 79 high, 80 to 99 moderate, 100 and over low. Dead fuels are rated on their own breaks, the Texas A&M and Oklahoma Mesonet figures (1 and 10 hour 6 / 9 / 15, 100 hour 10 / 13 / 18, 1000 hour 13 / 16 / 22); duff has no published scale and draws grey.

The first row picks how old a sample may be, **30 days**, **90 days** or **1 year**; **Show** picks **Live fuels**, **Dead fuels** or **Both**. Tap a dot for every fuel the site samples with its last value, date and years. Moving the map into another state asks for that state. The database is the US Forest Service's, through San Jose State University's fuel moisture portal.

Lightning





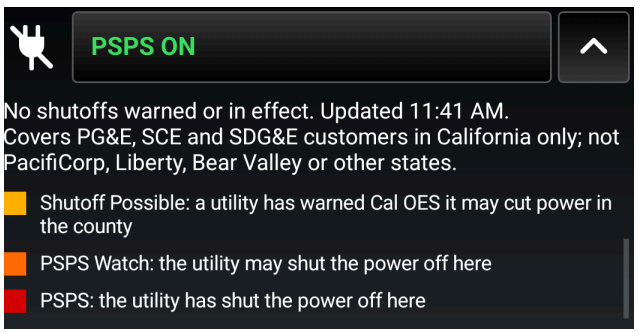
Lightning draws NOAA's lightning strike density: how many strikes the ground networks counted in each 5-mile square in 15 minutes, from yellow (under 1) to deep purple (over 150). It counts ground strikes and some cloud flashes.

A new frame comes every 15 minutes and arrives 10 to 25 minutes after the strikes; the line under the switch says which 15 minutes and how old. It shows which storms are making lightning and whether they are building. It is not a reason to call it safe to be outside.

Power shutoffs (PSPS)



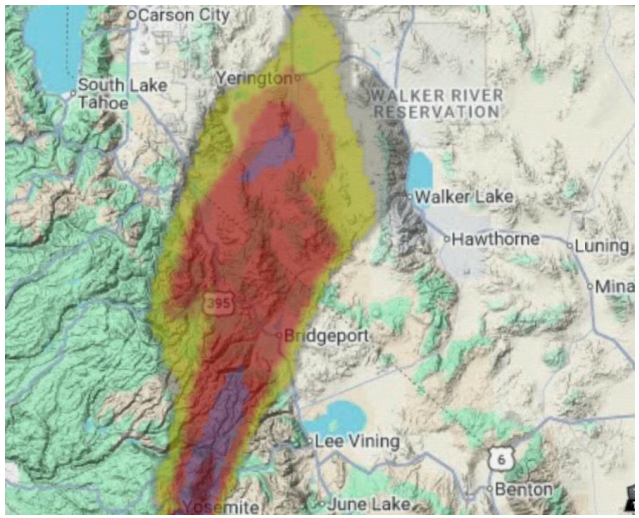
DETAILS
Riverside County
Shutoff Possible: a utility has told Cal OES it may cut power somewhere in the county to keep its lines from starting a fire. Which neighborhoods is the utility's to say.
Cal OES updated: 6:31 AM
From: California Governor's Office of Emergency Services, as reported by PG&E, SCE and SDG&E

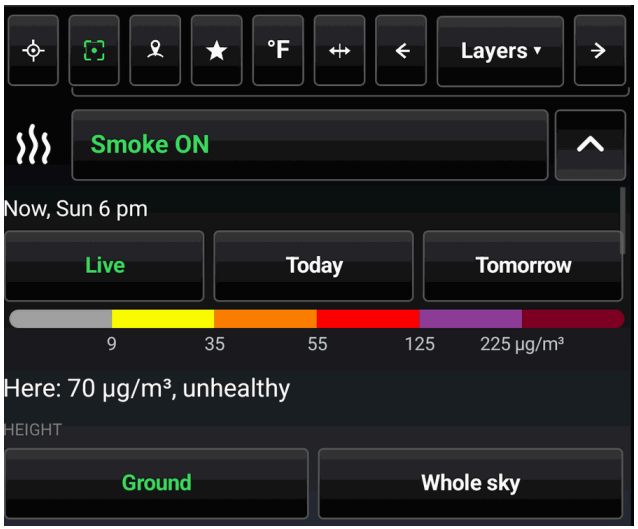


PSPS draws California's Public Safety Power Shutoffs: a county a utility has warned Cal OES may have a shutoff in amber, a circuit SCE or SDG&E is watching for one in orange (**PSPS Watch**), and the areas a utility has shut off in red, each named by its utility, such as "PG&E - PSPS". Tap one for its circuit, customers out, the shutoff window and when power is expected back. From about 10 miles in each area has its own label; farther out, nearby areas share one, "SCE - PSPS (23)", and past 150 miles the colors stand alone.

The line under the switch counts what is warned, watched and shut off, by utility, and when it was updated; a source quiet for 45 minutes is said to be unknown, never none. It comes from Cal OES (PG&E and the warned counties), Southern California Edison and San Diego Gas & Electric through takwerx's server, and does not cover PacifiCorp, Liberty, Bear Valley or any other state: ask the utility.

Smoke

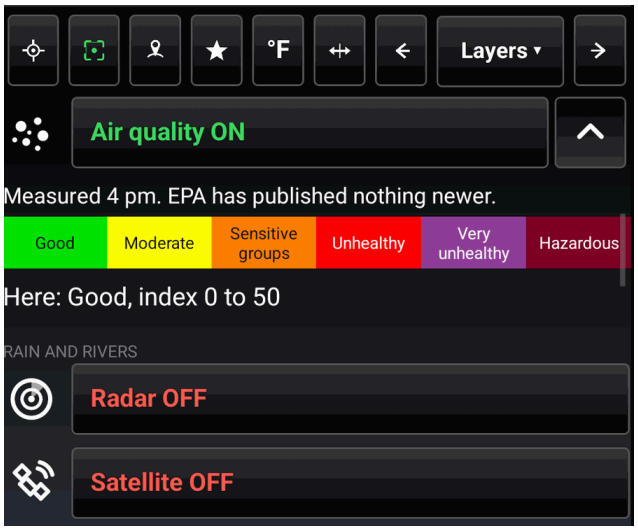




Smoke draws the forecast smoke hour by hour, at **Ground** level or through the **Whole sky**, in the air quality colors, with the amount **Here** in micrograms per cubic meter and what that means for breathing. It is the same forecast at every zoom, so the smoke keeps its shape as you zoom; a view wider than a few states is drawn for its middle.

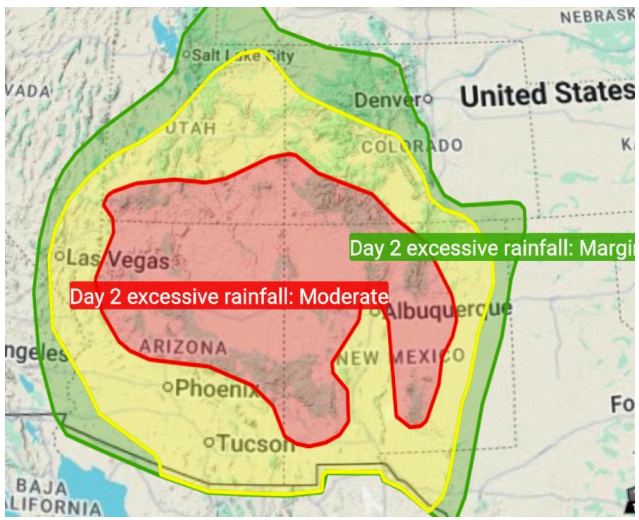
Air Quality

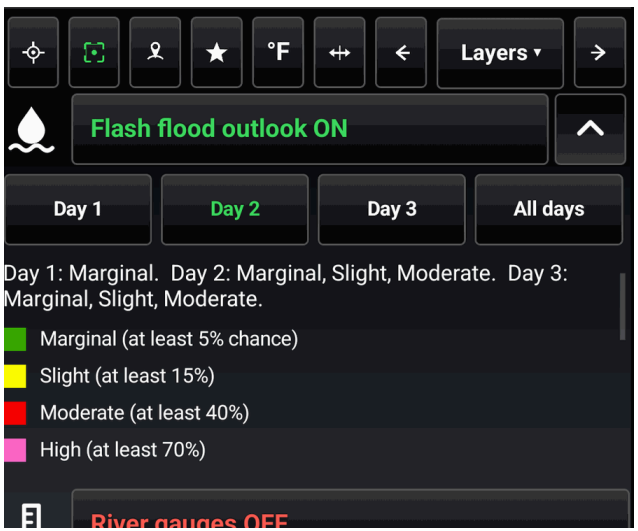




Air Quality draws the EPA's air quality areas in the index colors, Good to Hazardous, with the index **Here**. The line above the key says when it was measured, and says so when the EPA has published nothing newer.

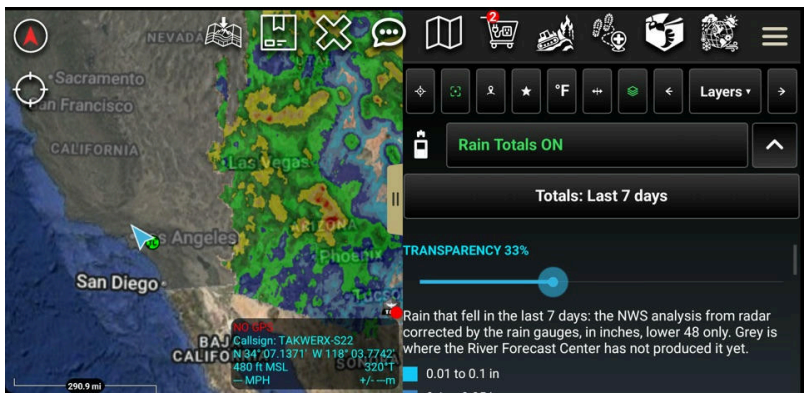
Flash Flood Outlook





Flash Flood Outlook draws the Weather Prediction Center's excessive rainfall outlook for the next three days: the chance that rain will run off faster than the ground and streams can take it, marginal, slight, moderate or high. One day at a time, or all three.

