FOG OF WARNING

San Francisco's Warning System That Warns but Doesn't Inform

June 18, 2026
City and County of San Francisco
2025–2026 Civil Grand Jury

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SUMMARY

> "There's something happening here. What it is ain't exactly clear."
>
> – Buffalo Springfield

San Francisco has approximately 828,000 residents, welcomes more than 23 million visitors annually, and absorbs over 200,000 daily commuters. Many of its residents speak a language at home other than English. The city faces earthquakes, tsunamis, flooding, wildfires (and smoke from remote fires), severe weather, and infrastructure failures — hazards that can compound without warning.

The city relies on digital channels to warn the public during emergencies: Wireless Emergency Alerts, AlertSF, the Emergency Alert System, social media, and field-based notification through police and fire. The San Francisco Department of Emergency Management (DEM) operates a Watch Center that maintains protocols for 38 incident types, coordinates directly with police, fire, and other city departments, and can communicate with first responders through hardened radio infrastructure, even when digital systems fail.

DEM staff undergo monthly proficiency tests and bi-weekly training exercises on the alerting platform. The department conducts structured internal reviews after major incidents to identify and act on operational improvements.

The gaps this report identifies are not in capability, but in the standards and processes that govern how that capability is used. This report focuses on AlertSF, the system DEM describes as the foundational element of the city's opt-in alerting.

The Civil Grand Jury found that:

1. City-originated emergency messages do not consistently include the five critical content elements — source, hazard, location, guidance, and time — that research has shown are necessary for the public to take protective action. The Jury's review of every publicly accessible AlertSF message found that none contained all five elements. No citywide standard requires their inclusion.
2. Written criteria do not exist for when Wireless Emergency Alerts (WEA), sent to all nearby cell phones, should be used across the majority of the 38 incident types the Watch Center handles. In the absence of criteria, WEA decisions are made case-by-case. The December 2024 tsunami WEA alert was sent citywide despite affecting only coastal zones.
3. The city's alerting protocols do not include closure procedures for any incident type. Every standard closure message follows the same pattern — "the incident has been resolved" — without communicating what changed, what actions can stop, or when the resolution occurred.
4. The city's primary opt-in alerting system (AlertSF) reaches a fraction of the people present in San Francisco on any given day. While WEA alerts reach all compatible phones regardless of enrollment, WEA cannot deliver the sustained information needed during extended incidents.
5. The resources dedicated to AlertSF do not match the system's stated importance. The promotional budget is not a dedicated line item, no standing strategy exists for reaching visitors and commuters, and no unified public destination exists for emergency information during an incident.

The Jury recommends that:

1. DEM adopts a Citywide Emergency Messaging Standard requiring all city-originated messages to include the five content elements, with requirements for multilingual delivery and a pre-send review step.
2. DEM adopts written criteria for when Wireless Emergency Alerts are warranted across all applicable incident types.
3. DEM establishes a formal post-alert closure policy requiring a follow-up message for every incident type for which an initial alert is issued.

4. DEM develops a dedicated audience growth strategy for AlertSF, including a standing approach to reaching visitors and commuters.
5. The Mayor and Board of Supervisors determine the appropriate resources for AlertSF, based on analysis done by DEM.
6. DEM establishes a consistent, mobile-first, multilingual public destination for emergency updates referenced across all alert channels.

Residents and visitors can sign up for AlertSF by texting their ZIP code to 888-777 or visiting alertsf.org.

BACKGROUND

The People and Hazards of San Francisco

San Francisco has approximately 828,000 residents, but the number of people in the city on any given day is considerably larger.[1] It is residents, commuters, and visitors, layered on top of one another and turning over constantly. More than 200,000 commuters arrive on a typical workday, and more than 23 million visitors pass through annually.[2][3] Recent examples of events drawing large numbers of visitors to the city include Super Bowl LX (2026), NBA All-Star Weekend (2025), APEC (2023), Dreamforce, Fleet Week, and Pride. Many of the people in the city at any given moment may not know its geography, its emergency systems, or the agencies responsible for public safety. An alert that works for a lifelong resident does not automatically work for the person standing next to them.

About 18% of San Francisco's residents do not speak English well.[4] The city's Language Access Ordinance designates threshold languages for which city agencies must provide translation and interpretation: Chinese, Spanish, and Filipino, with Vietnamese newly added in 2026.[5] An emergency message in English, using local shorthand or referencing locally familiar landmarks, may be unintelligible to a substantial portion of residents and visitors.

