

TOWN OF SHUTESBURY • EMERGENCY MANAGEMENT



Emergency Planning Survey Analysis

A Question-by-Question Analysis of Resident Preparedness, Respite Center Usage Likelihood,
and Household Infrastructure (**N = 149**)

Executive Summary & Purpose

149 Households Participated

Comprehensive survey evaluating the need for a daylight-hours cooling or warming center in Shutesbury.

Core Vulnerability Gap

44.3% (66 homes) have zero electrical backup power during extended outages, leaving nearly half the town reliant on municipal or neighbor assistance.

Respite Demand Profile

35.6% (53 homes) represent potential daylight respite center visitors—with 32.2% utilizing it as a contingency when home heat/power fails.

High-Risk Populations

16.8% (25 homes) depend on power-operated medical equipment (CPAP, oxygen, refrigerated meds), and **61.5%** include seniors aged 65+.

Severe Travel Barriers

77.2% cite hazardous roads (unplowed/trees down) and **42.3%** cite blocked driveways as major impediments to reaching respite services.

Core Anchor: Respite Center Demand

"If the Town of Shutesbury opened a temporary, daylight-hours cooling or warming center at a municipal building during a widespread power outage, how likely would you be to use it?"

35.6% Total Potential Center Usage
(32.2% Contingency Plan + 3.4% Primary Reliance)

Secondary Option (32.9%)

49 Homes

View the town center as a secondary safety net—to be used if wood stoves, generators, or private plans fail during multi-day events.

Primary Reliance (3.4%)

5 Homes

Rely directly on the municipal respite center as their immediate primary backup option during an extended grid failure.

Stay Home / Leave (64.4%)

96 Homes

Prefer staying home with off-grid heat/generators or leaving town, confirming the center functions as a targeted daytime safety valve.

Medical Dependency & Vulnerable Groups

Q8: Medical Device Dependency

16.8% (25 Homes)

25 households rely on electricity-dependent medical equipment that requires continuous or periodic charging:

- CPAP & BiPAP sleep apnea machines
- Oxygen concentrators & electric nebulizers
- Refrigerated life-saving medications (insulin, biologics)

Recommendation:

Create a registry of high-risk households

Q9: Vulnerable Household Demographics

Identified vulnerable demographics across responding households (N = 149):

Adults Aged 65+ 59.1% (88 mentions)

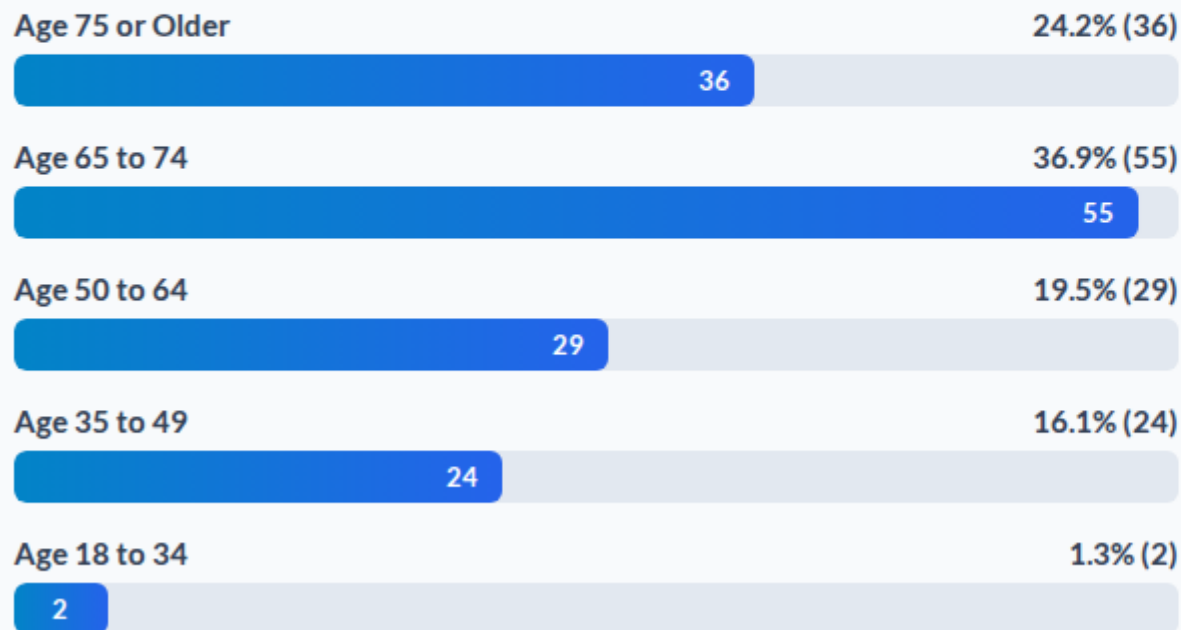
 Chronic Medical Conditions 13.4% (20 mentions)