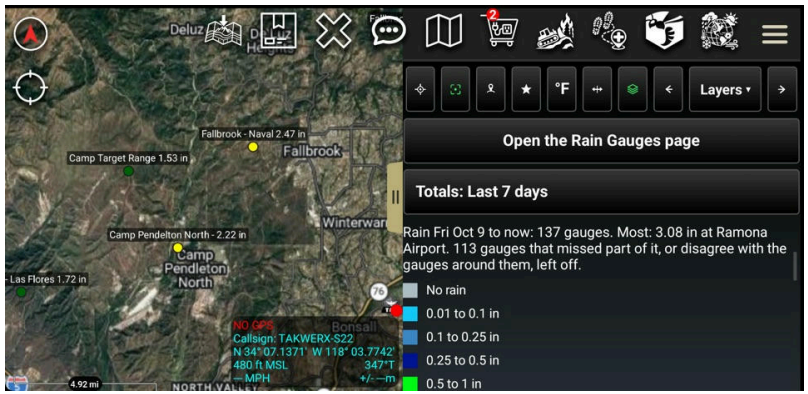
Rain Totals

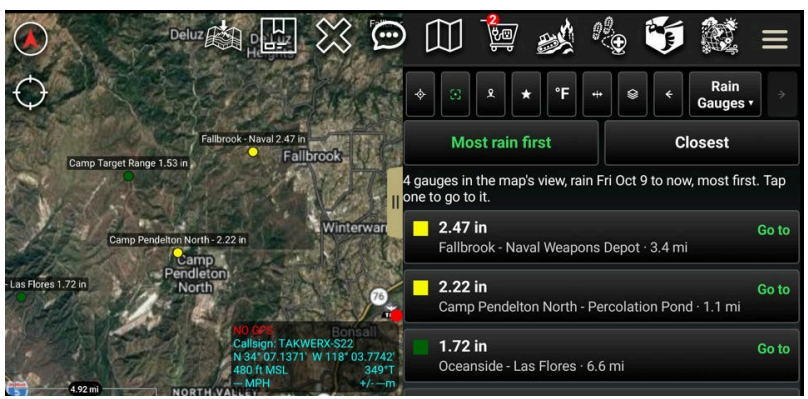


Rain Totals draws the rain that fell as a picture, in the NWS's own colors with the key under the switch. **Totals** picks the time: the last hour to 3 days from the NWS radar estimate at 1 km, updated every hour; 7 or 30 days, since Oct 1 or Jan 1 from the River Forecast Centers' analysis of radar corrected by the gauges (where it is not produced yet, the radar fills in 7 days and the rest is grey); or the hours before a date and time, the radar estimate as it stood at that hour.

The radar is good at where it rained and fair on how much: a sprinkle shows where a gauge caught nothing. Use it for where it rained and a gauge for how much. The **Transparency** slider lets the map show through. Lower 48 only.

Rain Gauges

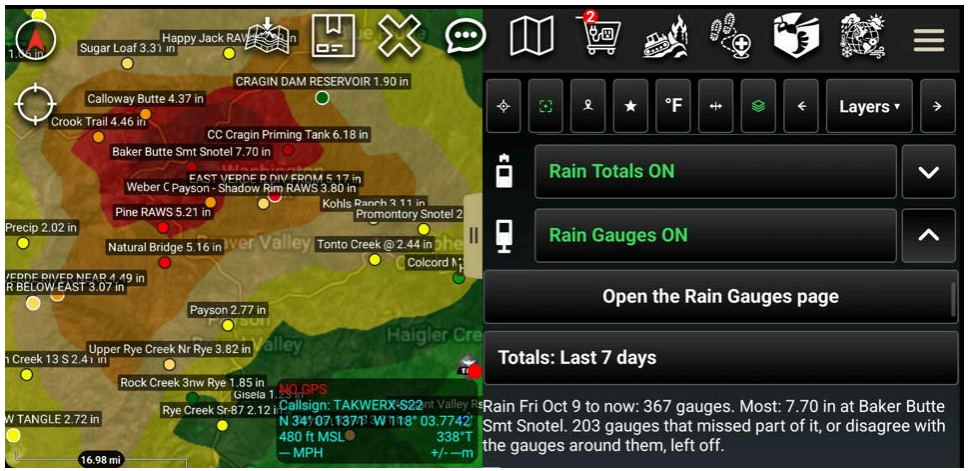




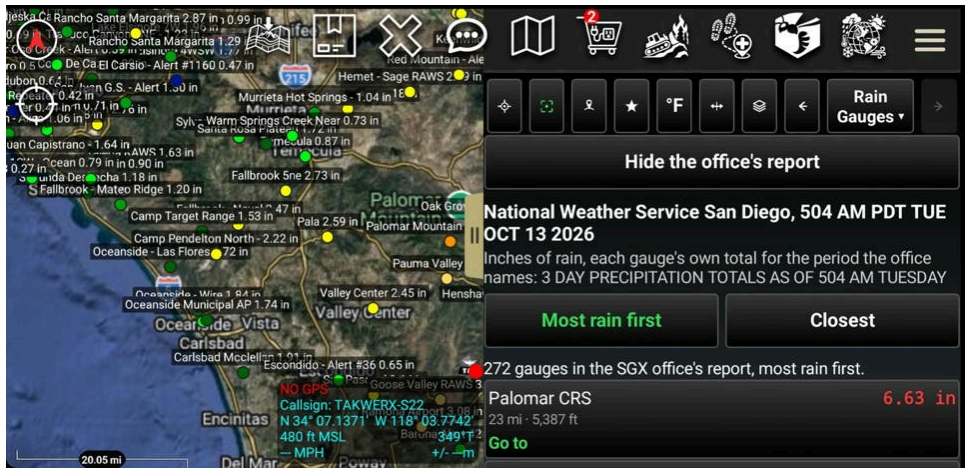
Rain Gauges draws each measured gauge as a dot in the Rain Totals colors for the same time, its name and inches in the pill. White ring: USGS. Dark ring: airports, NWS observers, county flood control, RAWS. No volunteer gauges. A gauge that missed part of the time, or disagrees with every gauge around it, is left off and counted on the status line.

The **Rain Gauges** page has **Totals** at the top, then the gauges in the map's view, **Most rain first** or **Closest**, each with **Go to**. At the bottom, the forecast office's own rainfall report opens as a table, for the period the forecaster names; it needs NWS as the forecast service.

Gauges over the totals



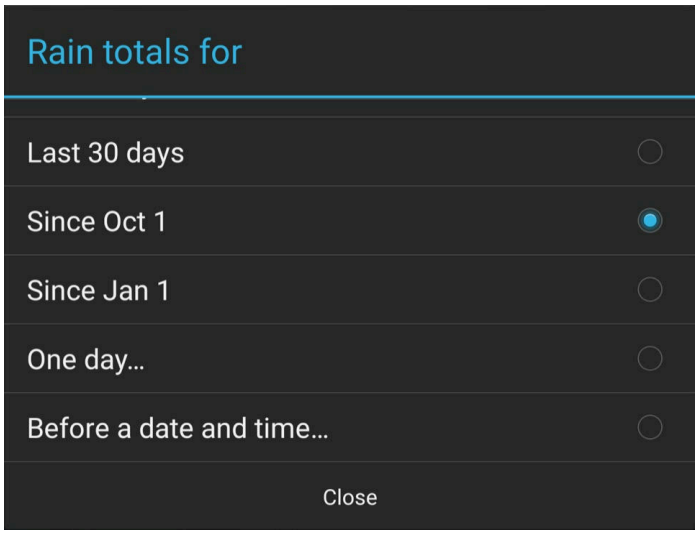
Both on Last 7 days: each dot on shading of its own color.



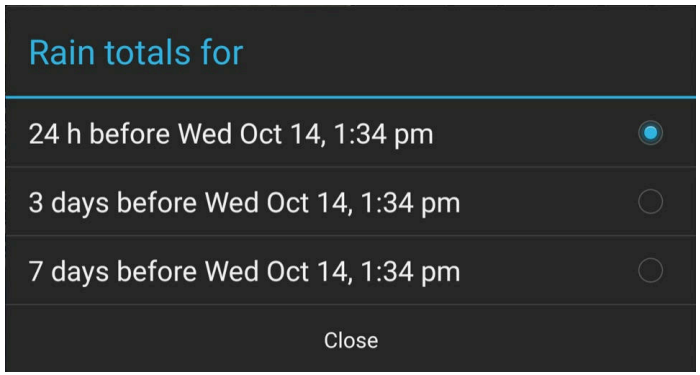
The office's rainfall report, opened on the Rain Gauges page.

With **Rain Totals** and **Rain Gauges** on the same time, a gauge that caught more or less than the radar shows stands out against the shading under it. The office's report is a table in the same colors, **Most rain first** or **Closest**.

