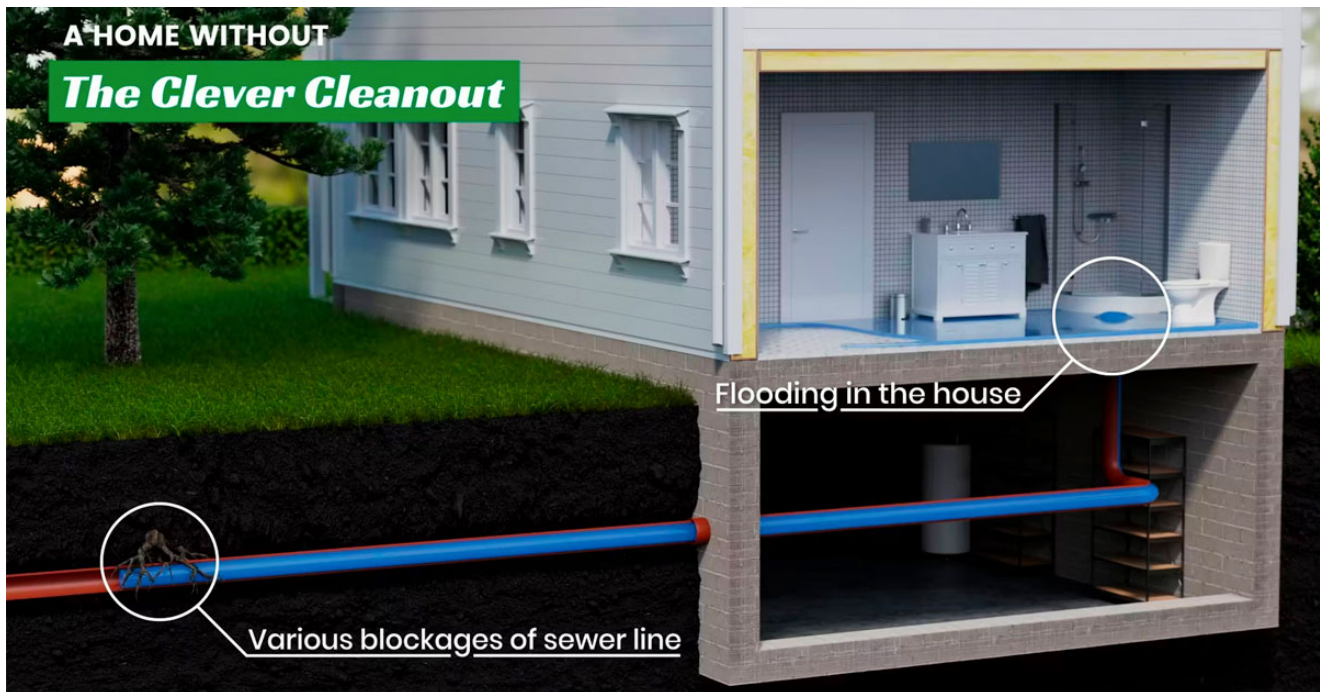


# Simple Solution for Backflow Prevention

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## Introduction

It started as a small trickle in the basement, barely noticeable. But within hours, John's finished basement was flooded with two feet of sewage – a nauseating mix of wastewater, sewage, and every imaginable household contaminant. Any hope of backflow prevention had failed.

The culprit? A sewer backflow incident, often caused by heavy rains overloading the sewage system. During these high-volume events, the sewers can back up into homes through outlets like floor drains and toilets. John never imagined his beautiful basement could be utterly destroyed by a surge of sewage in just a few hours.

Unfortunately, stories like John's are all too common. Sewer overflows cause an estimated \$9 billion in damage each year in the U.S. alone. But now, there's an innovative new solution called the Clever Cleanout from Sewer Sentry. This simple, affordable device installed on your home's sewer line prevents damaging backflows from entering your property. Keep reading to understand how it works – and how it can protect your home or business from catastrophic sewage damage.

## What is Sewer Backflow?

Sewer backflow occurs when wastewater in sewer pipes reverses direction and flows back into a building. This can happen for several reasons:

- **Sewer main backup** – A blockage or clog in the main sewer line can cause wastewater to back up through connections and drain pipes. Tree roots, grease, debris, and sediment are common causes of main line clogs.
- **Undersized sewers** – Sewer pipes that are too small to handle peak flows can become overwhelmed and back up. Heavy rainfall or excessive water use from many sources at once is often the cause.
- **Improper plumbing connections** – Incorrect plumbing that connects non-waste pipes like gutters or appliance hoses to the sewer system can allow water to backflow into the property.
- **Flooding** – Major flooding events can completely fill sewer systems and cause wastewater to flow backwards through pipes and fixtures.
- **Line failure** – If a sewer main line breaks or collapses, it disrupts normal flow and creates back pressure that pushes sewage backwards.

