



WHEN THE LIGHTS GO OUT

A Guide to Power and Lighting During a Wildfire or Earthquake

altadenafiresafe.org

Our Mission

The **Altadena Fire Safe Council** is working to reduce wildfire risk across our community through GIS-informed planning, science-based integrated vegetation management and regenerative land stewardship. We will pursue Firewise USA® neighborhood recognition by educating our community about home hardening, defensible space design, soil restoration and native plant landscaping.



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Preparedness recommendations on this site and pdf are general in nature and are not a substitute for professional advice, official emergency guidance, or manufacturer instructions. In an emergency, always follow directions from local authorities.

For more information on FCC regulations for amateur radio, visit: **FCC – Amateur Radio Service** ([fcc.gov/licensing](https://www.fcc.gov/licensing))

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Emergency Power Outage Checklist

Power outages during urban wildfires and earthquakes can last from hours to days. This checklist focuses on reliable lighting, battery backup, and device charging so you can maintain visibility, communication, and mobility. Build it once, maintain it yearly, and store items where you can access them in seconds.

Home Kit	
Power	☐ Portable power station (500–1000Wh apartment size)
	☐ 2 Power banks (20,000–30,000 mAh)
	☐ Foldable solar panel (40–100W)
	☐ Charging cables (2 per device type)
Lighting	☐ 2–3 Lanterns (main rooms)
	☐ 2 Flashlights
	☐ 1 Headlamp per person
	☐ 4–6 Glow sticks (backup)
Batteries	☐ 12–16 Lithium AA
	☐ 12–16 Lithium AAA
	☐ 2–4 Lithium 9V (if needed)
	☐ 8–12 Rechargeable AA/AAA
	☐ Battery organizer
Home Priority: Communication, room lighting, detector reliability.	
Go-Bag (Grab & Go)	Car Kit
☐ 1 Power bank (charged)	☐ Car USB charger (12V)
☐ Short charging cable	☐ 1 Power bank
☐ 1 Headlamp	☐ Small solar charger
☐ 1 Small flashlight	☐ 1 Flashlight
☐ 4 Spare lithium batteries	☐ 1 Headlamp
☐ N95 mask	☐ 4 Spare lithium batteries
Go-Bag Priority: Hands-free light + phone power.	☐ 2 Glow sticks

Batteries: What to Stock Up On for Emergencies

During urban wildfires or earthquakes, power outages can last hours to days, and battery-powered devices are often your lifeline. From flashlights and radios to headlamps and smoke detectors, having the right batteries on hand is crucial.



Types of Batteries to Stock	
Alkaline Batteries (AA, AAA, C, D, 9V)	Best For: Flashlights, radios, smoke detectors, clocks, small electronics.
	Why: Widely available, inexpensive, long shelf life (5–10 years).
	Tips: Buy name brands like Duracell or Energizer. Rotate stock every few years and check expiration dates.
Lithium Batteries	Best For: High-drain devices like LED headlamps, some flashlights, smoke alarms, and key electronics.
	Why: Longer shelf life (10–15 years), perform well in extreme heat or cold, lighter than alkaline.
	Tips: Especially important in urban wildfire scenarios where heat may reduce performance of standard batteries.
Rechargeable NiMH (AA/AAA)	Best For: Solar lanterns, rechargeable flashlights, headlamps, and other recurring devices.
	Why: Reduces waste, cost-effective over time, can be recharged hundreds of times.
	Tips: Keep a solar-compatible charger or USB charging base handy so you can recharge even without grid power.
Button Cell Batteries	Best For: Smoke detectors, carbon monoxide detectors, medical devices like glucose meters, watches, and small electronics.
	Why: Many safety devices rely on these, and they can be forgotten in emergency planning.
Deep Cycle / Specialty Batteries	Best For: Solar-powered generators, lanterns, emergency backup systems.
	Why: Designed to deliver sustained power over time; rechargeable deep-cycle batteries are often compatible with small solar generators.

A list of battery supplies for urban emergencies:		
Device Type	Battery Type	Suggested Stock
Flashlights, headlamps	AA / AAA	2–3 sets per device
Radios / small electronics	AA / AAA / 9V	2–3 sets per device
Smoke detectors	9V or AA	1–2 per detector, rotated yearly
Solar lanterns / rechargeable devices	NiMH AA/AAA	4–8 per device, plus charger
Specialty devices	Deep-cycle / Lithium	1–2 units per device/system
Tip: Keep batteries organized by type and device in waterproof containers. Label expiration dates and rotate stock annually.		