Rain before a date and time



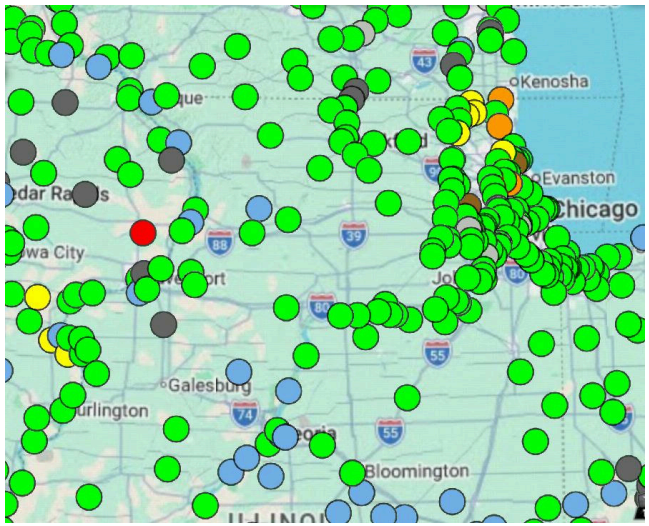
Totals: the time the rain is added up for.



The day, the time, then how long before it.

Before a date and time adds up the rain in the 24 hours, 3 or 7 days before a moment you pick, such as when a fire started: the gauges exact to the hour, the radar picture for the hour at or before it. For 3 or 7 days the USGS and county gauges wait for the map to be zoomed in to about 150 miles across. The county gauges' hours, the airports and the radar go back 45 days: further back the county and RAWS gauges show whole days and the airports are left out, and the radar calendar starts 45 days back.

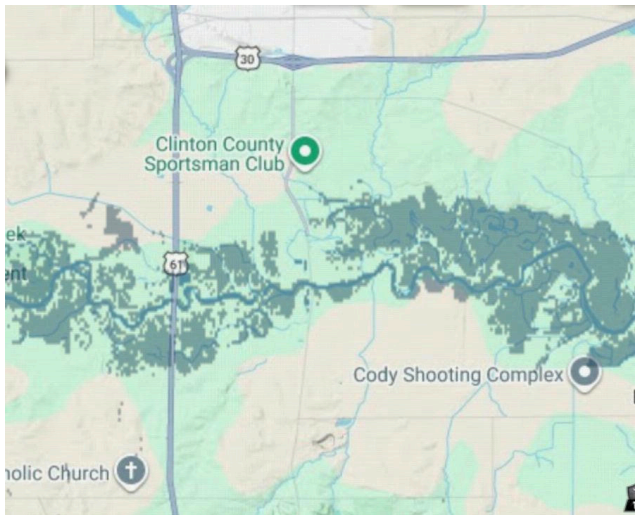
River Gauges

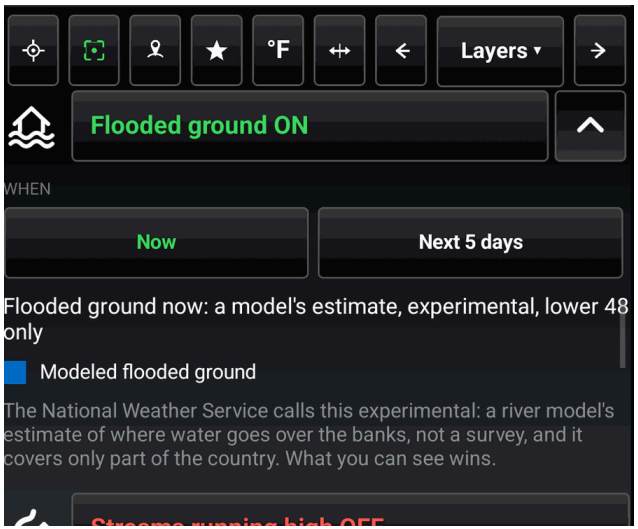




River Gauges draws the gauges around you, colored by the flood category they are in, no flooding through action, minor, moderate and major. Tap one for its record: the stage and flow now, the flood stages, and the hydrograph, observed and forecast, for the last day up to the last month. The **River Gauges** page lists the same gauges.

Flooded Ground

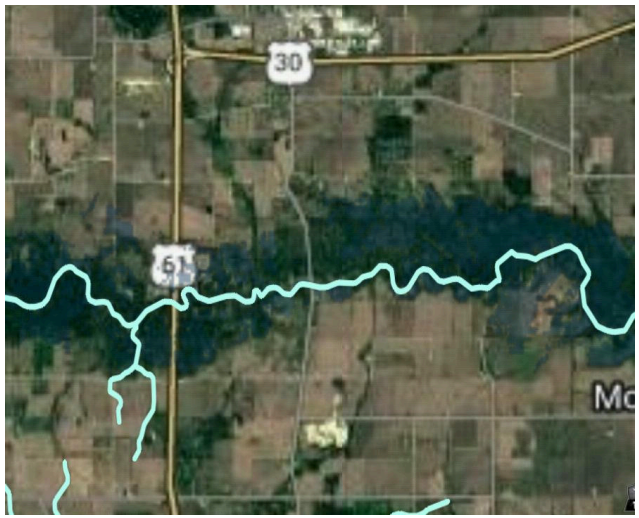


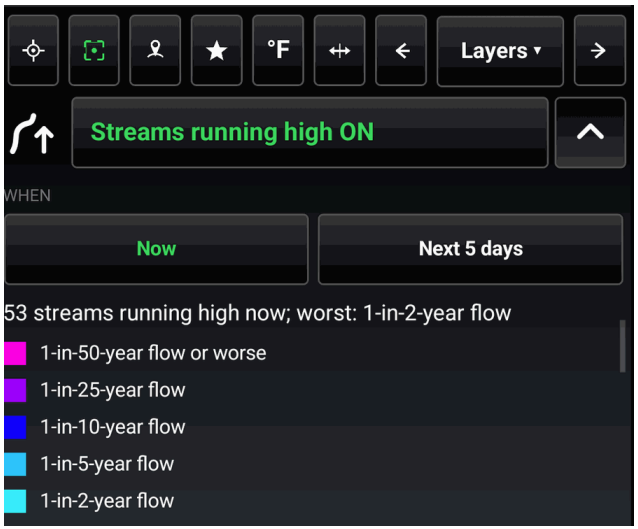


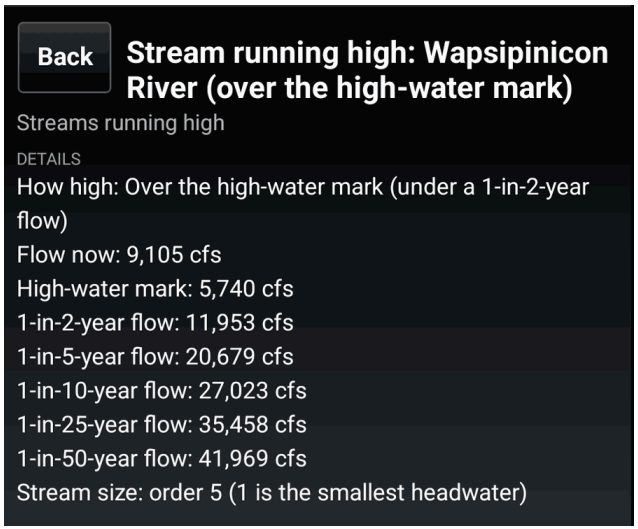
Flooded Ground draws where the Weather Service's river model puts water over the banks: **Now**, or at the worst of the **Next 5 days**.

The service calls it experimental. It is a model's estimate, not a survey, and it covers only part of the country. What you can see wins. Zoom in to a county-wide view or closer to see it.

Streams Running High

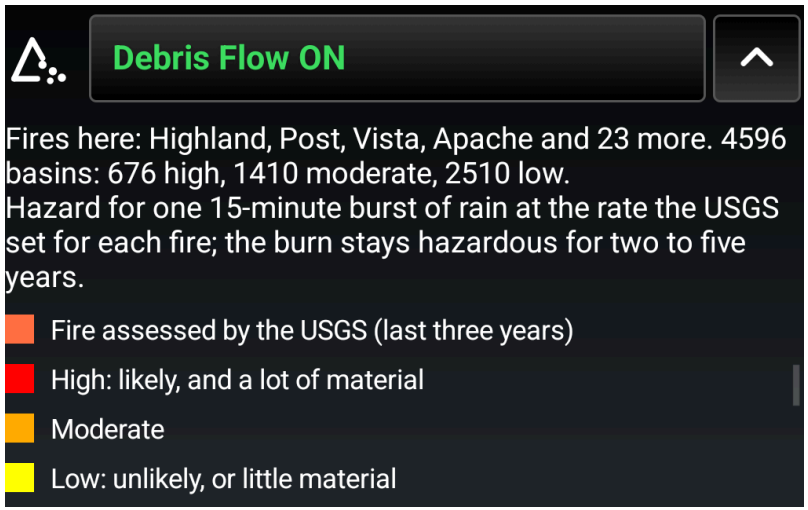






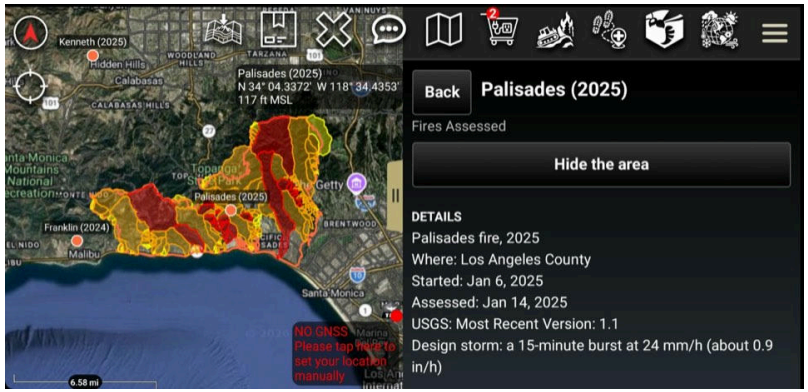
Streams Running High draws every stretch of stream the same model has over its high-water mark, colored by how rare a flow that big is, a 1-in-2-year flow up to 1-in-50 or worse. Tap a line for the flow, the high-water mark and the 2 to 50-year flows. It follows the same **Now** / **Next 5 days** choice as the flooded ground.

