



An Extended Guide · No. 1334

Powering a Sump Pump to Keep Your Basement Dry

Backup power for the worst timing

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! Read this first — panel work is a licensed electrician's job

A transfer switch connects to your home's electrical panel, and panel work is among the most dangerous jobs in any house. The power inside a panel can injure or kill even with the lights off, and a wiring mistake can start a fire or push deadly voltage back onto the lines outside, where a utility crew may be working. Installing, moving, or changing a transfer switch is a licensed electrician's job — almost always with a permit and an inspection. It is never a do-it-yourself project, and it is never something I do myself. This guide is here to help you understand, choose, and safely use a transfer switch — not to wire one. And please, never try to shortcut all this by backfeeding a generator through a wall or dryer outlet with a double-ended cord; that shortcut kills people, and a transfer switch is the safe, legal way to do the very thing it tempts you to do. If your sump pump is on a dedicated circuit rather than a plug, wiring it to a transfer switch is a licensed electrician's job.

Keeping the basement dry when the storm hits

Here's a cruel bit of timing: the same storms that knock out your power are often the ones dumping water toward your basement. If your sump pump loses power right when it's needed most, you can end up with a flood. Backup power keeps it running.

I'm Bill. For homes with a sump pump, this is one of the most important circuits to think about — because a failed pump during a big storm can mean thousands of dollars of water damage and heartache. A transfer switch (or a complementary battery backup) keeps that pump working through the outage.

We'll cover why the timing is so risky, how to back up your pump, and how to layer your protection so a single failure doesn't sink your basement. Any circuit wiring is the electrician's job; plumbing is a plumber's — I help you plan it all.

★ Worried about basement flooding?

Tell me about your sump setup and I'll help you plan reliable protection for the next big storm. Call or text (330) 200-8042.

Sump backup, on one page

If you remember only these, your basement is much safer.

- ❑ The storms that cut power are often the ones that flood — the worst possible timing.
- ❑ A sump pump has a motor that surges, so it needs real power to start.
- ❑ It may plug into an outlet (cord-able) or be on a circuit (needs the switch) — check yours.
- ❑ A generator through a transfer switch keeps it running during an outage.
- ❑ A battery-backup pump is a great complementary layer, for gaps and quick response.
- ❑ Never enter a flooded basement that may have live electricity — safety first.

✓ Layer your protection

The best basement protection isn't one thing — it's a generator plus a battery backup plus good habits, so no single failure floods you.

Why the timing is so dangerous

This is the heart of why sump backup matters so much.

A sump pump sits in a pit and pumps out groundwater before it can flood your basement. It runs on electricity. Now think about when your basement is most likely to flood: during heavy rain or rapid snowmelt — exactly the storms that also knock out the power. So right when your pump has the most work to do, it can lose the power it needs. Without backup, that gap is when basements flood.

! Peak need meets peak risk

The sump pump's busiest moment and your most likely outage often arrive together. That overlap is exactly why backup power matters here.

How a sump pump works, briefly

A quick picture, so the backup discussion makes sense.

Water that collects around your foundation drains into a pit — the sump — in your basement floor. When the water rises to a certain level, a float switch turns the pump on, and it pushes the water out through a pipe away from the house. Then it shuts off until the water rises again. During a big storm, it may cycle on and off frequently, which is exactly when it needs reliable power.

✓ It works on its own — when it has power

A sump pump runs automatically as water rises. Your job is simply to make sure it has power to do that, even when the grid is down.

The sump pump's surge

Like other motors, it needs a jolt to start — worth knowing for backup.

A sump pump's motor draws a starting surge each time it kicks on, larger than what it uses while running. Because it may start and stop often during a storm, your backup power has to handle that surge reliably, over and over. It's usually a modest load compared to a well pump or furnace, but the repeated starting is something to plan for in your sizing — our sizing guide explains how.

✓ Frequent starts, plan for the surge

A sump pump can cycle many times in a storm. Make sure your backup handles that starting surge every single time.

Cord or transfer switch? Check yours

How your sump pump is connected decides how you back it up.

Some sump pumps plug into a nearby outlet, which means a safe outdoor-rated cord from the generator could power it in a pinch. Others are on a dedicated circuit, which means backing them up goes through the transfer switch. Look at how yours is connected, or ask an electrician. Either way, wiring a circuit to the switch is the electrician's job — and a battery backup (coming up) is a great addition regardless.