Sewer backflow allows disease-causing sewage to overflow back into sinks, toilets, tubs, washing machines, and other fixtures. It can quickly cause unsanitary and dangerous conditions inside a building.

## Consequences of Sewage Backflow

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Sewage backflow can have disastrous effects on your home and health if left unchecked. Understanding the potential consequences highlights the importance of preventative solutions like the Clever Cleanout.

### Health Hazards

Backed up sewage contains harmful bacteria, viruses, parasites and toxic chemicals. If sewage backups into your home, exposure to these contaminants can cause severe illnesses like dysentery, hepatitis A, gastroenteritis, and more. Children, elderly, and those with compromised immune systems are especially vulnerable.

Even minor exposure to sewage backups can cause respiratory problems, skin infections, and nausea. The health risks posed by raw sewage are significant.

### Property Damage

When sewage backs up, it doesn't just stay in the pipes. Sewage can back up through drains, toilets, and sinks, flooding bathrooms, basements, and other living spaces with contaminated water. Floors, walls, furniture, carpeting, and personal belongings can all be damaged or destroyed.

The high acidity and contaminants in raw sewage can also corrode metal pipes and accelerate wear on water heaters, water softeners, and other systems. The property damage resulting from sewer backups is often extensive and extremely costly to repair.

## High Repair Costs

Fixing the damage caused by a sewer backup often requires extensive plumbing repairs, drain cleaning, construction, mold remediation, replacements of floors, drywall, cabinets, and more. The costs add up quickly, with repairs ranging from \$3,000 to \$20,000 or more depending on severity.

Homeowner's insurance typically does not cover sewer backup damage. Without coverage, the high costs for repairs must come out of pocket. Preventing backups is far more affordable than paying for costly repairs later on.

## Traditional Backflow Prevention Methods

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Sewage backflow can be prevented through various methods that have been used traditionally. These include:

### Backwater Valves

Backwater valves are installed on the main sewer line inside a home or business. They work like check valves to prevent sewage from flowing backwards and entering from the municipal sewer lines. Backwater valves remain open to allow wastewater to exit but will close shut if sewage attempts to backflow. While effective, they need to be cleaned periodically and may require pumping if clogged. Professional installation is recommended.

### Overhead Sewers

Overhead sewers involve lifting the lowest plumbing fixtures in a building above the level of the next upstream manhole. This creates a high-point trap to prevent backflow. While this method can work, it requires knowing the location of manholes and extensive plumbing modifications. It also reduces drainage efficiency by creating flat horizontal pipe sections.

### Standpipes

Standpipes are interior drain pipes that extend vertically to a height above the elevation of the nearest manhole. They act as a barrier to stop sewage backflows from reaching plumbing fixtures. However, they are visually unappealing and use interior space inefficiently. Frequent maintenance is required to keep them clear.

### Backflow Prevention Valves

These are mechanical valves installed on the main sewer drain line to allow flow in one direction only. They close automatically to prevent backflow but require professional installation and regular maintenance. Compared to backwater valves, they are less reliable and more prone to clogging.

## Introducing Clever Cleanout

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Sewer Sentry's Clever Cleanout is a patented flood control device that acts as a backflow preventer, backwater valve, and drain backflow preventer all in one. This innovative product provides a simplified, cost-effective solution to prevent damaging sewage backflows in homes and businesses.

Clever Cleanout was designed from the ground up to be easy to install and maintain. It has the following key features and benefits:

- Sleek, low-profile design fits a standard 4-inch cleanout opening
- No electricity or batteries required
- Made of durable, chemical-resistant materials
- Self-activating valve seals off backflow at thresholds as low as 1/2 inch
- Remains open during normal operation for zero plumbing fixture drainage issues
- Reusable after backflow event with no servicing required
- Installs above ground with just a screwdriver in about 10 minutes

Clever Cleanout sets a new standard for affordable, reliable backflow prevention. By leveraging the existing cleanout access point, it eliminates the need for expensive construction to install traditional backflow systems. Homeowners and businesses alike can find relief with Clever Cleanout.