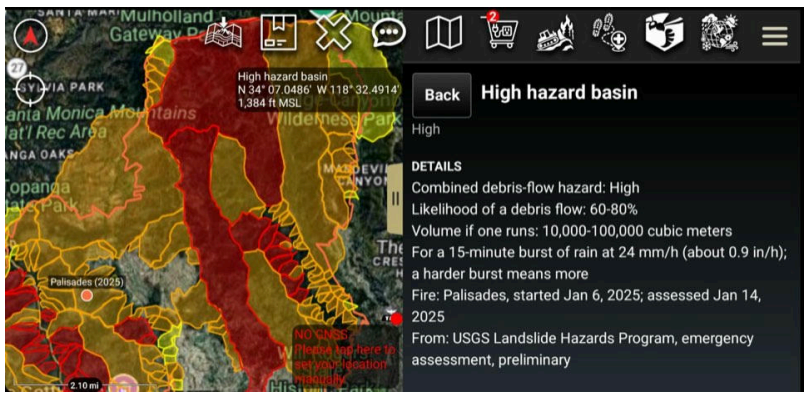
Debris Flow



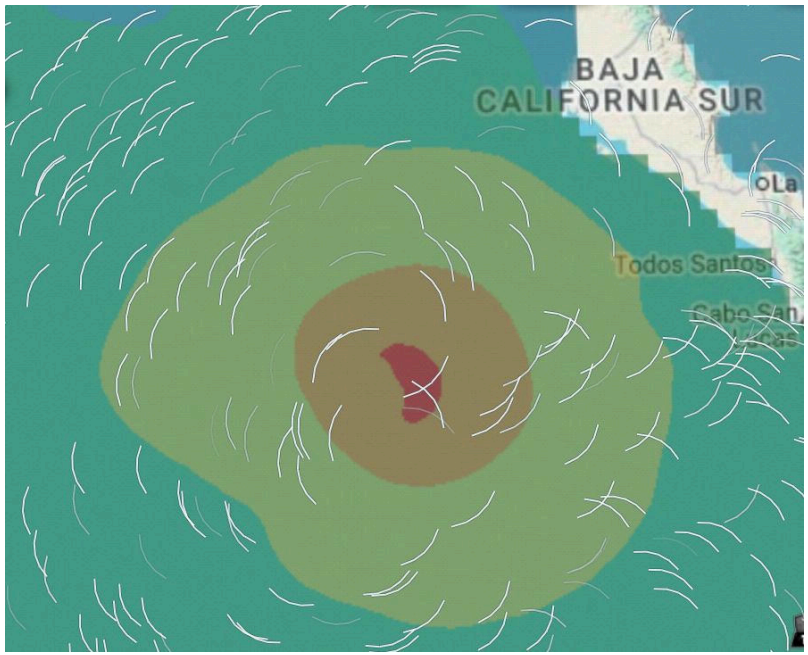
Debris Flow sits with the rivers because a debris flow is a flood of rock and mud, and the trigger is a burst of rain over a burn. It marks every fire the USGS has assessed in the last three years, and that is all it draws on its own. Tap a marker for the fire's page: **Show the area** brings the map to that burn and draws its perimeter and each stream basin, filled in USGS's own colors, Low yellow, Moderate orange, High red, for one 15-minute burst of rain at the rate the USGS set for that fire (24 mm/h, about an inch an hour, for most).

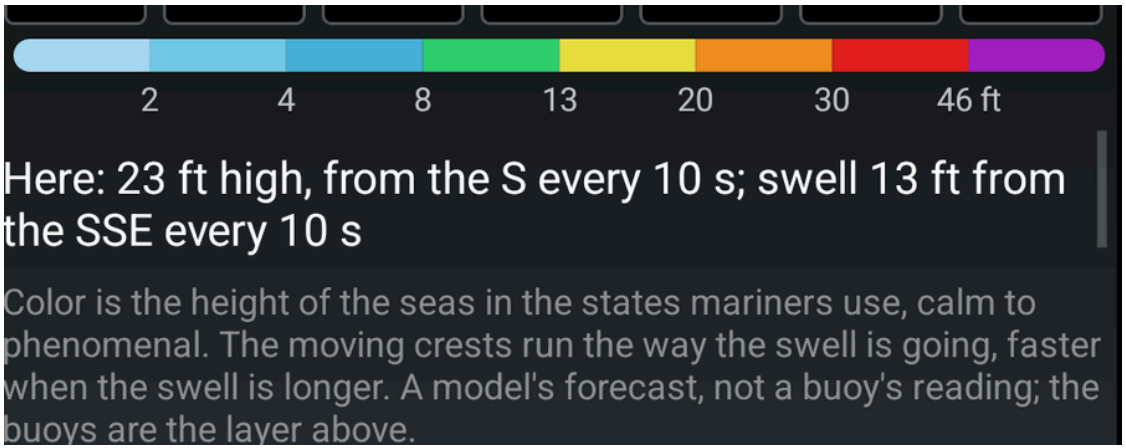
Tap a basin for the likelihood of a debris flow, the volume it would carry, the storm it is for and the fire; tap a fire for when it burned, when it was assessed and the USGS record. A burn stays hazardous for two to five years. This layer sends the area the map shows, never your position.


Kenneth (2025)
Hidden Hills
Calabasas
Palisades (2025)
N 34° 04.3372' W 118° 34.4353'
117 ft MSL
Franklin (2024)
Malibu
Santa Monica
Getty
Palisades (2025)
NO GNSS
Please tap here to set your location manually
6.58 mi
Back
Palisades (2025)
Fires Assessed
Hide the area
DETAILS
Palisades fire, 2025
Where: Los Angeles County
Started: Jan 6, 2025
Assessed: Jan 14, 2025
USGS: Most Recent Version: 1.1
Design storm: a 15-minute burst at 24 mm/h (about 0.9 in/h)


Mulholland
High hazard basin
N 34° 07.0486' W 118° 32.4914'
1,384 ft MSL
Palisades (2025)
NO GNSS
2.10 mi
Back
High hazard basin
High
DETAILS
Combined debris-flow hazard: High
Likelihood of a debris flow: 60-80%
Volume if one runs: 10,000-100,000 cubic meters
For a 15-minute burst of rain at 24 mm/h (about 0.9 in/h); a harder burst means more
Fire: Palisades, started Jan 6, 2025; assessed Jan 14, 2025
From: USGS Landslide Hazards Program, emergency assessment, preliminary

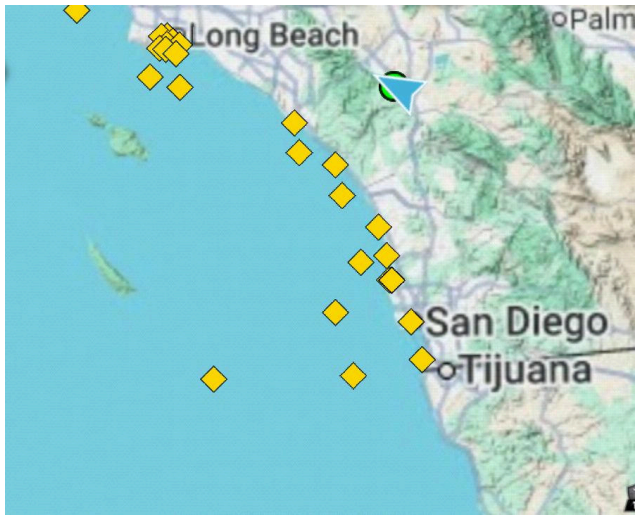
Waves

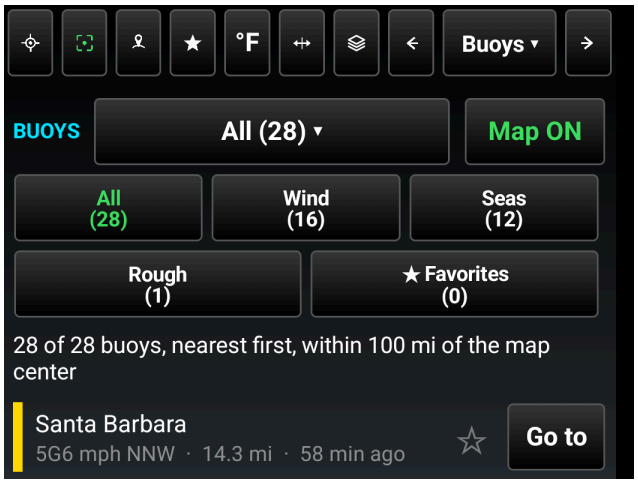




Waves draws the wave forecast: the height of the seas as color in the states mariners use, smooth to phenomenal, and the swell as crests moving the way it runs, faster when the swell is longer. The line reads the seas **Here**: height and state, where they come from and how often, and the swell under them. A model's forecast, not a buoy's reading.