✓ Know how yours is wired

Take a look: is your sump pump plugged into an outlet, or wired to a circuit? That answer shapes your backup plan.

Two kinds of homes, two sets of needs

Basement flooding threatens town and country homes alike, but the surrounding picture differs.

If you live in town or the suburbs

In town, a sump pump is often the main flood defense for a finished basement full of belongings. Backing it up — by cord, switch, or a battery unit — protects real value.

- A finished basement means more to lose, so sump backup is well worth it.
- City water keeps flowing, so a water-powered backup pump is an option here.
- Shorter outages still overlap with the heavy storms that flood.
- A battery-backup pump adds protection for quick, unattended response.

If you are out in the country on a well

Out in the country, a sump pump often shares the stage with the well pump and furnace on your must-run list, and longer outages mean it may need to run on backup power for an extended stretch.

- The sump pump joins the well pump and furnace on a fuller rural list.
- Longer outages mean the pump may run on the generator for a good while.
- Water-powered backups need city water pressure, so they usually aren't an option on a well.
- A battery-backup pump is especially valuable where outages run long.

★ Protecting a basement, town or country?

I'll help you layer generator, battery, and habits so your basement stays dry through the next big one. Call (330) 200-8042.

Battery-backup sump pumps

This is a wonderful complement to generator power — and worth knowing about.

A battery-backup sump pump is a second pump with its own battery that kicks in automatically the instant the main pump loses power or can't keep up. It doesn't wait for you to start a generator, so it covers the crucial first minutes of an outage and any moment you're not home. Its battery only lasts so long, though, which is where the generator comes in — to power the main pump for the long haul. Together, they're a strong one-two punch.

✓ Battery for speed, generator for endurance

A battery backup responds instantly and unattended; the generator runs the main pump for the long haul. The pair covers each other's gaps.

Water-powered backup pumps

For homes on city water, there's another backup worth a mention.

A water-powered backup pump uses your home's city water pressure — not electricity — to pump out the sump, so it keeps working even in a total power outage with no battery to run down. It only works on homes with pressurized city water (not a well, which loses pressure when its own pump loses power), and it does use water while running. For the right home, it's a clever no-electricity layer. A plumber can tell you if it suits your setup.

✓ A no-electricity option for city water

If you're on city water, a water-powered backup needs no power or battery at all — a nice extra layer. Ask a plumber whether it fits.

Sizing the generator for your sump

As always, your own pump tells you what you need.

Find your sump pump's power needs on its label or in its manual, and your electrician confirms the generator handles its repeated starting surge along with your other must-run loads. Because a sump pump cycles on and off rather than running constantly, it's usually an easy load to fit alongside the furnace and fridge — but the surge each time it starts is what matters. Our sizing guide covers the method with no invented numbers.

★ I'll help you size it in

Bring me your sump pump's details and I'll help you fit it into your generator plan alongside everything else. Call (330) 200-8042.

Remember it runs on its own

Unlike the furnace or fridge, you don't fully control when the sump pump runs.

The sump pump turns itself on whenever the water rises, which means during a storm it may demand power at unpredictable moments. So when you're managing your generator's load, leave headroom for the sump pump to kick on without warning — don't run your generator right at its limit if the sump might fire up. Treat it as a load that gets priority the moment it calls for power.

! Leave room for a surprise start

The sump pump can demand power at any moment during a storm. Keep some headroom so it can start without overloading your generator.

The winter freeze problem

In an Ohio winter, a sump pump can face a sneaky problem: a frozen discharge.

A sump pump pushes water out through a discharge pipe. In freezing weather, that pipe or its outlet can ice up, so even a perfectly powered pump has nowhere to send the water — and it can burn out trying. Keeping the discharge clear and protected from freezing is a plumbing matter worth attending to before winter. Backup power keeps the pump running; a clear discharge lets it actually work.

✓ Power and a clear pipe both matter

A powered pump with a frozen discharge still can't drain your basement. Have a plumber help keep the discharge clear in winter.

Test before storm season

A quick test before the wet months means no nasty surprises.