The hazards the city faces are varied and can compound. Earthquake, tsunami, wildfire smoke, flooding, severe weather, infrastructure failure, and hazardous materials incidents are all present in the city's risk profile; a single event can trigger several simultaneously. An earthquake may produce a tsunami. A storm may cause

flooding and power outages in the same hour. Among major global cities, few approach this level of complexity. Japan's national J-Alert system broadcasts emergency warnings in five languages for a comparable mix of risks.[6] Los Angeles shares the wildfire and multilingual dimensions. New York matches the density and visitor volume. What distinguishes San Francisco is the overlap of coastal, hillside, wildland, and urban-core risks across 47 square miles.

How the City Alerts the Public

Three terms recur throughout this report. An **alert** is a notification to be distributed. A **message** is the content of that notification: the words on a phone screen, or a television or radio broadcast. A **channel** is the delivery method: the technology that carries a message from sender to recipient's email, phone alerts or broadcast program interruptions.

THE WATCH CENTER

The Department of Emergency Management operates the Watch Center at 1011 Turk Street.[7] The Watch Center is the operations hub where decisions are made about when to alert the public, what to say, and which channels to use. It is the nerve center that dispatches alerts on appropriate channels and coordinates the city's emergency communications with other departments and agencies.

The Watch Center is staffed daily from 6:00 AM to 10:00 PM, with an on-call Duty Officer available overnight. Watch Center specialists monitor public safety conditions across the city and coordinate with police, fire, public health, transit, and other city departments. The Watch Center maintains protocols for 38 distinct incident types, from structure fires and hazardous materials releases to tsunami warnings and citywide power outages. These protocols specify notification chains, agency contacts, and escalation sequences for each type.

The Watch Center communicates with the San Francisco Police Department (SFPD), the San Francisco Fire Department (SFFD), and other city agencies through dedicated radio infrastructure. In a catastrophic scenario where power fails, phone networks fail, and internet service drops, the Watch Center can still reach responders in the field via two-way radio. During a prolonged power outage, when cellular devices lose battery charge and digital alerts can no longer reach the public, the Watch Center's ability to coordinate field-based notification through

police and fire services provides communications that do not depend on anyone having a charged phone. This capability provides resilience independent of the digital channels the public sees. Most residents are unaware it exists.

ALERTING CHANNELS

The city's alerting channels fall into three categories: broadcast systems that reach people without requiring any prior action, an opt-in system that requires registration, and supplemental channels that amplify or extend the reach of the first two.

Broadcast systems. Wireless Emergency Alerts (WEA) is the most powerful channel available to the city. WEA messages are sent to all compatible cell phones within a defined geographic area; no registration or opt-in is required. Messages can be geographically targeted to specific zones and are limited to 360 characters. WEA is reserved for imminent threats and is not built to carry sustained, detailed information across the duration of an extended incident. DEM sends WEAs through Federal Emergency Management Agency's Integrated Public Alert and Warning System (IPAWS) and adheres to FEMA guidance in addition to its own internal protocols.[8] Also available to DEM, the Emergency Alert System (EAS) interrupts television and radio broadcasts with emergency information and is reserved for the most severe events.

Opt-in system. AlertSF is the city's primary opt-in alerting system. Residents and visitors who register receive alerts via text message, email, or phone call, targeted by ZIP code. Because AlertSF requires registration, it can only reach people who have signed up. The implementation of AlertSF is the commercial software platform Everbridge Nixle, which is also DEM's connection to IPAWS for sending WEA alerts. AlertSF is one of several notification systems operated by city agencies; residents may also receive alerts from SFMTA, BART, 311, and other services through separate platforms with different triggering criteria.

Supplemental channels. DEM's External Affairs team maintains social media accounts (including @SF_emergency on X and Instagram), posts to Nextdoor and Facebook, and publishes information on sf.gov/ReadySF. Social media platforms surface content to users based on past engagement patterns, which means emergency messages from official accounts may not appear prominently to users who have not previously followed or interacted with those accounts. Critical

messages compete with other content for visibility, and misleading or inaccurate information can spread alongside official updates or outpace them entirely. DEM's own internal after action review of the December 2024 tsunami event documented that inaccurate information was shared across social media and from neighboring jurisdictions during the event.

In urgent situations, DEM coordinates with SFPD and SFFD to notify the public through emergency vehicles, loudspeakers, and door-to-door contact. In San Francisco emergency services terminology, Code 3 designates an emergency response that activates lights and sirens. SFFD deployed Code 3 during the December 2024 tsunami warning to supplement digital alerts in coastal zones. SFPD and SFFD do not have direct access to the AlertSF platform; they amplify alerts through their own agency channels and field operations.