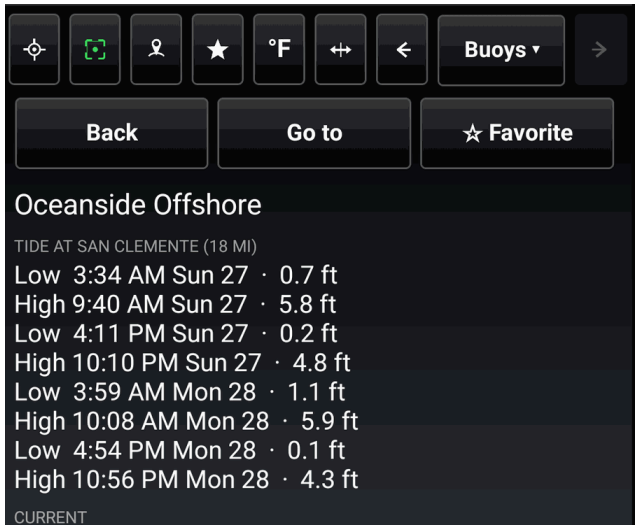
Buoys

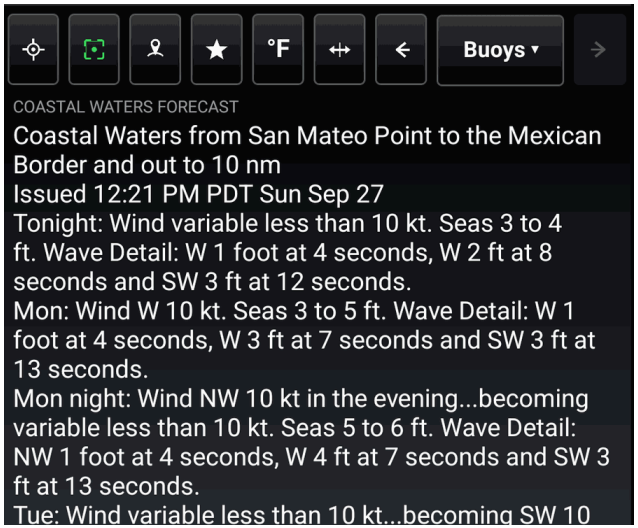




Buoys draws the buoys and coastal stations as diamonds: yellow when the reading is recent, red when the station has been silent for more than eight hours. The **Buoys** page lists them nearest first. The button beside the page name reads the filter in force and opens the others, each saying how many it will show: wind, seas, rough water, favorites.

A buoy's record



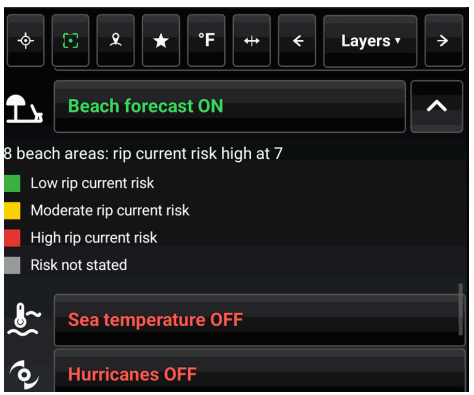


Tap a buoy, on the map or in the list, for its readings, the sea state they mean, the nearest tide station's highs and lows for today and tomorrow, and the nearest current.

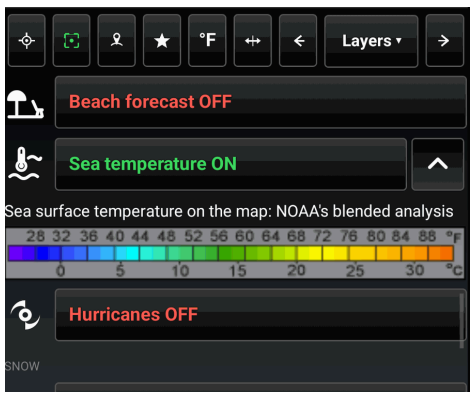
At the end of the record is the coastal waters forecast for the water it sits in, or the offshore forecast for a buoy beyond the coastal zones.

Beach Forecast and Sea Temperature



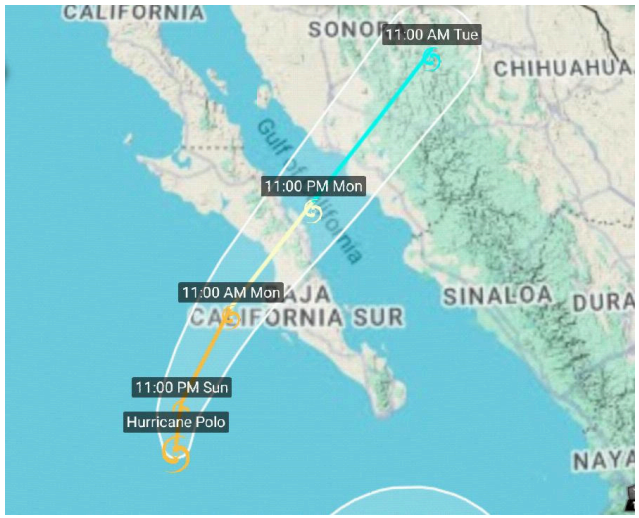


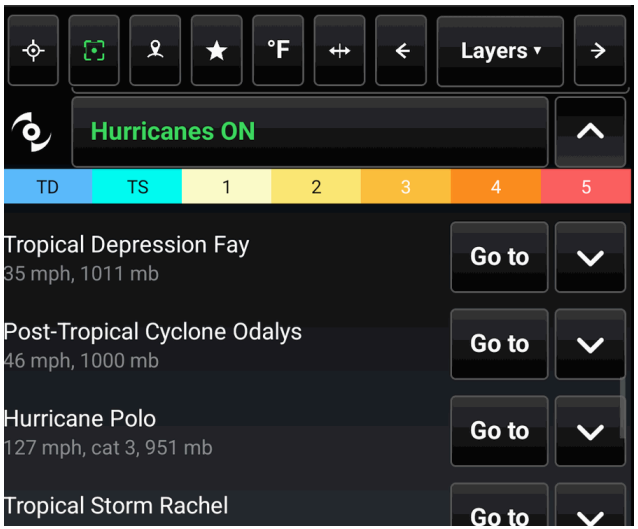




Beach Forecast draws the surf zone forecast along the coast in view: each beach area colored by rip current risk, low, moderate or high, with surf and water temperature behind a tap. **Sea Temperature** draws the sea surface temperature as a picture, with its scale in both units.

Hurricanes





Hurricanes draws the National Hurricane Center's active storms: the forecast track with its times, the cone, and the wind fields. The block lists every storm with its strength; **Go to** frames it, and the arrow opens its advisory and map choices. With no storm it says "No storms right now". A storm NHC still lists but no longer forecasts, post-tropical or past its final advisory, shows only a marker where it is, and the block says so.

Snow

Avalanche Zones draws the avalanche centers' forecast zones, filled by danger rating in the national danger scale colors, with the travel advice and the center's forecast link behind a tap. A zone out of season is not drawn; one in season but not yet rated is drawn as an outline.

Snow Stations draws the mountain snow stations around the map: snow depth, water equivalent and temperature, colored by depth.

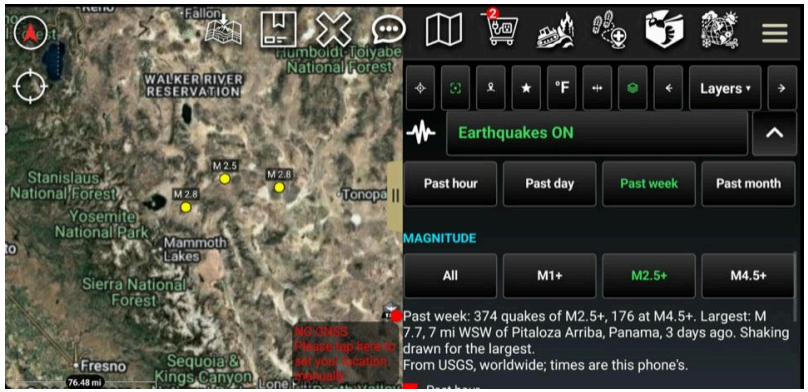
Snow Depth draws the daily snow analysis as a picture, in the same depth classes, lower 48 only.

Earthquakes



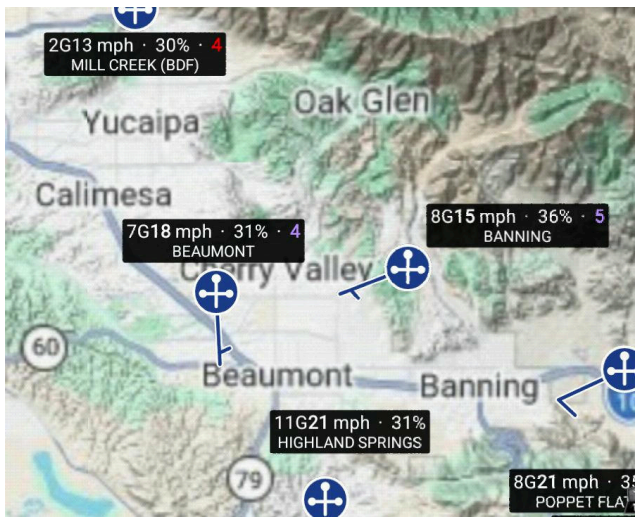
Earthquakes draws the USGS feed the way USGS's own map does: a circle sized by magnitude, colored by age (past hour red, past day orange, past week yellow, older white), the magnitude in the pill on every one. The first row picks the past hour, day, week or month (the month feed carries M2.5 and up only); **Magnitude** picks All, M1+, M2.5+ or M4.5+.

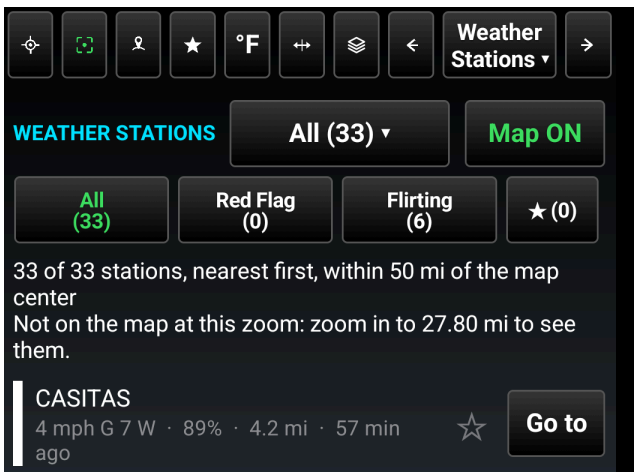
For up to five of the largest quakes of M4.5 or more, the ShakeMap's intensity contours are drawn in USGS's intensity colors with their Roman numeral. Tap a quake for the magnitude, the place, the time, the depth, how many felt it and how hard, the PAGER impact level, a tsunami flag, whether a seismologist has reviewed it, and the USGS event page. Worldwide, every five minutes.


