

Communications & Notification Stack: Building a System We'll Actually Use

Re: Designing an emergency communications system that works in practice, not just on paper

Date: May 17, 2026

Status: Decision memo for the June 3 meeting

Executive summary

The May 17 meeting defaulted to a hand-maintained phone tree plus door-to-door checks for non-tech residents. That is better than nothing but well below current best practice. The right question isn't "what's the most sophisticated system we could build?" but "what's the simplest system that will actually be used during an event by people who are tired, scared, and possibly without power?"

Recommendation: build a three-layer stack — county Red Alert for official alerts, a free community channel for our internal coordination, and hand-maintained captain phone trees as the fallback when digital fails — and explicitly do not pursue an expensive commercial mass-notification platform.

Note on platform: this memo originally leaned toward Signal as the single internal channel. The May 21 communications working session and the subsequent Strategic Analysis refined this to a two-channel architecture — community WhatsApp for broad reach plus a captains' Signal channel for sensitive coordination. Where this memo and those later documents differ, the later decision governs.

1. The notification problem, decomposed

"Communications" is at least five different things, each with different requirements:

- **Type 1 — Official alerts to all residents.** Source: county and state authorities. This should not be our problem to solve; make sure every resident is signed up for Buckingham County Red Alert and has Wireless Emergency Alerts enabled.
- **Type 2 — Community-internal coordination during an event.** Real-time group messaging that survives cell-tower disruption (internet-based via Starlink). This is where the committee needs to focus.
- **Type 3 — Pre-event preparedness reminders.** Email plus opt-in text plus a community channel — kept separate from emergency alerts so people don't learn to ignore both.
- **Type 4 — Post-event recovery coordination.** Mixed channels: community channel, email, posted notices, word of mouth.
- **Type 5 — Welfare checks on non-responsive residents.** Irreducibly human: a physical door-knock by a known neighbor. The captains-by-road system is the answer here, and it's the most important thing we're building.

Key insight: different layers need different tools. Trying to build one system to do all five is why community emergency-comms efforts so often fail.

2. The tool survey

Free tools

- **Buckingham County Red Alert (Type 1)** — free; text, voice, and email for county-issued alerts. Verify it's operational and get the sign-up URL into the door hanger. We don't control content, so it can't carry internal coordination.
- **Wireless Emergency Alerts (Type 1)** — free, already on every modern smartphone; the door hanger reminds residents to enable it.
- **Community broadcast channel (Types 2–4)** — WhatsApp for broad community reach (near-universal adoption, end-to-end encrypted via the Signal protocol) plus Signal for the captains' channel (smaller group, strongest privacy where sensitive data lives). Both require a smartphone, so neither serves non-smartphone users.
- **NOAA Weather Radio with SAME alerts (Type 1 fallback)** — ~\$30–60 per radio; receives alerts even when cell networks fail. The best fallback for grid-down plus cell-down scenarios. Distribute 3–5 across captain homes and refuge sites.
- **Email (Types 3–4)** — free and universal but slow for emergencies; best for routine and recovery, via MailChimp's free tier.

Commercial mass notification — explicitly not recommended

CodeRED, Everbridge, Rave, and RedFlag are enterprise-grade platforms (~\$1,500–\$5,000/year for a small community). The county's Red Alert is already the paid-for version of this; for 200 residents the per-contact cost is wildly inefficient, and the features that justify the price aren't relevant to us. Spending \$2K–\$5K/year here means not spending it on respirators, defensible space, or detection. This would only change if we grew into a multi-county coalition.

The phone tree

The traditional phone tree works without internet and reaches residents who don't text or use apps, and it forces human contact that catches welfare concerns digital channels miss. But it's slow, depends on every link answering, breaks with cell-tower disruption, and is an administrative burden to keep current. Verdict: it's the fallback, not the primary — for residents who can't or won't use the digital channel, and for when digital is down.