ANALYSIS

Why Alert Message Content Matters

San Francisco's hazard environment means that residents, visitors, and commuters may receive emergency messages about a variety of fundamentally different types of danger. A tsunami requires moving to higher ground. A fire requires avoiding an area. A power outage requires different precautions entirely. In a city where more than 23 million visitors cycle through annually and nearly half of residents speak a language at home other than English, each message has to be self-contained. The reader may have no prior context about the city's geography, emergency systems, or even the agency sending the alert. This is equally true for people with access and functional needs, those who depend on assistive technology, have limited mobility, or require information in alternative formats, for whom message clarity is not a convenience but a necessity.

Researchers studying emergency communication have focused on precisely this kind of environment for more than thirty years. Their work has identified five content elements that increase the likelihood of timely protective action.[9] A message that contains all five elements is considered "complete."

- **Source:** Who is sending this message? Is the responsible agency identified? Do I recognize it to be authoritative?

- **Hazard:** What is the danger? Is the threat description specific enough that I understand the risk?
- **Location:** Where does this apply? Am I affected?
- **Guidance:** Are specific instructions provided? What should I do?
- **Time:** For how long? When will the situation end? When and how should I check for updates?

When people receive an incomplete message, they do not sit still. They call 911. They check social media. They text friends. They look out the window. Those searches take time, and in an earthquake, tsunami, or active threat, it's time they may not have. This well-documented behavior is called *milling*.[9] [10] Complete messages reduce milling and the delay between receiving a warning message and taking effective action. This has been documented in San Francisco. For example, after the December 2024 tsunami warning, DEM's internal review documented exactly this behavior: the public did not know what to do when they received the alert or whether it was legitimate, resulting in a surge of calls to 911, 311, and fire stations. The five-element framework is the established diagnostic tool for understanding why that happens and how to prevent it.

In a national study of more than 6,000 emergency alerts sent between 2012 and 2022, fewer than 8.5% contained all five elements.[11] The finding was published in peer-reviewed research and cited in testimony before the U.S. House of Representatives in December 2025.[12] The challenge is not unique to San Francisco. Researchers have also established that what happens after an alert matters as much as the alert itself. When people are told to evacuate, shelter in place, or avoid an area, they need to be told when they can stop. Effective post-alert messages explain what changed, what actions can cease, and confirm that the danger has passed.[13] Without that follow-up, people remain in an uncertain state, continuing to shelter when they do not need to, avoiding areas that are safe, or losing trust in the system because it issued a directive and never closed the loop.

THE ALL-HAZARDS MESSAGING LIBRARY

DEM maintains a library of pre-scripted message content in English, Chinese, Spanish, Filipino, and Vietnamese for use across incident types. The library contains the message content that goes into messages from AlertSF. Protocols described

above govern when to send those messages and through which channels; content and decision criteria are separate systems.

TRAINING AND CONTINUOUS IMPROVEMENT

DEM staff participate in regular training on alerting protocols and platform operations. DEM conducts monthly tests of IPAWS procedures and bi-weekly training sessions led by an internal alert warning specialist. These sessions walk through hypothetical scenarios using the Everbridge platform, drafting and routing alerts and stopping just short of a live public send. When a new weekly Duty Officer shift rotates on, the Watch Center offers refresher training to maintain proficiency, recognizing that after-hours officers may go for extended periods between live alert activations.

After major incidents, city departments conduct structured internal reviews to document what happened, identify what worked and what did not, and track operational changes. DEM follows this practice.

DEM also participates in regional coordination through the Urban Areas Security Initiative (UASI) and has engaged with neighboring Bay Area jurisdictions on joint alerting initiatives.

San Francisco's Alerts, Measured

The Jury reviewed 329 messages publicly accessible through the AlertSF events page on the Everbridge platform, covering October 2024 through April 2026.[14] Each message was scored against the five-element framework described in the Background. Full methodology and results appear in the Appendix.

Not a single message in the 329-message archive contained all five elements at full presence. The rate at which messages contained all five elements at least partially present, was 6.5%.[14] The national rate, measured across more than 6,000 alerts over a decade, is 8.5%. San Francisco is below that rate.[11]

This finding does not describe a system in disrepair. DEM is a capable operation running without the standards that would tell it what "complete" looks like. The Watch Center maintains detailed protocols for 38 incident types. Staff undergo monthly IPAWS proficiency tests and bi-weekly scenario-based training on the Everbridge platform. DEM conducts structured post-incident reviews and acts on

what it learns. The multi-channel approach provides multiple pathways to reach the public, and the Watch Center's hardened radio infrastructure allows field coordination to continue even when digital channels go dark, a capability that proved its value during the city's December 2025 power outage affecting nearly one-third of the city's neighborhoods.[15] The all-hazards messaging library, with pre-scripted content in five languages including Vietnamese as of 2026, reflects a deliberate investment in multilingual readiness. Staffing aligns with actual demand: 96% of AlertSF messages during the review period were sent during Watch Center operating hours.[14]

The question this report addresses is whether the standards and processes that guide DEM are set up to consistently deliver what the public needs, across incident types, channels, and audiences. The findings that follow apply to the city's digital alerting system as it operates today.

