

Why Sump Pumps Fail: Insights from Gateway Water & Mold

If you have a basement in the St. Louis area, you know the dread that comes with a heavy spring rain. That familiar hum of the sump pump kicking on is a comfort, but when it stops, the silence can cost you thousands in water damage. After years of working in water damage restoration and mold remediation, I have seen the same sump pump failure patterns play out again and again. The most common reason a sump pump fails is not a manufacturing defect or old age. It is something far simpler: a stuck float switch.

The float switch is the mechanical brain of your sump pump. It rises with the water level and triggers the pump to turn on. When it gets stuck, the pump either runs continuously or, worse, never starts at all. That is where the trouble begins. Water creeps up the basin, spills over the top, and within hours you are dealing with soaked carpet, warped drywall, and the unmistakable smell of mold. I once responded to a call in a Kirkwood home where the homeowner had just installed a brand new submersible pump. The float switch jammed against the side of the basin during its first real test. The basement flooded with three inches of water. That is how fast it happens. [Gateway Water & Mold](#)

The Float Switch Problem

Float switches come in a few varieties. The most common is the tethered float, which hangs from the pump by a short cord. As the water rises, the float lifts and pivots to activate the switch. But the tether can get caught on the pump housing, the discharge line, or the basin wall. If the basin is narrow or the pump is not centered, the float can snag easily. Pedestal pumps often use a vertical rod float switch instead, which is less prone to jamming but still vulnerable to debris. A small piece of gravel or a plastic wrapper can wedge under the float and hold it in place.

I recommend checking your float switch at least once a month during wet seasons. Lift the float gently by hand and listen for the pump to click on. Let it drop and confirm it turns off. It is a simple test that takes thirty seconds. If you find that the pump does not respond, clean the float mechanism and make sure the tether has free range of motion. A little maintenance here goes a long way toward preventing basement flooding.

Power Outages and Battery Backup

St. Louis weather is unpredictable. A thunderstorm can knock out power for hours while the rain keeps falling. Without electricity, your sump pump is just a plastic bucket in a hole. Power outages are the second most common cause of sump pump failure. The solution is a battery

backup system designed specifically for sump pumps. These units sit above the basin and automatically switch to battery power when the grid goes down. They are not cheap, but compared to the cost of water damage restoration, they pay for themselves the first time they are used.

I have seen homeowners rely on a dehumidifier to keep the basement dry, but a dehumidifier cannot remove standing water. It can only manage humidity. When the sump pump fails, the dehumidifier becomes irrelevant. A battery backup buys you time. Most good systems can run a pump for several hours on a single charge, enough to handle the typical storm outage. Gateway Water & Mold often emphasizes the battery backup as a critical piece of a dry basement strategy. Their team sees too many homes where a simple power outage turned into a full mold remediation project.

Discharge Line and Check Valve Issues

Even if the pump runs fine, the water has to go somewhere. The discharge line carries water from the pump out of the house, usually to the yard or a storm drain. If that pipe freezes, gets clogged, or collapses, the pump will run but move no water. The motor can overheat and burn out. A check valve is installed on the discharge line to prevent water from flowing back into the basin after the pump shuts off. If the check valve fails, the pump has to re-pump that water every cycle, which wears it out faster and can cause the pump to short-cycle.

I worked on a home in Webster Groves where the discharge line ran through an unheated crawl space. Every winter, the line froze solid. The pump would run, the motor would heat up, and eventually the thermal overload switch would trip. The homeowner never noticed until the spring thaw, when the basement flooded. The fix was to insulate the discharge line and add a heat trace cable. That is not a standard recommendation, but in that house it was the only solution that worked.

Different Pump Types, Different Failure Modes

Not all sump pumps are the same. The two main categories are pedestal pumps and submersible pumps. Pedestal pumps have the motor mounted above the water, with a long shaft reaching down to the impeller. They are easier to service because the motor stays dry, but they are noisier and the shaft seal can leak over time. Submersible pumps sit in the water, so they run more quietly and are less prone to air locking. But if the seal fails, the motor can short out. Brands like Grundfos, Zoeller, and Liberty Pumps each have their loyal fans, and each has its own quirks. Grundfos pumps are known for efficient motors, Zoeller pumps for heavy cast-iron construction, and Liberty Pumps for reliable float switch designs. None of them are immune to the float switch problem.

A submersible pump with a stuck float switch is a common call for water damage companies. The water level rises, the pump does nothing, and the homeowner discovers it only when they step into a puddle at the bottom of the basement stairs. By that point, the water has already seeped into the drywall and the baseboards. Mold can start growing within 24 to 48 hours. That is why mold remediation often goes hand in hand with sump pump failure. You cannot have one without the other in a damp basement environment.

Sewer Backup and Sewage Ejectors

Another scenario that gets overlooked is sewer backup. If the municipal sewer line surcharges during heavy rain, water can flow backwards into your basement drain. A sump pump cannot help with that unless you have a sewage ejector system designed to handle solids and pump against head pressure. A sewage ejector is essentially a heavy-duty sump pump with a grinder or a large impeller to handle waste. It is a different beast entirely, but the same failure modes apply: stuck float switch, clogged discharge, power loss. In St. Louis, where combined sewer systems still exist in older neighborhoods, a sewer backup can overwhelm a standard sump pump quickly. A check valve on the main drain line is essential to prevent backflow, but many homes lack one.

I recall a job in a South City bungalow where the homeowner had a sump pump for groundwater but no protection against sewer backup. A heavy rain caused the city sewer to back up into the basement through the floor drain. The sump pump basin was separate and never even saw the water. The result was four feet of raw sewage in the basement. That is a different kind of water damage, one that requires professional biohazard cleanup and extensive mold remediation. The homeowner now has a sewage ejector with a battery backup, and he tests the float switch every month.

Practical Tips to Avoid Failure

Here is what I have learned from years of seeing sump pump failures turn into water damage claims:

- Test the float switch monthly by lifting it manually. Confirm the pump turns on and off freely.
- Install a battery backup if you have any finished space in the basement. A few hundred dollars can save thousands in restoration.
- Inspect the discharge line for kinks, ice, or blockages before each rainy season.
- Replace the check valve every three to five years. They are cheap and easy to swap.
- If you have an aquarium pump or dehumidifier in the basement, do not let their discharge hoses drain into the sump basin. That extra water can cause the pump to

cycle more often and wear out faster.

These steps will not eliminate all risk, but they will dramatically reduce the chance of a surprise flood. Gateway Water & Mold has seen the aftermath of enough neglected sump pumps to know that a few minutes of preventive maintenance can save a whole basement.

In the end, sump pump failure is rarely a mystery. It is almost always a stuck float switch, a power outage, a frozen discharge line, or a failed check valve. The fix for each is straightforward. The hard part is remembering to check before the storm hits. If you wait until the water is rising, it is already too late. A little attention today can keep your basement dry tomorrow, and keep the mold remediation crew away from your door.