 Young Children (<5 years) 5.4% (8 mentions)

 None of the Above 32.9% (49 homes)

Respondent Demographics & Housing

Respondent Age Distribution (N = 148)

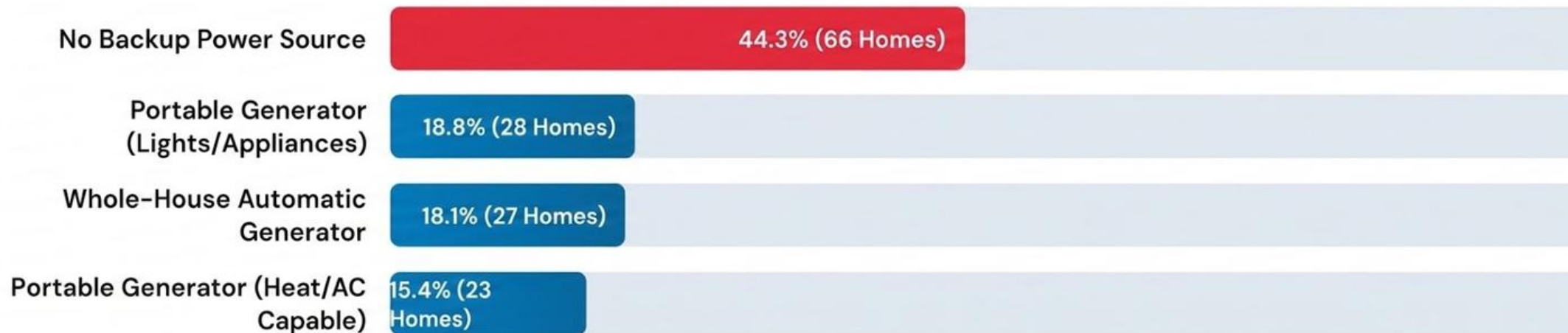


61.5%

Senior Representation (Age 65+)

- **Q13 High Senior Engagement:** 91 of 148 respondents are aged 65 or older, reflecting an aging resident base with elevated vulnerability during freezing conditions.
- **Q12 Living Arrangements:** 17.4% (26 homes) of respondents live alone, a meaningful share of the town's most isolated residents during an extended outage — the remaining 78.5% (117 homes) live with family, friends, or roommates.

Household Backup Power Capabilities



⚠ Strategic Takeaway

Nearly half of all respondents (44% / 66 homes) have zero electrical backup power during extended grid outages. This group represents the primary target audience requiring daytime warming, cooling, device charging, and potable water.

Heating Sources & Home Thermal Endurance

Q2: Primary Heating Systems

Select all that apply across responding households (N = 149):

Oil or Propane Boilers/Furnaces 61.7% (92)

Cordwood Stoves (Off-grid heat) 39.6% (59)

Electric / Heat Pumps 31.5% (47)

Solar PV with Battery Storage 4.7% (7)

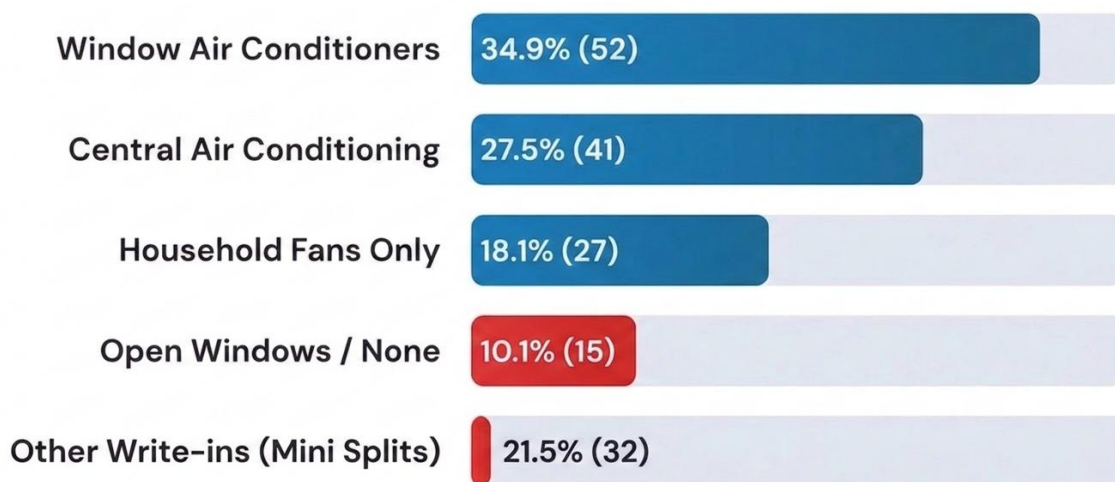
Q3: Winter Heat Loss Duration (>55°F)