- ❑ Pour a bucket of water into the sump pit and confirm the pump kicks on and drains it.
- ❑ Confirm it runs on generator power during your seasonal switch-over test.
- ❑ Check that the discharge pipe is clear and directs water away from the house.
- ❑ If you have a battery backup, test it and check the battery's condition.
- ❑ Make sure the pit is free of debris that could jam the float.

✓ The bucket test

Pouring a bucket of water into the sump to make sure the pump responds is a two-minute test that can save your basement.

Who handles the sump side

Like the well pump, this touches an electrician and a plumber.

- **A licensed electrician** wires a sump circuit to the transfer switch, if it's on a dedicated circuit.
- **A plumber** handles the pump itself, the pit, and the discharge line.
- **I help** you plan the backup layers, size it in, and coordinate the right pros.
- **You** keep the pit clear, test it seasonally, and manage the generator during a storm.

★ I'll line up the right pros

Between the electrician and the plumber, I'll help you get the right person for each part of your sump backup. Call (330) 200-8042.

Layer your protection

The strongest basement defense uses more than one backup, so no single failure floods you.

Think in layers. A battery-backup pump responds instantly and unattended, covering the first minutes and any time you're away. Your generator, through the transfer switch, powers the main pump for the long haul. Good habits — keeping the pit clear, the discharge open, and the system tested — back both up. And knowing your options if things still go wrong completes the picture. No one layer is perfect; together they're strong.

✓ No single point of failure

The goal of layering is simple: if any one backup fails, another catches the water. That's real peace of mind for a basement.

Common sump-backup mistakes

A few slip-ups leave basements vulnerable. Avoid these.

- **Relying on the generator alone** for the crucial first minutes — a battery backup covers that gap.
- **Running the generator at its limit** so the sump can't start when it needs to.
- **Ignoring a frozen discharge** in winter, leaving the pump nowhere to send water.
- **Never testing the pump** until the night it's needed.
- **Entering a flooded basement** with possible live power — dangerous.

! The dangerous one

Never wade into a flooded basement that might have live electricity. Water and power together can be deadly — more on that next.

If the basement floods anyway

Even with good planning, sometimes water wins. Here's how to stay safe.

If your basement floods, do not wade into standing water that may be in contact with electrical outlets, cords, appliances, or the panel — water and electricity together can be deadly. If you can safely shut off power to the basement from a dry spot, that helps, but never reach into water to do it. When in doubt, stay out and call a professional. Belongings can be replaced; you cannot. Once it's safe, a cleanup pro can help with the water damage.

! Never wade into an electrified flood

Standing water touching electrical equipment can be deadly. If you're not certain the power is off, stay out of the water and call for help.

Common Questions

The questions I hear most about sump-pump backup.

Q: Why does my sump pump need backup power?

Because the heavy storms that flood basements are often the same ones that knock out power — so your pump can lose power right when it's needed most.

Q: Can I just plug my sump pump into the generator with a cord?

If it plugs into an outlet, a safe outdoor-rated cord can power it. If it's on a dedicated circuit, it goes through the transfer switch instead. Check how yours is connected.

Q: Do I need a battery backup if I have a generator?

It's a great complement. A battery backup responds instantly and unattended, covering the first minutes and any time you're away; the generator runs the main pump for the long haul.

Q: What if my basement floods with the power still on?

Never wade into standing water that may contact electrical equipment — it can be deadly. If you can't safely cut the power from a dry spot, stay out and call a professional.

★ More sump questions?

Call or text (330) 200-8042 — keeping basements dry and folks safe is worth getting right.

How I help keep your basement dry

This is about protecting your home and your peace of mind during the worst storms.

I'll help you understand how your sump pump is connected, decide between cord and switch, plan a layered defense with a battery backup, size the pump into your generator plan, and set up a seasonal test routine. I'll coordinate a licensed electrician for any wiring and a plumber for the pump and discharge. The goal is a basement that stays dry even when the storm and the outage arrive together.

★ Let's protect your basement

Call or text (330) 200-8042 and we'll build a layered plan so a big storm doesn't become a flooded basement.

One safety reminder

Running the sump on the generator means the usual rule applies.