Fallon
WALKER RIVER RESERVATION
Humboldt-Toiyabe National Forest
M 2.5
M 2.8
M 2.8
Stanislaus National Forest
Yosemite National Park
Mammoth Lakes
Sierra National Forest
Tonopa
Fresno
Sequoia & Kings Canyon
76.48 mi
NO GNSS
Please tap here to set your location manually
°F
Layers
Earthquakes ON
Past hour
Past day
Past week
Past month
MAGNITUDE
All
M1+
M2.5+
M4.5+
Past week: 374 quakes of M2.5+, 176 at M4.5+. Largest: M 7.7, 7 mi WSW of Pitaloza Arriba, Panama, 3 days ago. Shaking drawn for the largest.
From USGS, worldwide; times are this phone's.


Back
M 2.8 - 21 mi SE of Mina, Nevada
Past week
DETAILS
M 2.8 (ml)
Where: 21 mi SE of Mina, Nevada
When: Oct 9, 5:59 AM (3 days ago)
Depth: 4.0 mi (6.4 km)
Status: reviewed by a seismologist
USGS: https://earthquake.usgs.gov/earthquakes/eventpage/nn00925518
From: USGS Earthquake Hazards Program

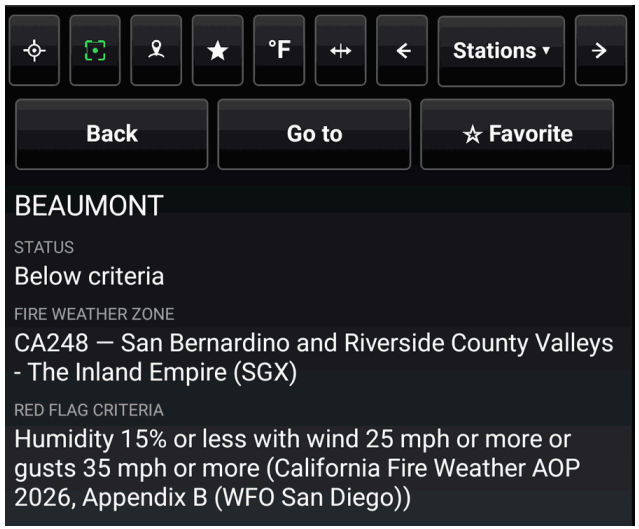
Weather Stations

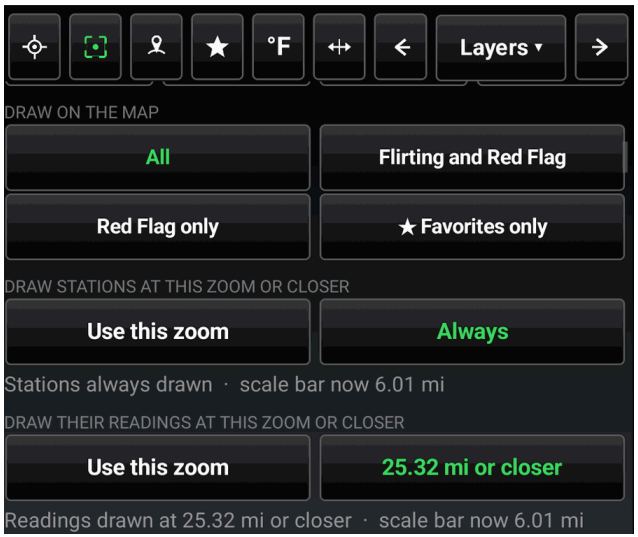




The station layer draws the weather stations around you with a barb for the wind and the readings beside it: wind, gusts and humidity. A station is colored by how close it is to the Red Flag criteria for its own fire weather zone. The **Weather Stations** page lists them nearest first. The button beside the page name reads the filter in force and opens the others, each saying how many it will show.

A station, and when stations draw

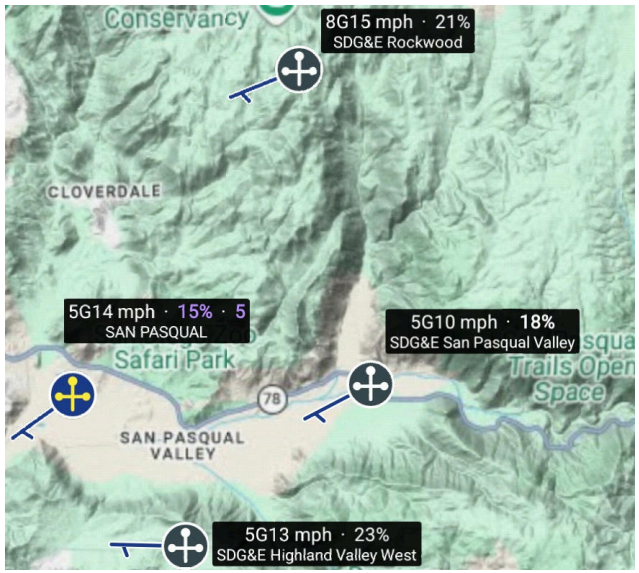


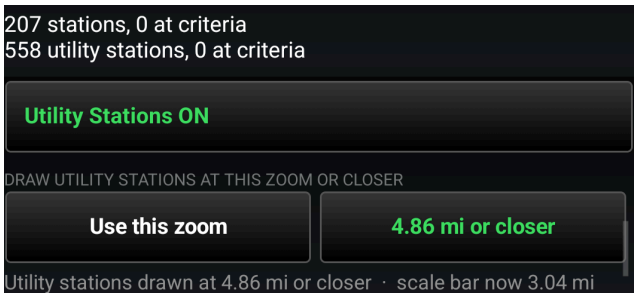


Tap a station for the whole record: every reading, its fire weather zone and that zone's Red Flag criteria. The star keeps it as a favorite.

Draw on the map picks which stations draw. The two zoom settings decide when the stations and their readings appear: **Use this zoom** takes what the scale bar reads now, **Always** never hides them.

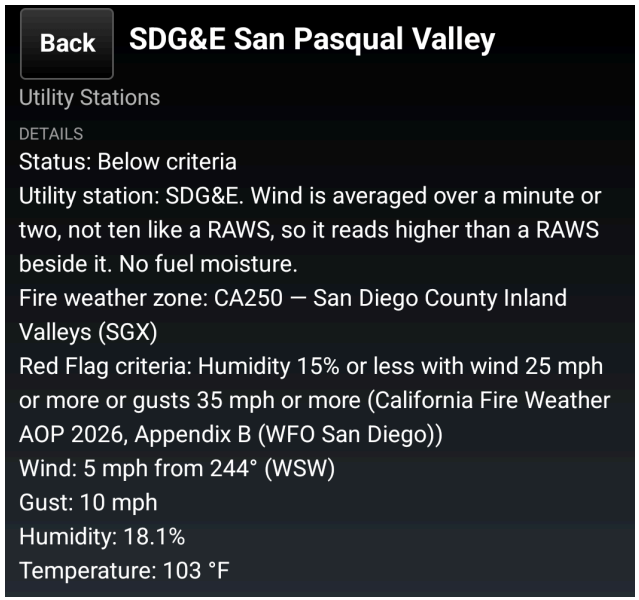
Utility stations

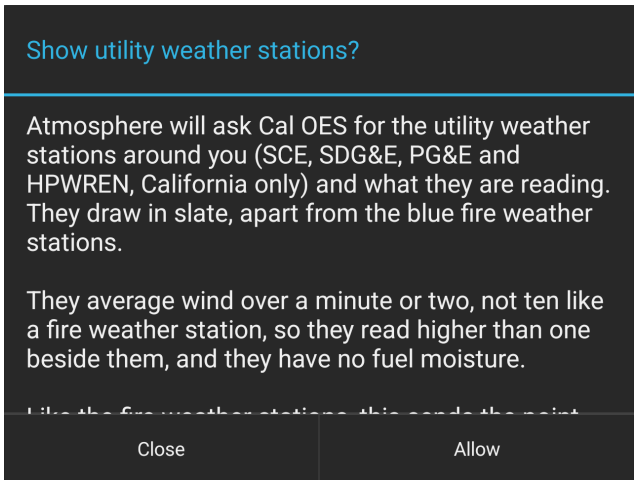




In California, **Utility Stations ON** under the Weather Stations arrow adds the stations SCE, SDG&E, PG&E and HPWREN run, from Cal OES. They draw on a slate disc beside the blue fire weather stations, their names start with the utility's, and they come in at their own zoom, 5 miles on the scale bar by default: there are hundreds of them.