WHERE THE GAPS ARE

The element most consistently absent from AlertSF messages is time. In 85% of messages, there is no time information at all.[14] People are told to avoid an area or take shelter, but not when they can expect the situation to end, when to check back, or how long to maintain protective actions.

The source element is never fully identified in standard templates. Every message begins with "ALERTSF," the name of the system, not the name of the responsible agency. A visitor receiving a message from "ALERTSF" has no way to determine what authority stands behind it. Fewer than 5% of messages name the actual agency involved.[14]

Appearing in 94% of messages, location is the most represented element, reflecting a template structure that requires operators to enter an intersection or block range. Guidance is present in nearly all messages at 98%, though without a closure standard, most resolution messages still default to status-only language.[14]

THE TEMPLATE PROBLEM

Most AlertSF messages are not written from scratch. They follow pre-built templates where an operator fills in a location and hazard type. The templates themselves determine whether a message will be complete before anyone types a word.

Four templates account for more than half of all alert messages in the playbook archive. All four are structurally incomplete.[14] The template does not include a time element, and the closure templates do not include action-focused guidance. This means the incompleteness is systemic. It is not a matter of operators making mistakes under pressure. The templates produce incomplete messages by default.

The completeness gap is compounded by message truncation across delivery channels. AlertSF delivers messages in two formats: a full text version averaging 320 characters and an SMS version averaging 99 characters, with a maximum of 138 characters.[14] The SMS version, which is what most subscribers actually see on their phone, is substantially shorter than the full text and may omit content that is present in the longer version.

The Jury also observed eight types of errors in the archive — doubled text, a missing template field, a wrong location requiring a subsequent correction, and a sentence cut off mid-word — the kind of mistakes a pre-send review step exists to catch.[14]

WHEN DEM GETS IT RIGHT

The best messages in the archive prove that DEM already knows how to compose near-complete alerts. The Treasure Island power outage series includes specific affected streets, the responsible utility, estimated restoration times, protective actions during and after the outage, and multilingual links. In July 2025, the tsunami advisory referenced the National Tsunami Warning Center as an authoritative source, explained the triggering earthquake, highlighted affected areas, and provided an expected arrival time.[14]

DEM composed these messages for higher-stakes situations where more effort went into content. The question is whether that level of quality should depend on the severity of the individual event or whether a standard should ensure consistency across all messages. When DEM sends a complete, well-structured first message, other city departments and media outlets can reference and amplify an authoritative source.

MULTILINGUAL DELIVERY

Not all messages in the archive include multilingual translations, although the all-hazards messaging library contains pre-scripted content in five languages.

DEM's own internal review of DEM's response to the July 2025 tsunami threat found that draft messaging was "not fully vetted or translated," creating a need for rush translation during the event. A messaging standard that includes multilingual delivery requirements would ensure that translation is part of the standard workflow rather than an afterthought during live incidents.

CHANNEL-SELECTION DECISIONS

The standards gap extends beyond message content to when the most powerful channel is used. DEM's protocols specify WEA as a channel for only two of 38 incident types. For all other incident types, decisions to use WEA are delegated to the on-duty manager with no written thresholds.

The city's response to the December 2024 tsunami threat illustrates the consequence. DEM sent a WEA to the entire city, though the tsunami inundation zone covers only coastal areas. Residents and visitors miles from any coast received a tsunami warning on their phones. DEM's internal review documented the confusion this created.

While WEA messages reach the widest audiences, "alert fatigue" is a documented risk, and DEM has recognized this risk. What a messaging standard should address is not only what messages say but the criteria for when the most intrusive channel is appropriate, so that these decisions are guided by consistent thresholds rather than momentary case-by-case judgment.

THE PROTOCOLS GAP

DEM's Watch Center protocols specify which available Everbridge message template to use for each incident type but contain no criteria for message content quality or completeness. The protocols the Jury reviewed do not reference a content standard, or any equivalent framework, for what a message should contain to be effective. They govern when to alert and which template to use. They do not govern what the message should say.