! Read this first — carbon monoxide is the real danger

A running generator's exhaust contains carbon monoxide — an invisible, odorless gas that can kill in minutes. Never run a generator indoors, in a garage, in a shed, or on a porch, not even with the door open and a fan going. Run it outside only, well away from the house — the safety agencies say at least 20 feet — with the exhaust pointed away from every window, door, and vent. Put battery-backup carbon-monoxide alarms on each floor and outside the bedrooms. If an alarm sounds, or anyone feels dizzy, sick, or sleepy, get everyone into fresh air first and ask questions later. Powering a sump pump changes nothing about the generator — it runs outdoors only, far from the house, exhaust pointed away, even in a downpour (sheltered only by a proper running-rated cover).

The short version to carry with you

If the details blur, hold onto these.

- ❑ The storms that flood are the storms that cut power — back up the sump pump.
- ❑ Check how yours connects: a plug can use a cord; a circuit needs the switch.
- ❑ Layer it: a battery backup for speed, the generator for endurance.
- ❑ Test before storm season, and never wade into an electrified flood.

✓ Keep this guide handy

If you have a basement that can flood, keep this one with your home papers and revisit it each spring.

You don't have to do this alone

You just have to remember that a friendly, patient person is one call away.

I hope this guide made keeping your basement dry with backup power feel a little less daunting and a lot more doable. Keep it in a drawer with your other home papers, come back to a page whenever you need it, and don't worry about memorizing anything.

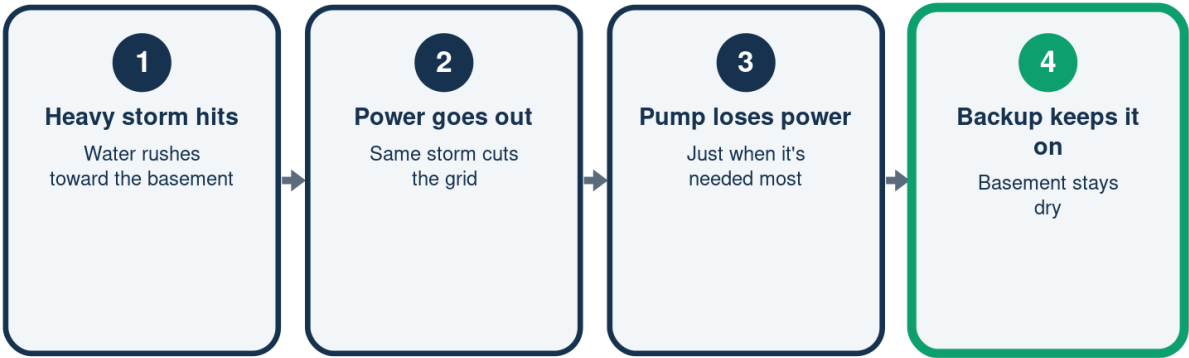
When you'd rather have a hand, that's exactly what I do. I come to your home, work at your pace, and never make you feel rushed or silly for asking. A first visit is a flat \$99, and for the parts that don't need me on-site I can often help right on your screen for \$49. Every visit comes with a 30-day, come-back-free guarantee. I don't do the licensed electrical or gas work myself — for that I'll help you line up a trustworthy local pro.

★ Bill's Home Tech — real help, close to home

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Why the Sump Pump Needs Backup

Peak need meets peak risk



The storm that floods is the storm that cuts power -- plan for both.