A utility station

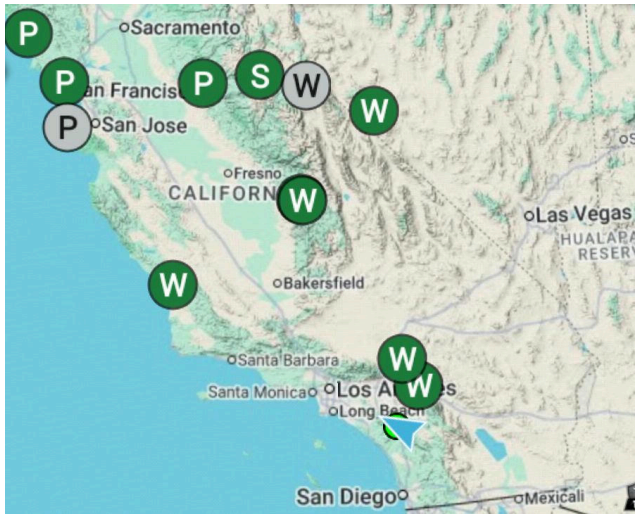


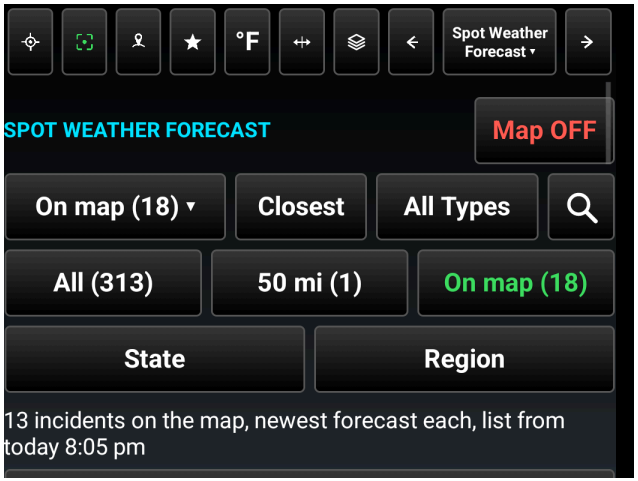


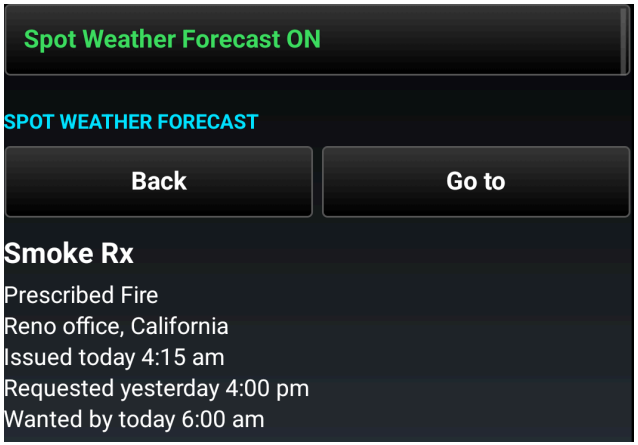
A utility averages its wind over a minute or two, not ten as a fire weather station does, so it reads higher than one beside it, and it has no fuel moisture; its record says so at the top.

They are counted on their own line under the switch, with how many are at criteria. A station that is also a fire weather station is drawn once, as the fire weather station.

Spot Weather Forecast

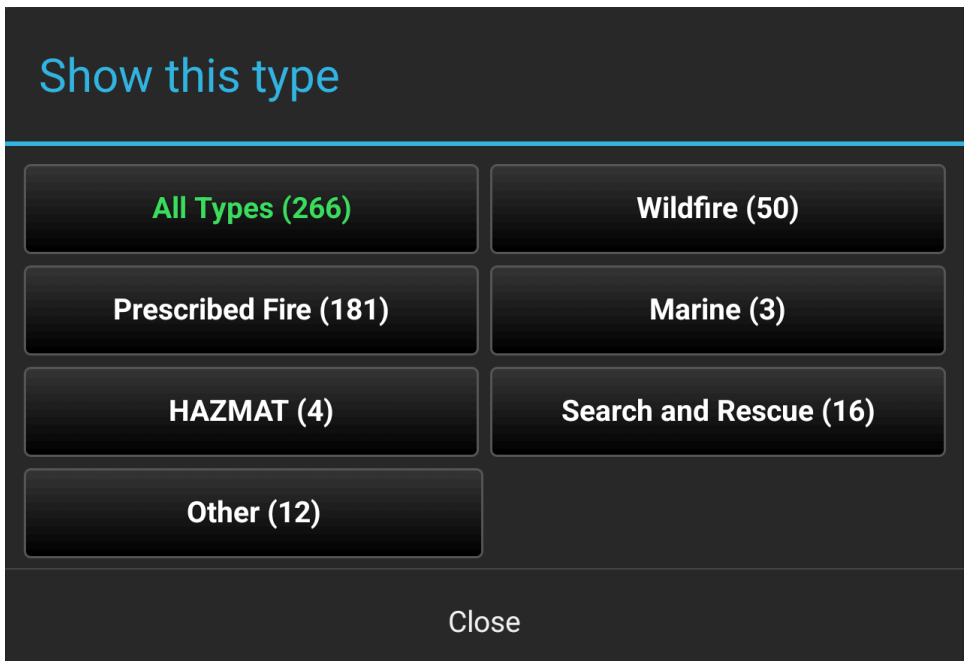


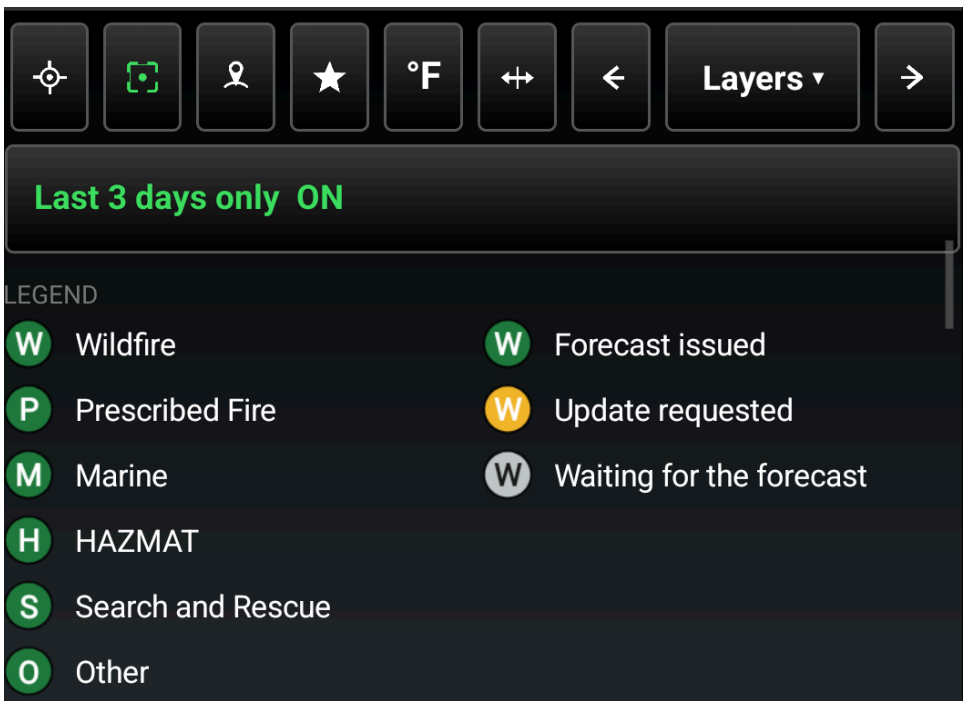




The **Spot Weather Forecast** layer draws every open spot forecast request: W for a wildfire, P for a prescribed fire, S for search and rescue. The **Spot Weather Forecast** page lists them under one row of buttons: the first reads where the list looks and how many it holds, and opens the choices beneath it (all, nearby, on the map, by state or region); the next flips between **Newest** and **Closest** first; and the magnifier at the end of the row opens a search by incident name, which a second tap closes and clears. Nearby and Closest measure from the point chosen in the top row. Tap one for the forecast the office wrote.