No citywide standard requires the inclusion of the five content elements across all channels and incident types. Without this standard, message quality depends on the individual template and the individual operator rather than on a consistent institutional requirement.

What Happens After the Danger Passes

When a city tells its residents to evacuate a neighborhood, avoid an intersection, or shelter in place, it has issued a directive that changes people's behavior. People alter their routes, cancel plans, or stay indoors. What information should residents receive when the threat has passed?

Research on post-alert communication identifies three components of effective closure: what changed, what the recipient can now do, and the operational status of the prior alert. Effective closure includes all three.[13] A message that says only "the incident has been resolved" provides status but nothing else. The Watch Center protocols the Jury reviewed contain no closure procedures for any of the 38 incident types. The only reference to post-alert messaging appears in the tsunami protocol, which notes that the National Tsunami Warning Center will not issue a follow-up WEA cancellation and that DEM "may consider" sending its own. "May consider" is permissive, not mandatory.

The AlertSF message archive confirms the gap in practice. Every standard closure message follows the same pattern: "The incident in the area of [LOCATION] has been resolved."[14] This tells the recipient that something ended. It does not say what the original hazard was, whether it is safe to return, what actions can stop, or when the resolution occurred. A person who missed — or never received — the initial alert and receives only the closure message learns that an unnamed incident at a named location has ended, with no context for what happened or what they should do differently.

Closure messages are a different category than alerts. An alert calls for action. A closure releases that call. Sending closures does not contribute to alert fatigue. They resolve it. Failing to close the loop leaves people in an uncertain state longer than necessary.

The practical consequences are not hypothetical. After the city's December 2025 power outage, which affected nearly one-third of the city, the Board of Supervisors cited communication failures.[15] DEM's internal review of that event documented misinformation filling the gap on social media and from neighboring jurisdictions when official follow-up did not arrive.

No formal closure procedure exists for any incident type. The decision to issue a follow-up message, and what that message says, is left to the individual judgment of Watch Center staff during each incident.

Reaching the People Who Need to Hear It

AlertSF reaches a fraction of the people present in San Francisco on any given day. DEM reports approximately 106,000 total AlertSF subscribers, though this figure includes inactive accounts and those to whom delivery has failed. The currently active subscriber base is smaller. DEM has cited approximately 40,000 text and 34,000 online subscribers. The department does not have sufficient information about its subscribers to determine how many are San Francisco residents and how many are visitors.

The resources dedicated to growing AlertSF's audience do not match the system's stated importance. The annual budget for promoting AlertSF is not a dedicated line item but is drawn from a shared resource pool, amounting to an estimated $20,000 to $30,000 annually with no dedicated paid media. DEM's own leadership has identified expanded Watch Center coverage as its top operational priority, ahead of audience growth or additional alerting tools. For a system DEM describes as foundational to the city's emergency communication, the current investment is difficult to reconcile with that description.

WEA reaches everyone with a compatible phone, no registration required. Claims that the majority of San Franciscans "won't receive any alerts" because they are not enrolled in AlertSF are incorrect. WEA delivers alerts to all compatible devices in the affected area regardless of enrollment. The limitation is different. WEA is reserved for imminent threats. It cannot deliver the sustained, detailed information that an opt-in system can. During the December 2025 power outage, the city needed to communicate transit alternatives, resource center locations, and multi-day service disruptions — information that WEA's 360-character limit and imminent-threat restriction cannot support.[15] AlertSF and WEA serve different purposes and are not substitutes for one another.

Over the 18-month period covered by this report, an AlertSF subscriber received an average of approximately four messages per week, about 17 per month (these are not necessarily sent to all subscribers). On 71% of days, no alerts were sent at all.[14]

These are AlertSF messages only. Subscribers to other city services such as transit alerts or 311 updates may receive additional notifications through separate systems. The volume is well within a reasonable alerting cadence and does not support a concern that increasing enrollment would overwhelm subscribers.

The consequence of limited reach became visible during recent incidents. DEM's own internal review documented that misinformation spread across social media and from neighboring jurisdictions during the December 2024 tsunami threat, filling the information gap left when the authoritative source does not reach most of the affected population.

DEM HAS DEMONSTRATED IT CAN DO THIS

DEM can build effective audience outreach when it commits resources to a specific effort. For Super Bowl LX in February 2026, DEM coordinated a regional visitor campaign with the NFL, airport kiosks, and hotel distribution. Visitors were encouraged to register for alerts specific to the event. The campaign resulted in 852 opt-ins. A similar effort for three weekends of Golden Gate Park concerts last summer received 1,486 registrations. DEM also convened a regional workshop to revive the Joint Information System across 12 Bay Area counties and volunteered to lead it.