Estimated time home stays above 55°F without power:

- **48+ Hours (65.8% / 98 homes):** Strong insulation or supplemental wood heat prevents rapid freezing.
- **24 to 48 Hours (15.4% / 23 homes):** Moderate thermal endurance before indoor temperatures drop.
- **12 to 24 Hours (13.4% / 20 homes):** Vulnerable after 1 full day of winter power outage.
- **Under 12 Hours (4.7% / 7 homes):** Urgent need for warm respite during a rapid freeze event.

Summer Cooling Infrastructure & Extreme Heat Risk

Q1: Household Cooling Systems



Summer Heatwave Vulnerability

Over **16.8% (25 homes)** have no mechanical AC infrastructure at all, relying solely on window fans or ambient air.

During extreme summer heat waves paired with grid outages, active cooling units fail instantly town-wide. An air-conditioned municipal cooling center provides critical protection against heat exhaustion, particularly for elderly residents.

Primary Storm Travel Barriers



77.2%

Hazardous Road Conditions

115 mentions of unplowed roads, heavy ice, downed trees, or fallen power lines blocking vehicle travel during severe winter storms.



42.3%

Driveway Clearance Delays

63 mentions of residents being unable to shovel or plow long private driveways in time to safely leave home during heavy snow.



15.4%

Reluctance to Leave

23 mentions of residents unwilling to leave under storm conditions, primarily due to pet care needs or monitoring home plumbing.

Travel Mobility & Historical Displacement

Mobility & Emergency Displacement

- **94.6% Independent Mobility (141 homes):** Can drive themselves or have a household driver capable of traveling to a town center once roads clear.
- **1.3% Town Transport Needed (2 homes):** Expressed direct need for municipal or neighbor transportation assistance during emergencies.
- **7.4% Past Displacement (11 homes):** Have temporarily vacated their home due to severe cold or extended power loss over the past 3 years.
- **Relief Locations Used:** 73% stayed with local relatives/friends; 27% stayed in out-of-town commercial hotels.



Vulnerability Matrix

Vulnerability Tier	Profile (Data Synthesis)	Survey Share
 High Vulnerability	No backup power (44.3%) + medical device dependency (16.8%) or rapid heat loss <24 hrs (18.8%)	~17% – 20%
 Contingency Needs	No generator; cordwood or oil heat; seeks municipal center if secondary plans fail (Q10)	~32%
 Self-Sufficient	Whole-house generator (18.8%) or strong off-grid wood heat; prefers staying home	~50% – 64%

Actionable Recommendations for Town Board

1. Vulnerable Resident Registry

Establish a confidential town registry for seniors, medically dependent residents (16.8%), and those needing transportation or welfare checks during multi-day outages.

2. Promote Existing Operating Hours

Actively publicize regular Town Hall and Library operating hours as comfortable, powered daytime respite locations during minor routine power disruptions.

3. Define Activation Triggers

Formalize operational protocols for activating emergency daylight respite services when town-wide power outages exceed 12–24 hours during severe cold/heat events.

4. Expand BrightArrow Outreach

Launch a campaign to increase resident enrollment in BrightArrow (formerly CodeRED) SMS/call alerts to ensure rapid broadcast of emergency respite services.

Establish a Vulnerable Resident Registry

Data Justification & Target Share

16.8%

Medical Device
Dependency (25
Homes)

12.1%

Seniors Living Alone
(18 Homes)

1.3%

Direct Transport Aid
Needed (2 Homes)

Survey synthesis identifies a core high-vulnerability tier of **17.4% (26 households)** combining zero backup power with medical dependencies or rapid thermal loss (<24 hrs).

Core Risk: Power failure poses immediate health risks for oxygen concentrators, CPAPs, nebulizers, and refrigerated insulin/biologics.