Storage Tips	Where to Buy Batteries Online	Bonus Tips for Wildfire & Earthquake Prep
Store in a cool, dry location away from sunlight. Heat and moisture reduce shelf life.	Goal Zero – Deep Cycle Batteries & Solar Power Accessories: goalzero.com	High-heat resistance: Lithium batteries are preferred in wildfire-prone urban areas where ambient temperatures may spike.
Use airtight plastic bins to prevent corrosion and prevent shorting.	BatteryJunction – Specialty & Deep Cycle Batteries: batteryjunction.com	Emergency rotation: Rotate 10–20% of your stock every year to ensure peak performance.
Keep a separate emergency kit set in go-bags or accessible drawers.	Home Depot / Lowe’s – Rechargeable & Standard Batteries: homedepot.com and lowes.com	Multi-use devices: Stock flashlights or radios that can also be charged via solar or hand-crank to reduce dependency on replaceable batteries.
Avoid mixing old and new batteries in the same device.	Amazon – Alkaline & Lithium Batteries amazon.com	

Best Products		
Lithium AA / AAA Batteries	Why they’re best: Longest shelf life (up to 15 years), lighter weight, and far better heat tolerance than alkaline—critical during wildfire conditions. Keep in go-bags, cars, and heat-prone storage areas.	Best brands: ☐ Energizer Ultimate Lithium ☐ Panasonic Lithium
Rechargeable NiMH AA / AAA Batteries	Why they’re best: Can be recharged hundreds of times using USB or solar chargers, reducing waste and dependence on supply chains. Use rechargables at home with solar or USB chargers.	Best brands: ☐ Panasonic Eneloop ☐ Powerex Imedion
Where to Buy		
Battery Junction – specialty battery retailer with deep technical specs: batteryjunction.com		The Prepared – curated emergency gear with testing standards: theprepared.com

Lighting and Power Supplies for Emergencies

In urban wildfire or earthquake scenarios, power outages can strike suddenly, sometimes alongside evacuations, blocked streets, or smoke-filled skies. Being prepared isn't just about lighting your home — it's about staying safe, informed, and connected. **Best practices include:** keeping key supplies within reach, maintaining charged or solar-ready devices, and using portable, durable lighting that works whether indoors or outside. **Redundancy is critical:** combine battery-powered, solar-powered, and chemical light sources to ensure you're never left in the dark.

Solar & Battery-Powered Lighting	
Solar Lanterns	Inflatable or collapsible lanterns provide bright, portable light for living spaces or emergency shelters. Great for smoke-filled or power-out homes where clear visibility is crucial.
	☐ Charging cables (2 per device type)
Lighting	☐ 2–3 Lanterns (main rooms)
	☐ 2 Flashlights
	☐ 1 Headlamp per person
	☐ 4–6 Glow sticks (backup)
Batteries	☐ 12–16 Lithium AA
	☐ 12–16 Lithium AAA
	☐ 2–4 Lithium 9V (if needed)
	☐ 8–12 Rechargeable AA/AAA
	☐ Battery organizer
Home Priority: Communication, room lighting, detector reliability.	
Go-Bag (Grab & Go)	Car Kit
☐ 1 Power bank (charged)	☐ Car USB charger (12V)
☐ Short charging cable	☐ 1 Power bank
☐ 1 Headlamp	☐ Small solar charger
☐ 1 Small flashlight	☐ 1 Flashlight
☐ 4 Spare lithium batteries	☐ 1 Headlamp
☐ N95 mask	☐ 4 Spare lithium batteries
Go-Bag Priority: Hands-free light + phone power.	☐ 2 Glow sticks

Lighting and Power Supplies for Emergencies

Solar & Battery-Powered Lighting		
Solar Lanterns	Solar lanterns combine light and USB charging capability so you can illuminate spaces and top up devices using stored solar energy.	LuminAID PackLite & Titan Series Lanterns – Solar-rechargeable lanterns with up to 100+ hours of light and ability to charge phones on the side
	Foldable Solar Lanterns with integrated power banks — great for balconies, patios, or car kits.	Best Use: Keep one per main living area + go-bag for immediate lighting and device juice.
	luminaid.com	
Flashlights & Headlamps	For urban emergencies where dust, debris, or darkness can make navigating unsafe.	Rechargeable LED Flashlights – Compact lights you can charge ahead of an outage and power via solar chargers or power banks.
	USB-C Rechargeable Headlamps – Hands-free lighting for inspecting damage, checking exits, or walking outside safely at night.	Pro Tip: Headlamps are often rated by lumens: 200–500 lm is plenty for household and outdoor tasks. Rechargeable 18650/21700 formats provide long runtime and can often be powered from a portable power station.
	petzl.com	rei.com fenixlighting.com
Portable Power Banks & Solar Chargers	For phones, tablets, and smaller USB devices when you need mobile charging without the grid.	High-Capacity Solar Power Banks Compact but strong enough for several full phone charges.
	Solar Blanket Chargers Panels that convert sunlight into power for phones, tablets, and compatible laptops. A long-term power backup.	Built-in flashlight modes, SOS signals, and USB-C PD ports help keep devices alive longer when you're away from outlets.
	ravpower.com	emergencyreadyresources.com
Practical Preparation Packs		
Ready-to-Use Kits or Product Bundles	EcoSurvive Power & Light Add-On Kit – Includes a 10,000 mAh power bank, 20 W solar panel, rechargeable lantern, and headlamp are priced for budget-friendly preparedness.	
	ecosurvive.com	
Rechargeable LED Glow Sticks. (Failsafe)	No heat, no flame, visible in smoke, safe for children.	Best for: Marking exits, hallways, bathrooms, or stairs.
	beprepared.com	