These initiatives demonstrate capability. But 852 sign-ups from a Super Bowl that drew tens of thousands of visitors to the city illustrates the scale of the distance between what DEM can do and what the system currently achieves. The efforts are event-specific and produce modest enrollment. They do not create standing infrastructure for ongoing audience growth. A visitor who arrives the week after the Super Bowl has no equivalent on-ramp to the alerting system.

There is also no consistent, mobile-first, multilingual public destination — a single URL that all channels can point to for more information during an emergency. During the December 2025 power outage, messages referenced multiple URLs.[14] A unified public destination would reduce confusion and give every message a consistent place to send people for updates.

A system DEM calls the foundation of the city's emergency communication should be resourced to match that claim, with a dedicated approach to audience growth, a

standing strategy for reaching visitors and commuters, and a public destination that all channels reference.

FINDINGS AND RECOMMENDATIONS

FINDINGS

F1: Five content elements — source, hazard, location, guidance, and time — are necessary in a public alert for the public to take timely protective action.

F2: City-originated emergency messages do not consistently include these five content elements.

F3: No citywide standard requires inclusion of these five content elements across city alerting channels.

F4: The Watch Center's protocols contain no criteria for message content quality.

F5: For most emergency incident types, there exist no written criteria that govern when Wireless Emergency Alerts, the City's most powerful channel, should be used, leaving the decision to the discretion of the Watch Center's on-duty manager.

F6: The absence of written criteria means that decisions about when to use the most intrusive channel available to the city are made case-by-case, without the benefit of consistent thresholds developed in advance.

F7: The city's emergency alerting protocols do not include closure procedures for any of the 38 incident types covered by Watch Center protocols.

F8: Standard closure messages do not communicate what changed, what actions can stop, or when the resolution occurred.

F9: Research has established that effective post-alert communication requires three components: resolution, action guidance, and status.

F10: The absence of formal incident closure procedures means that the decision to issue a follow-up message, and what it says, is left to individual judgment.

F11: The city's primary opt-in alerting system reaches a small fraction of the people present in San Francisco on any given day.

F12: Wireless Emergency Alerts cannot deliver the sustained information an opt-in system like AlertSF provides during extended incidents.

F13: DEM has demonstrated ability to build effective audience outreach through event-specific campaigns, but these efforts have not become standing infrastructure.

F14: The resources dedicated to growing and maintaining AlertSF do not reflect the system's stated operational role as the foundation of the city's opt-in alerting.

F15: No standing strategy exists for reaching visitors or commuters beyond event-specific campaigns.

F16: No unified, mobile-first, multilingual public destination exists for emergency information.

RECOMMENDATIONS

R1: By **1 January 2028**, the Department of Emergency Management should adopt a Citywide Emergency Messaging Standard that requires all city-originated emergency messages, across AlertSF, WEA, EAS, and social media channels, to include the five content elements: source, hazard, location, guidance, and time. The standard should include content requirements for both initial alerts and closure messages, requirements for multilingual delivery consistent with the City's Language Access Ordinance, and a pre-send review step.

R2: By **1 January 2028**, the Department of Emergency Management should adopt written criteria defining when Wireless Emergency Alerts are warranted across all 38 incident types the Watch Center handles. The criteria should address hazard severity, geographic scope, time sensitivity, and interaction with all other available channels.

R3: By **1 January 2028**, the Department of Emergency Management should require a closure or follow-up message for every incident type for which an initial alert is issued. Closure messages should communicate what changed, what protective actions can stop, and when the resolution occurred.

R4: By **1 January 2028**, the Department of Emergency Management should develop a dedicated audience growth strategy for AlertSF, including a standing approach to reaching visitors and commuters beyond event-specific campaigns. The strategy should include measurable enrollment targets and a regular reporting cadence to the Mayor and Board of Supervisors.

R5: By **1 January 2028**, the Department of Emergency Management should publish a study setting forth what it would take to fully resource the audience growth strategy developed for AlertSF under Recommendation R4.

R6: By **1 July 2028**, the Mayor and Board of Supervisors should determine whether to resource AlertSF to the extent set forth in DEM's study and, if not, determine what steps would be necessary for an AlertSF growth strategy.

R7: By **1 January 2028**, the Department of Emergency Management should establish a consistent, mobile-first, multilingual public destination for emergency updates that is referenced across all alert channels and serves as the authoritative source for the public during and after an incident.

REQUIRED AND INVITED RESPONSES

The following responses are required pursuant to California Penal Code Sections 933 and 933.05.