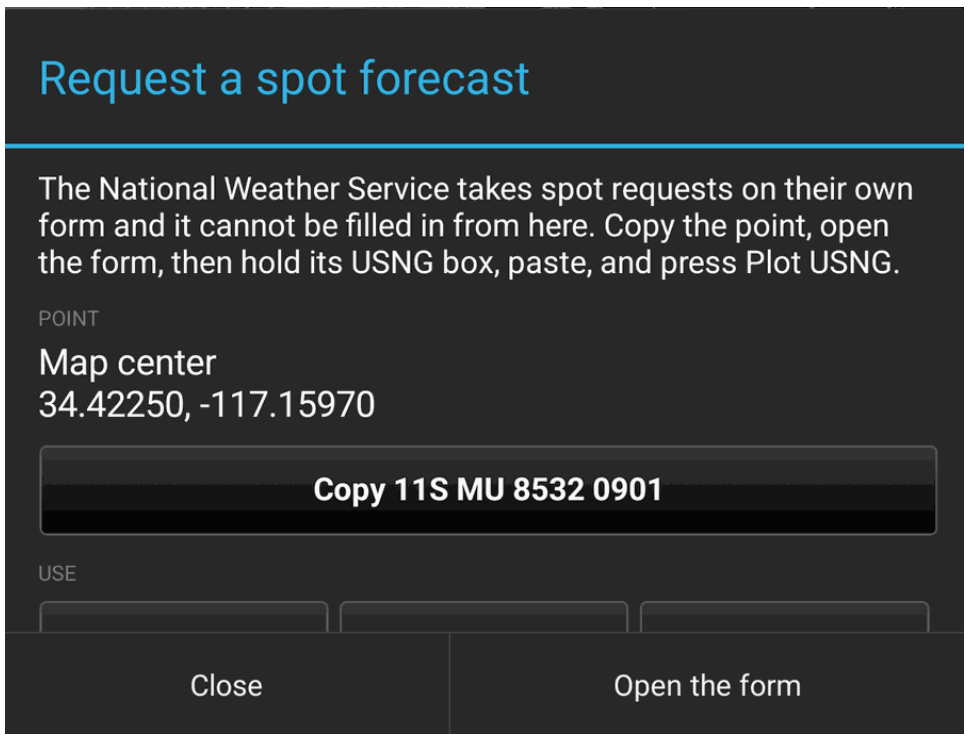
Spot types and the map key

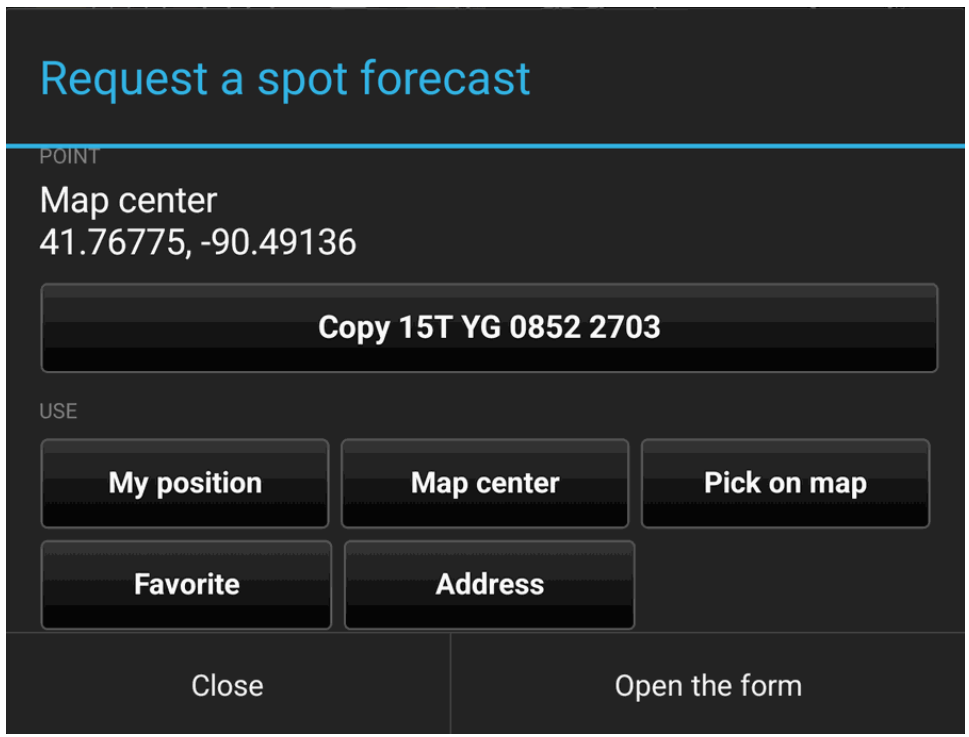




All Types on the page picks one kind of request, with how many there are of each; the kind picked applies to the map as well as the list. Under the layer's arrow the key shows each kind's icon and what the three colors mean. **Last 3 days only** keeps both to requests asked for or answered in the last three days.

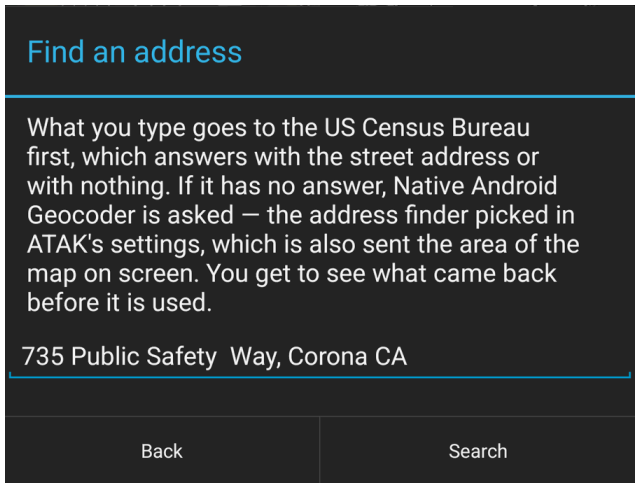
Requesting a spot forecast

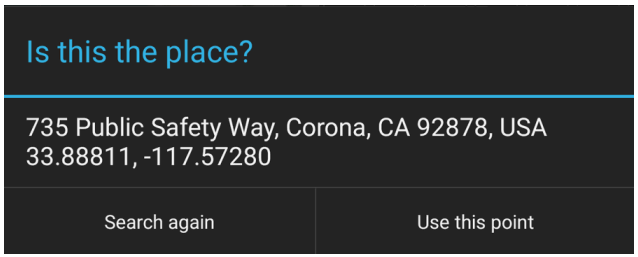


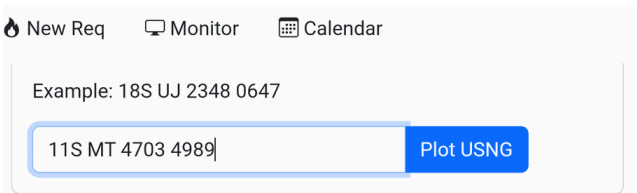


Request a spot forecast prepares yours. Pick the point - **My position**, **Map center**, **Pick on map**, a **Favorite** or an **Address** - and copy it. The Weather Service's form cannot be filled in from here: **Open the form**, hold its USNG box, paste, and press **Plot USNG**.

By address

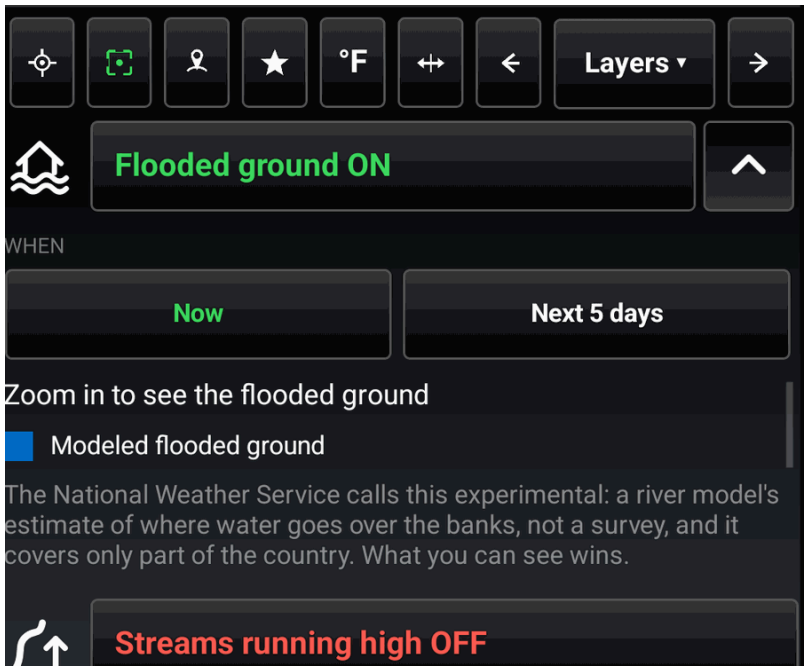






An address is looked up by the US Census Bureau first, and only then by the address finder chosen in ATAK's settings. You see what came back before it is used: **Use this point** makes it the point to copy, and the form takes it as a USNG string.

What the status lines say



Every layer says what it is doing, in words you can act on:

- "Getting the …" - a request is out.
- "Zoom in to see …" - the view is too wide for this layer to draw honestly, so it draws nothing rather than a picture of the middle.
- "Drawn for the middle of the map" - the picture is smaller than the view.
- "The 800 biggest streams running high here; zoom in for the smaller ones"
  - the answer was cut, and the small ones are what is missing.
- "No … here" - the answer came back empty. That is an answer.
- A server error is said as one; the last good picture stays up and the layer asks again on the next map move.

What leaves the device

Only what you ask for:

- A **forecast** sends the point it is for, rounded to about 100 m, to the service picked in **Forecast settings**: NWS unless you pick Open-Meteo.
- A **map layer**, once you have allowed it, sends the area of the map it is drawing, never your position, except the station, gauge and buoy layers, which send the point chosen at the top of the pane, rounded the same way.
- The **Fire Weather Zones** page finds your zone by sending the half-degree square the point is in, about 30 miles across, never the point. The Red Flag Warning and Fire Weather Watch list is one request for the whole country.
- **SAWTI** and **PSPS** send nothing about where you are: each asks for its whole set, and the SAWTI page finds your zone on this device. So do **Storm Reports**, **Tornado Paths** and **Earthquakes**, which are whole national or worldwide files; **Debris Flow**, **Rain Totals** and **Rain Gauges** send the area the map shows, padded; **Fuel Moisture** sends the two-letter code of the state under the map center, **Rain Gauges** the codes of the states under the map, and both rain layers the 2-degree squares under it, with the dates, found on this device. The office's rainfall report and the synopsis find the office by the half-degree square the point is in, and only while NWS is the forecast service.
- An **address** you type goes to the US Census Bureau, and to ATAK's own address finder if the Census has no answer.
- Every request carries the plugin's name and version, which public services require. No callsign, device identifier or TAK server detail is ever sent.

All of it is outbound HTTPS: to the National Weather Service and its centers, NOAA and its Regional Climate Centers, the EPA, the USGS, the Forest Service, Environment Canada, RainViewer, the avalanche centers and takwerx's own server, which relays Cal OES, the utilities and the Iowa Environmental Mesonet, and to the one weather service you pick.

This manual

This manual opens from ATAK's **Settings**, under **Tool Preferences**, **Specific Tool Preferences**, **Atmosphere**.

Atmosphere is a data view. It publishes nothing, it records nothing, and it draws no warnings except the Red Flag Warnings and Fire Weather Watches on its fire weather zones: the IPAWS Alerts plugin draws the rest, on the same map, and the two are meant to run together.

Feedback and bug reports: the issue tracker of the plugin's own repository, linked from its README.