Lighting and Power Supplies for Emergencies

Portable Solar Powered Generators and Power Banks				
Why a solar powered generator is the single best item most households should have.	Jackery 1000 / Yeti 700			
	Real, multi-device backup without gasoline or noise. It delivers enough capacity to keep phones, tablets, Wi-Fi routers, medical devices within reason, or even a small fridge or tools running for a stretch—much more than a typical phone bank or lantern.		Flexible charging methods for urban outages. Works from wall power, car, or solar panels—ideal when power returns intermittently or when you’re outdoors trying to recharge in sunlight during a wildfire evacuation.	
	Best Use: Home base in a city apartment or small house as your primary power hub during an outage. Powering laptops or multiple phones in a shelter or for remote work if commuting is impossible after an earthquake.		How to Use: store charged at home, not in the garage only. Use during outages to prioritize communications first. Recharge via solar panels during daylight. Good for short trips or evacuations where you need a compact generator-style battery that’s safer and quieter than fuel.	
	jackery.com	goalzero.com	anker.com	blavorpowerbank.com
Personal Device Charging Power Banks (Go Bag Essentials)	Anker PowerCore / Nitecore NB Series			
	For urban emergencies where dust, debris, or darkness can make navigating unsafe.		Rechargeable LED Flashlights Compact lights you can charge ahead of an outage and power via solar chargers or power banks.	
	Why they’re best: Reliable lithium cells, fast charging, compact Best for: Phones, radios, headlamps, earbuds		How to Use: Keep one fully charged at all times and recharge via power station or solar panel.	
	theprepared.com		nitecorestore.com	
Solar Panel Chargers (Off-Grid Recharging)	Goal Zero Nomad Solar Panels (10–50W)			
	Why they’re best: Durable, efficient, designed for emergency use. Best for: Balconies, patios, evacuation staging, long outages.		How to Use: Angle toward sun; even indirect light helps. Pair with power banks or power stations.	
	goalzero.com			

Buy Once, Maintain Yearly

Urban Emergency Power, Lighting & Charging Checklist

This checklist is designed around one principle: purchase durable, high-quality emergency equipment once, then keep it ready with a simple annual routine. In urban wildfire and earthquake scenarios, reliability and familiarity matter more than quantity.

Buy Once: Core Equipment	
Batteries (Foundational)	Lighting (Layered & Redundant)
☐ Lithium AA batteries (8–16)	☐ Solar lanterns (1 per main living area)
☐ Lithium AAA batteries (8–16)	☐ Rechargeable headlamps (1 per person)
☐ 9V lithium batteries (6–10)	☐ Rechargeable flashlights (1–2)
☐ Rechargeable NiMH AA/AAA batteries (8–12)	☐ LED or chemical glow sticks (4–8)
☐ Battery organizer (labeled, waterproof)	Why: No single lighting source works everywhere. Lanterns for rooms, headlamps for safety, flashlights for inspection, glow sticks as fail-safes.
Why: Supports flashlights, radios, smoke detectors, headlamps, and legacy devices.	
Device Charging (Communications First)	Supporting Essentials
☐ High-capacity power banks (20K–30K mAh) × 2	☐ Hand-crank or rechargeable emergency radio
☐ Foldable solar charger (10–50W)	☐ Car USB charger (12V)
☐ Portable power station (500–1000Wh)	☐ Waterproof storage bins
☐ Short, rugged USB-C and USB-A cables	☐ Go-bag version of lighting + power bank
Why: Phones, radios, and internet devices are your lifeline in urban emergencies.	
Maintain Yearly: 60-90 Minute Routine	
Batteries	Lighting
☐ Check expiration dates	☐ Turn on every lantern, headlamp, and flashlight
☐ Replace any battery expiring within 2 years	☐ Recharge all devices fully
☐ Test smoke & CO detectors	☐ Replace cracked or dim units
☐ Recycle depleted batteries properly	Tip: If a light feels annoying to use, replace it now because stress magnifies friction.
Tip: Keep lithium batteries in go-bags and cars; use rechargeables at home.	

Buy Once, Maintain Yearly

Maintain Yearly: 60-90 Minute Routine	
Charging & Power	Storage & Placement
☐ Fully charge all power banks & power stations	☐ Review evacuation grab sequence
☐ Test charging a phone from each device	☐ Ensure nothing is buried behind other items
☐ Test solar charger outdoors for 30 minutes	☐ Confirm lights are stored in multiple locations
☐ Update device priority list (phones, router)	
Use Guide: What to Reach for First	
Earthquake (Immediate)	Urban Wildfire / Smoke Event
☐ Headlamp (hands free)	☐ Indoor battery powered lanterns only (no flame)
☐ Flashlight for inspection	☐ Power station for phones & radios
☐ Glow sticks to mark hazards	☐ Solar charging during daylight
☐ Power bank for phone	☐ Preserve batteries for night
Multi-Day Outage	
Solar charger → power bank	
Power bank → phone/radio	
Power station → shared devices only	