Required Respondent	Findings	Recommendations
Mayor of San Francisco	F2–F8, F10–F16	R1–R7
Board of Supervisors	F14, F15, F16	R6

Invited Respondent	Findings	Recommendations
SF Department of Emergency Management	F1–F16	R1–R5, R7
SF Police Department	F1, F2, F3	R1
SF Fire Department	F1, F2, F3	R1

NOTES

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4 U.S. Census Bureau. "American Community Survey 2024 1-Year Estimates." Table S1601, Language Spoken at Home. data.census.gov/table/ACSST1Y2024.S1601?g=160XX00US0667000. 43.9% of San Francisco residents age 5 and over speak a language other than English at home.

5 City and County of San Francisco. Language Access Ordinance. San Francisco Administrative Code, Chapter 91.

6 Centre for Public Impact. "J-Alert: Disaster Warning Technology in Japan." centreforpublicimpact.org/public-impact-fundamentals/j-alert-disaster-warning-technology-in-japan.

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14 AlertSF Health, alertsf.health. Statistics in this report reflect the dataset as of April 14, 2026 (329 alerts spanning October 1, 2024 through April 14, 2026). Underlying data and per-message scores are publicly available at alertsf.health/alerts.json. Methodology and scoring rules are at alertsf.health/codebook.

15 San Francisco Board of Supervisors, Public Safety and Neighborhood Services Committee. Hearing on December 2025 power outages. 12 Feb. 2026. sfgov.legistar.com/LegislationDetail.aspx?ID=7798863&GUID=ED703E1B-CEFF-4C6F-9362-D4282929064B.

16 Bat Phone image (Glossary): 2025–2026 San Francisco Civil Grand Jury.

METHODOLOGY

The Jury investigated San Francisco's public alert and warning systems from October 2025 through April 2026. In conducting this investigation, the Jury:

- Interviewed individuals in the San Francisco government whose work touches on the city's public alert and warning systems. Also consulted an academic researcher who has worked on emergency warning communication, and a practitioner with operational expertise in public safety information systems.
- Reviewed DEM operational documents, including Watch Center protocols covering 38 incident types, a post-incident after action report, and correspondence regarding the Outdoor Public Warning System and regional coordination. Also reviewed Board of Supervisors resolutions, vendor documentation, federal IPAWS guidance, Congressional testimony, and media reporting from local and national outlets.
- Reviewed published academic research on emergency warning communication, including longitudinal studies of Wireless Emergency Alert content, experimental research on message completeness, and post-alert communication. This research informed the analytical framework applied in the investigation and provided a national baseline for comparison.
- Conducted a systematic review of every emergency message publicly accessible through the AlertSF events page on the Everbridge platform at the time of review, scoring each against a five-element completeness framework derived from the Warning Response Model. The complete scoring criteria, per-message results, and underlying dataset are published at AlertSF.Health for independent verification.
- Used commercially available AI tools to assist with locating publicly available documents, reviewing published academic literature, and analyzing publicly accessible AlertSF message data. All findings, scoring judgments, and recommendations reflect the Jury's own assessment.

The Jury was not able to review every internal document DEM maintains; additional standards or training materials may exist beyond what was provided. The message

analysis covers what was publicly displayed on the Everbridge events page during the evaluation period and may not capture every message sent through the system.

GLOSSARY

311 — San Francisco's non-emergency customer service line for city information and service requests.

Access and functional needs — People who need specific accommodations during an emergency: those with disabilities, limited mobility, medical equipment dependence, cognitive or sensory impairments, or language barriers.

AlertSF — The city's opt-in emergency alerting system, run by DEM on the Everbridge platform. Subscribers get notifications by text, email, or phone call, targeted by ZIP code. To sign up, text your ZIP code to 888-777 or visit alertsf.org.

All-clear — The follow-up communication that tells people the danger has passed and they can stop sheltering, evacuating, or avoiding an area. This report uses "closure" for the broader concept; "all-clear" is what most people would call it.

BART — Bay Area Rapid Transit. Regional rail system serving San Francisco and the East and South Bay. BART operates its own notification system separate from AlertSF.

Bat Phone — A private wired telephone exchange that enables communications among the emergency command center and select department offices.[16]

CAP — Common Alerting Protocol. The data format that lets a single alert flow through IPAWS to WEA, EAS, and other channels at once.

Cell broadcast — How WEAs actually get to your phone. Unlike a text message, a cell broadcast goes to every compatible device in a geographic area simultaneously — no phone number, no registration. This is why your phone can scream at you even though you never signed up for anything.