Operational Implementation

-  **Confidential Opt-in Process:** Launch an opt-in registration program via annual town census mailings, town website forms, and Council on Aging outreach.
-  **Proactive Emergency Check-ins:** Empower Emergency Management to launch automated emergency alerts when grid outages exceed 6–12 hours.
-  **Recruit and Train Wellness Check Volunteers:** Working with the Council on Aging, to conduct targeted wellness outreach.

Promote Existing Operating Hours as Daytime Respite

Strategic Alignment & Capabilities

32.9%

Contingency Seekers (49 Homes)

3.4%

Primary Reliance Users (5 Homes)

Survey data demonstrates that respite demand is targeted and daytime-focused. Over **32.9% of residents** view municipal facilities as a secondary safety valve when home heat, generators, or private plans fail.

Efficiency Gain: Fulfills daytime respite demand without triggering costly off-hours municipal staffing or full emergency shelter declarations for minor disruptions.

Public Outreach & Facility Branding

-  **Publicize Facility Amenities:** Actively promote Town Hall and M.N. Spear Memorial Library operating hours as comfortable, powered, and climate-controlled daytime spaces.
-  **Dedicated Respite Stations:** Designate clear "Power & Work Tables" equipped with charging strips, Wi-Fi access, and potable water during routine localized grid blinks.
-  **Multi-Channel Awareness:** Publish regular facility guides in the town newsletter, website, and local flyers so residents default to town spaces during minor events.

Formalize Operational Activation Triggers

Level 1: Standby

PREPARATION

Outage ETA: 6 to 8 Hours

Winter Trigger: Ambient temperature <20°F.

Summer Trigger: Outage ETA 6-8+ hours. Ambient temperature >85°F or NWS heat watch issues

- Alert 4.7% of homes (7 households) with <12-hour thermal loss.
- Notify Emergency Management team to prepare shift coverage.
- Advertise municipal building open hours.

Level 2: Full Activation

CORE DEPLOY

Outage Clock: 12+ Hours

Winter Trigger: Ambient temperature <20°F. Primary travel routes cleared.

Summer Trigger: NWS Heat Advisory (Heat Index >95°F for 2+ consecutive days.

- Town Hall extends its open hours from 8:00am to 7:00pm.
- If the outage hits on a weekend or closed day, the town opens Town Hall for a set 8:00 AM – 5:00 PM daylight window rather than remaining closed.
- **Synchronize with Highway operations:** Open facility once primary arterial roads are plowed/cleared.
- Dedicated power strips/charging stations are set up.
- Broadcast facility opening and hours via BrightArrow.

Level 3: Extended

MULTI-DAY

Outage Clock: 24+ Hours

Winter Trigger: Ambient temperature <20°F. Primary travel routes cleared. Extended freezing conditions.

Summer Trigger: Sustained heat wave (>3 days)

- Maintain Extended Daylight Hours (8 AM – 8 PM) at Town Hall.
- Proactive Registry Check-ins: Volunteer phone calls / door-knocks for 25 medical-device homes & 18 seniors living alone.
- Coordinate regional mutual aid if needed.



Road Clearance Synchronization Requirement: 77.2% of residents (115 mentions) face hazardous road barriers during winter storms. Center activation must be coordinated with Highway Dept clearing operations so residents can travel safely.

Expand BrightArrow Emergency Communications

“1” Communication Barrier Analysis

77.2%

Road & Tree Barriers (115 Mentions)

42.3%

Blocked Private Driveways (63 Mentions)

Severe storm hazards prevent unnecessary resident travel. Timely, automated alerts inform residents whether roads are passable and whether respite services are open before they leave home.

Channel Advantage: BrightArrow (formerly CodeRED) delivers rapid voice calls and SMS directly to mobile phones, bypassing dead home Wi-Fi/internet.

📌 Outreach & Implementation Strategy

- 👤+ Town-Wide Enrollment Drive:** Launch the "Stay Connected Shutesbury" campaign via tax bills, annual census mailings, election polling, and library sign-ups.
- ⚙️ Standardized Alert Templates:** Pre-draft SMS/voice templates for (1) Respite Opening, (2) Road Clearance Updates, and (3) Water/Charging Access Hours.
- 🔗 Redundant Multi-Channel Distribution:** Simultaneously broadcast BrightArrow alerts across official town email lists, municipal website banners, and local social channels.

 CONCLUSION

Questions & Discussion

Thank you to all 149 Shutesbury households whose survey responses guided these emergency planning insights and recommendations.

Town of Shutesbury • Emergency Management Team