06 - Field Cooking Methods

How to cook when the stove does not work. This page covers every realistic heat source available in a Southern California suburban setting, ranked by convenience, fuel availability, and efficiency.

The Core Requirement

Rice needs 18 to 20 minutes of sustained heat at a simmer. Beans need 60 to 90 minutes, or 20 to 35 minutes if using lentils. Any heat source that can boil water and maintain a simmer for that duration is sufficient. You do not need high heat — you need consistent, controllable, sustained heat.

A lid on the pot is more important than the heat source. It traps steam, cuts cooking time, and reduces fuel consumption significantly regardless of what you are cooking on.

Method 1 — Propane Camp Stove

Best for: First weeks of a disruption when propane supply is still available.

How it works: A standard two-burner camp stove or single burner backpacking stove running on 1 lb disposable propane canisters or a larger refillable tank.

Fuel estimate:

- A 1 lb canister lasts roughly 1 to 2 hours at medium-low
- Cooking one full meal for a family of 4 (beans plus rice) takes approximately 90 to 110 minutes total
- Plan for roughly 1 canister per day for a family of 4 cooking beans from scratch
- Using lentils instead of whole beans cuts this to approximately 45 minutes total cook time — roughly half a canister per day

Stock: Minimum 14 canisters for two weeks of bean cooking. 7 canisters if using lentils exclusively. A 20 lb refillable tank extends this considerably and is more cost effective per BTU.

Tips:

- Use the lowest flame that maintains a simmer — most people run camp stoves hotter than necessary

- Wind kills efficiency — block the stove on two or three sides if cooking outside
- The retained heat method (see below) pairs well with propane to cut canister use nearly in half

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Method 2 — Retained Heat Cooking

Best for: Extending any fuel source — works with propane, open fire, or any method.

How it works: You bring the food to a full boil on your heat source, then immediately insulate the entire covered pot so it finishes cooking in its own trapped heat.

How to do it:

1. Bring pot to a rolling boil with lid on
2. For beans: boil actively for 10 minutes first
3. For rice: boil until just starting to simmer
4. Remove from heat
5. Wrap the entire pot — lid and all — tightly in a blanket, sleeping bag, heavy jacket, or towels
6. Place inside a closed box, cooler, or cabinet for additional insulation if available
7. Leave undisturbed for:
   - Rice: 25 to 30 minutes
   - Lentils: 30 to 40 minutes
   - Beans (pre-soaked): 2 to 3 hours
8. Unwrap and check for doneness before serving

Why it works: A well-insulated pot loses heat very slowly. The food continues cooking in the residual heat without any additional fuel input. This is not a new technique — it has been used in various forms for centuries under names like hay box cooking or fireless cooking.

Fuel savings: For rice, retained heat cooking eliminates roughly 15 to 18 minutes of active burn time per pot. For beans, it can eliminate 45 to 60 minutes or more after the initial boil. Over two weeks this adds up to multiple canisters saved.

Method 3 — Open Fire

Best for: When propane runs out or wood is available.

How it works: A controlled wood fire with a cooking grate, hanging pot, or improvised stand.

Setup:

- Use a grate over a fire pit, a tripod with a hanging chain, or two concrete blocks with a grate across them
- A small contained fire is more controllable and more fuel efficient than a large one
- Hardwoods (oak, fruit wood) burn longer and hotter than softwood — use softwood to start, hardwood to cook
- In Buena Park and surrounding areas, wood availability is limited — this method works but requires sourcing wood in advance

Heat control:

- Move the pot closer to or further from the flame rather than adjusting the fire itself
- A simmer over open fire is maintained by position — directly over coals rather than active flame is ideal for sustained low heat
- Lid on at all times during cooking

Efficiency tips:

- Cook with the retained heat method after the initial boil to minimize wood use
- Cook multiple items in sequence over the same fire while it burns down
- Cook in the morning or evening to avoid wind and conserve fuel

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Method 4 — Rocket Stove

Best for: Efficient wood cooking when open fire would waste fuel.

How it works: A rocket stove uses a specific airflow design to burn small pieces of wood very efficiently, producing a focused hot flame from very little fuel. It can be built from materials available in most suburban areas.

Simple rocket stove from cinder blocks:

1. Place two cinder blocks parallel, about 4 inches apart, on a flat surface
2. Place two more on top, offset so they bridge the gap — this is your combustion chamber
3. Leave an opening at the front for feeding wood and an opening at the top for your pot
4. Feed small sticks or broken wood pieces in from the front
5. The design naturally draws air through the bottom and produces a concentrated upward flame

A permanent version can be built from bricks and mortar in an afternoon. The improvised cinder block version works immediately.

Why it is more efficient than open fire: The focused airflow burns fuel more completely, producing more heat from less wood with less smoke.

Method 5 — Propane Grill

Best for: Households that already own a propane grill with a remaining tank.

A standard backyard propane grill works for cooking in pots. Use a burner on medium-low with a pot directly on the grate. Less efficient than a camp stove due to the open design losing heat to the sides, but a 20 lb tank contains significantly more fuel than disposable canisters and may already be on hand.

Estimate: A 20 lb tank at medium-low produces approximately 18 to 25 hours of burn time depending on the grill. Enough for several weeks of cooking if managed carefully.

Method 6 — Solar Cooking

Best for: Supplemental cooking on clear days in Southern California.

How it works: A dark pot placed in direct sunlight with a reflective surround — aluminum foil over cardboard, a car windshield shade, or a purpose-built solar cooker — concentrates solar radiation to heat the pot to cooking temperatures.

Realistic temperatures: A well-designed improvised solar cooker can reach 250 to 300 degrees Fahrenheit on a clear day with direct sun. This is enough to cook rice and lentils slowly and to heat beans if they have been pre-soaked.

Southern California advantage: Buena Park averages over 280 sunny days per year. Solar cooking is more viable here than almost anywhere else in the continental United States.

Limitations:

- Does not work on cloudy days or in shade
- Cooking times are 2 to 3 times longer than conventional methods
- Requires positioning the pot toward the sun and adjusting as the sun moves
- Not suitable as a primary method but genuinely useful as a fuel-free supplement on clear days

Simple setup:

1. Line a cardboard box with aluminum foil on all interior surfaces
2. Place a dark-colored pot inside
3. Cover the opening with a sheet of glass or clear plastic wrap
4. Angle toward direct sunlight

5. Check and rotate every 30 to 45 minutes

Method Comparison

Method	Fuel Source	Fuel Cost	Setup Time	Reliability	Best Use
Propane camp stove	Propane canisters	Medium	None	Very high	First choice, weeks 1 to 3
Retained heat	None (extends any method)	None	None	Very high	Use with everything
Open fire	Wood	Low if sourced	Low	High	When propane runs out
Rocket stove	Small wood pieces	Very low	Medium	High	Efficient wood cooking
Propane grill	Propane tank	Medium	None	High	If grill already on hand
Solar cooking	Sunlight	Free	Medium	Weather dependent	Supplement on clear days

Priority Order

1. Use propane camp stove with retained heat method to maximize canister life
2. When propane runs low, transition to rocket stove or open fire
3. Use solar cooking on clear days as a free supplement to extend all other fuel sources
4. Retained heat cooking applies at every stage regardless of heat source

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