Code 3 — Standard San Francisco emergency services terminology for an emergency response with lights and sirens activated. SFFD used Code 3 as a field

notification method during the December 2024 tsunami, driving through coastal neighborhoods with lights and sirens to supplement digital alerts.

DEM — San Francisco Department of Emergency Management.

DPW — San Francisco Department of Public Works. Responsible for maintenance and removal of physical infrastructure including remnant siren hardware.

Duty Officer — The DEM staff member on call overnight (10 PM to 6 AM) when the Watch Center is closed.

EAS — Emergency Alert System. Interrupts TV and radio with emergency information. Reserved for the most severe events.

Everbridge — Commercial mass notification platform on which AlertSF runs. Acquired Nixle, the community notification system many agencies previously used. The public-facing AlertSF events page is hosted on Everbridge.

FEMA — Federal Emergency Management Agency. Runs IPAWS.

IPAWS — Integrated Public Alert and Warning System. FEMA's federal platform for distributing alerts — the pipeline that connects local agencies like DEM to channels like WEA and EAS.

Milling — The gap between getting a warning and actually doing something about it. People mill when a message doesn't give them enough information — they call 911, check X (formerly Twitter), text friends, or look out the window. Complete messages shorten this delay. Incomplete messages make it worse.

NWS — National Weather Service. Issues weather alerts and warnings. When an AlertSF message says "The National Weather Service has issued a Flash Flood Warning," the NWS is the originating authority.

OPWS — Outdoor Public Warning System. San Francisco's siren network — the Tuesday noon test that ran for decades. Taken offline December 2019 over cybersecurity vulnerabilities. Still offline.

Opt-in / Opt-out — Opt-in means you signed up (AlertSF). If you don't register, you don't get the messages. Opt-out means you receive messages by default (WEA). You can disable some WEA categories in your phone settings, but not all of them.

SFFD — San Francisco Fire Department.

SFMTA — San Francisco Municipal Transportation Agency; operates Muni.

SFPD — San Francisco Police Department.

SFPUC — San Francisco Public Utilities Commission. Responsible for the city's water, power and sewer.

ShakeAlert — The USGS earthquake early warning system that delivers automated alerts to mobile devices when shaking is detected. The speed requirement for earthquake alerts exceeds what any human-operated system can achieve; ShakeAlert is referenced in the context of sirens' inability to serve this function.

Threshold languages — Languages in which San Francisco's Language Access Ordinance requires city agencies to offer services. Currently five: English, Chinese, Spanish, Filipino, Vietnamese.

UASI — Urban Areas Security Initiative. Federal grant program for regional emergency preparedness; DEM coordinates with other Bay Area jurisdictions through UASI.

Warning Response Model — Five things a warning message should contain: who's sending it (source), what the danger is (hazard), where it applies (location), what to do (guidance), and how long (time). The framework goes back to Mileti and Sorensen in 1990, and has since been validated across earthquakes, tsunamis, tornadoes, wildfires, and other hazards.

Watch Center — DEM's nerve center at 1011 Turk Street. Staffed 6 AM to 10 PM, seven days a week. Monitors conditions, coordinates with SFFD, SFMTA, SFPD, and the city's Department of Public Health, and decides when and how to alert the public. Overnight, a Duty Officer covers from home.

WEA — Wireless Emergency Alert. Short messages pushed directly to cell phones in a defined geographic area — no signup needed. Limited to 360 characters.

APPENDIX

This snapshot from AlertSF.Health is **current as of April 14, 2026**. For the most up-to-date information and data, which may supersede the content of this report, please refer to the website directly.

Based on 329 alerts from October 1, 2024 through April 14, 2026.

VOLUME

329
messages
Every AlertSF message sent in this range.

18
per month
The typical pace during this range, adjusted for its length.

71%
of days had no alert
Days on which AlertSF sent nothing at all.

WHAT THE MESSAGE TELLS YOU

1.5%
answered all five
Who, what, where, what to do, and how long — all five clearly answered in one message. The national rate across 6,000+ federal alerts is under 8.5%.

7.9%
answered four of five
A looser bar: every question answered except one.

98%
say what to do
The message gives a clear action — avoid the area, shelter in place, use alternate routes.

91%
name a specific place
A street, intersection, or neighborhood — not just "citywide."

85%
don't say how long
You can't tell whether the situation lasts minutes, hours, or the rest of the day.

95%
don't name the agency
The message starts with "ALERTSF" — the system, not the agency that actually issued the warning.

WHEN THEY GO OUT

4%
sent overnight
Between 10pm and 6am, San Francisco time. The Watch Center is staffed around the clock; this is just when the alerts happen to land.