Layers of Basement Protection

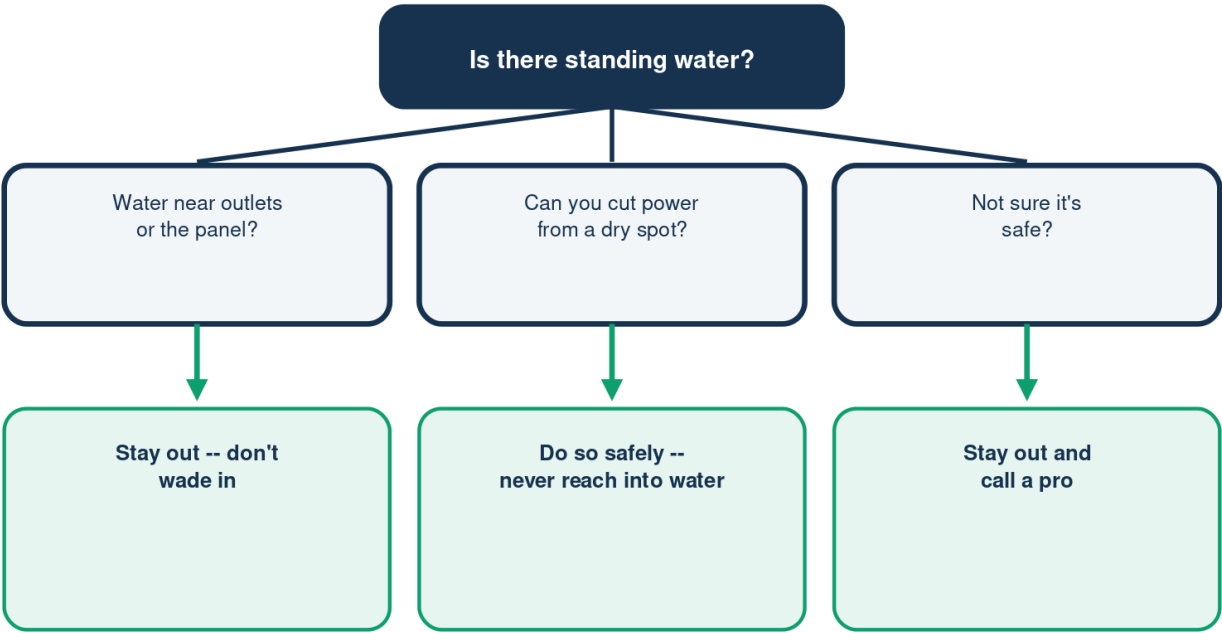
No single point of failure

Layer			What it does
Battery backup	Instant, unattended		response
Generator + switch	Runs the main pump		for the long haul
Water-powered	No power needed		(city water only)
Good habits	Clear pit and		discharge, tested

Layer them so if one fails, another catches the water.

Basement Flooding -- Stay Safe

Water and power are a deadly mix

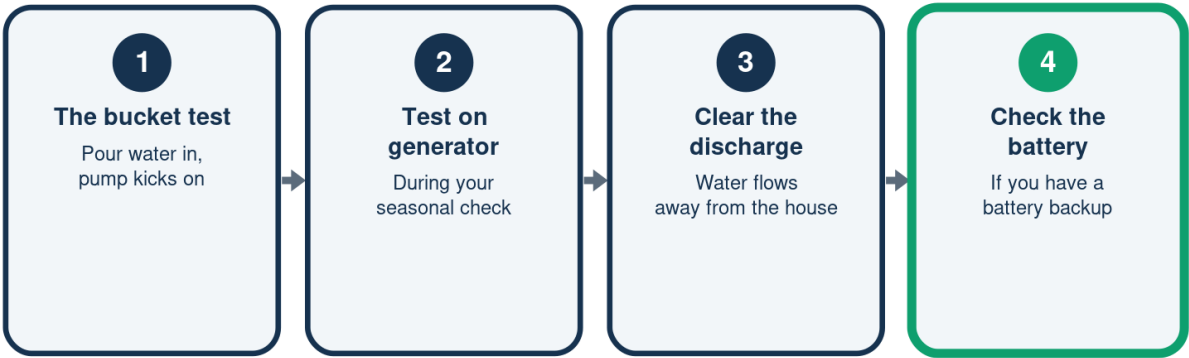


Belongings can be replaced -- never risk yourself in an electrified flood.

Illustration - a schematic, not to scale. Your setup may differ.

Test Before Storm Season

A two-minute check that saves basements



A powered pump with a frozen or clogged discharge still can't drain.



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A Note From Bill

A quick note from Bill.

I write these guides to make home tech a little less frustrating, and I do my best to keep every step accurate and up to date. Still, every home, device, and setup is a bit different, so I can't promise a guide will match yours exactly or fix your particular problem. These guides are for general information only — they're not professional, legal, or financial advice, and they don't replace your device's own manual or the manufacturer's instructions. Please go slow, use your own good judgment, and use everything here at your own risk. If a step involves electrical wiring, a gas appliance, a water heater, plumbing, or climbing a ladder — or if anything just doesn't feel safe — please stop and call a licensed professional (or give me a call at 330-200-8042). Bill's Home Tech and Bill Davis can't be responsible for any damage, data loss, or injury that comes from using these guides. Thanks for reading, and stay safe out there.

— *Bill*



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