3. The recommended three-layer stack

Layer 1 — County / Federal (Type 1)

Red Alert + WEA + NOAA Weather Radio. Every resident signs up for Red Alert and verifies WEA; 3–5 NOAA radios are distributed. Cost: ~\$150 for radios.

Layer 2 — Community-internal (Types 2–4)

A community WhatsApp channel for broad reach plus an email list, kept distinct from the emergency channel: “Yogaville Emergency” for rare, always-operational posts (the channel residents check first when there's trouble) and “Yogaville Preparedness” for higher-volume reminders, drills, and recovery info. Mixing routine and emergency content trains people to ignore the emergency channel. Backup admins identified for each. Cost: \$0.

Layer 0 — Captain-to-captain coordination

This is the gap the meeting missed. Captains need to talk to each other in real time during an event — a separate “Yogaville Captains” Signal group for the ~10–15 people who actually coordinate response. This is the operational nerve center, not a channel for general residents, and Signal's encryption matters because this is where captain notes on vulnerable residents and gate codes live. Set it up on day one.

Layer 3 — Captain phone trees (Type 5 + Layer 2 fallback)

Each captain maintains a paper-and-phone roster for their road, activated when digital channels fail, when a welfare check is needed, or for residents not on the digital channel. Cost: \$0.

4. Products and setup

Layer	Tool	Cost	Maintained by
1	Buckingham County Red Alert	\$0	County
1	NOAA Weather Radios	\$150	Hub captain
2	WhatsApp — Yogaville Emergency	\$0	Comms-hub admin
2	WhatsApp — Yogaville Preparedness	\$0	Comms volunteer
2	MailChimp (free tier)	\$0	Comms volunteer
0	Signal — Yogaville Captains	\$0	Committee chair
3	Captain phone trees	\$0	Each captain

Total Year 1 cost: ~\$150–\$250.

5. The Buckingham County reality check

Verify, don't assume. Confirm Red Alert is operational (counties have transitioned between vendors recently, and alerts can be unreliable during a transition), get the correct sign-up URL, confirm what alert types the county sends, and confirm registration is free. This is one phone call — the same call that covers CERT, refuge-site registration, and the county shelter list from Memos 1 and 3. Sequence them together.

6. Residents without smartphones

Our community includes residents who don't text, email, or want apps. For them: the captain phone tree is primary; a NOAA Weather Radio in the home (\$30–60, a per-resident equipment grant the committee can offer); a door-to-door check during any event; and a designated trusted neighbor who relays for them. Identifying these residents is part of the captain-by-road work, and the captain list should have a column: “Digital? / Trusted relay neighbor?”

7. The drill question

Do it. A quarterly mini-drill (a scheduled ashram-siren test paired with a channel test post; residents verify they heard both) and an annual full drill (captains call their phone trees, residents practice their evacuation route to a designated TFRA, the comms hub activates Starlink-backed comms). Once we're a CERT site, drills become routine.

8. Privacy and data hygiene

Resident phone numbers and addresses are sensitive data — treat the captain roster like any privacy-protected list: don't email it around, don't store it in a publicly-accessible shared doc, don't post it. Opt-in is the standard; residents affirmatively agree to be on the list for community-safety purposes only. Designate one data steward (the committee secretary) who keeps lists current, deletes data when residents move out, and handles questions.

9. Decision request

1. Approve the three-layer stack.
2. Authorize Erik or Don to confirm Red Alert status, set up the community and captain channels with backup admins, and configure MailChimp.
3. Decline to pursue commercial mass notification for the foreseeable future.

4. Adopt the quarterly mini-drill schedule and plan a first full drill for fall 2026.
5. Designate a data steward for the captain roster (default: committee secretary).
6. Allocate ~\$250 for NOAA Weather Radios.

A note on principle: a system so elaborate that no one will use it during a crisis fails the most basic test. Choose the tool that meets people where they are — a channel a sixty-year-old neighbor can install and check during a panicked moment beats a sophisticated platform with credentials no one remembers. Build one, maintain it, and trust it when the moment comes.

Prepared by Erik · AgniWellCare · Yogaville Community Fire Safety Committee