## How Clever Cleanout Prevents Backflow

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The Clever Cleanout utilizes a simple, yet innovative design to prevent sewage backflows. Here's an overview of its working mechanism:

1. The Clever Cleanout is installed along the main sewer line, replacing a section of straight pipe.
2. It contains a hinged backflow prevention flap that sits flush against the interior wall of the pipe when sewage flows downstream in the normal direction.
3. This hinged flap is weighted so that it takes very little pressure to push it open when sewage is flowing downstream.
4. However, when a surge of sewage attempts to flow back upstream, the flap immediately swings shut, sealing off the pipe and preventing backflow into the property.
5. Any sewage trying to backflow is stopped by the closed flap, which covers the entire interior circumference of the pipe.
6. The flap is engineered with a rubber gasket that creates a watertight seal when closed.
7. After the backflow surge subsides, the flap swings back open to allow normal downstream wastewater flow again.
8. This cycle repeats each time backflow occurs, providing automatic, maintenance-free protection against sewage backflows.

9. The flap is designed for longevity, capable of thousands of closures without any wear or loosening.

So in summary, the genius of Clever Cleanout is its simplicity. With no motors or electricity required, just a swinging weighted flap, it effectively seals off backflow surges and prevents damage within a home or business.

## **Clever Cleanout vs Traditional Methods**

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Clever Cleanout stands out from traditional backflow prevention methods in several key ways:

### **Effectiveness**

Unlike basic backwater valves that can get stuck open, Clever Cleanout has a float that reliably closes when water flows backward. This smart engineering prevents nearly all backflow events that could flood a building. Traditional methods like overhead sewers and swing check valves have more potential failure points.

### **Cost**

Installing Clever Cleanout costs a fraction compared to overhead sewers or drain tile systems that reroute plumbing. As a simple retrofit into the existing cleanout, Clever Cleanout runs just \$150-300 including professional installation. Traditional methods easily cost thousands of dollars.

### **Installation**

It typically takes a plumber less than an hour to install Clever Cleanout, without any major construction or re-plumbing required. Traditional methods often require opening walls, digging outside, jackhammering floors, and extensive modifications – taking days to weeks. The quick and non-invasive Clever Cleanout install means very little disruption.

By leveraging clever and reliable engineering, Clever Cleanout beats traditional backflow systems on effectiveness, affordability, and simplicity. For most homes and businesses, it's the smarter solution.

## **Importance of Preventing Backflow**

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Sewage backflow can have disastrous effects if left unchecked. Preventing backflow is critical for avoiding health hazards, property damage, and high repair costs.

### **Avoid Health Hazards**

Raw sewage contains bacteria, viruses, parasites and other pathogens that can cause serious illnesses if they enter your home. Exposure to sewage brings risks of gastrointestinal diseases, respiratory infections, skin rashes and more. Infants, elderly and those with compromised immune systems are especially vulnerable. Stopping backflow prevents these contagions from invading your home and harming your family.

### **Prevent Property Damage**

When sewage backs up, it can quickly cause major destruction. Carpets, furniture, drywall, flooring and other possessions may need to be ripped out and replaced due to contamination. Sewage can also damage the structure and foundation of a home if left untreated. Proactive backflow prevention saves you from extensive repairs and replacements that may cost thousands of dollars.

### **Save on High Repair Costs**

If a backflow incident occurs, you'll likely need the help of plumbers, damage restoration professionals and mold remediation services. These experts charge hefty fees for emergency services. Additionally, your homeowners insurance may not cover sewage damage. Paying out of pocket for massive repairs takes a huge financial toll. Investing in backflow prevention upfront can save you from shelling out big bucks down the road.

## **Who Needs Clever Cleanout?**

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Clever Cleanout is an important tool for both homeowners and business owners to protect against costly sewage backflow damage.

### **Homeowners**

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Homeowners are especially vulnerable to sewer backflows during major rain events or floods. If the municipal sewer system becomes overwhelmed, sewage can back up into homes through drain pipes, toilets, and other plumbing fixtures. This can cause major damage to flooring, walls, furniture, and possessions. By installing a Clever Cleanout device, homeowners ensure a barrier against backflow entering the home. The small upfront investment can prevent thousands of dollars in damage and hazardous sewage contamination.

### **Businesses**

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Commercial properties like restaurants, hotels, and office buildings are at high risk for sewer backup issues. Any business with restrooms, drain lines, dish or laundry facilities needs proper backflow prevention. Lawsuits, property damage, closure costs, and expensive repairs can all result from sewage flooding within a business. Specific industries like food

service and hospitality may also face health code violations if backflow occurs. Installing Clever Cleanout gives business owners peace of mind that their property is protected 24/7 against the substantial financial damages caused by sewer overflows.

## **Conclusion**

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Clever Cleanout by Sewer Sentry is an innovative and effective way to prevent costly and unsanitary sewage backflows. By installing the patented Clever Cleanout device, homeowners can protect against sewage and rainwater backing up into their property.

Clever Cleanout works automatically as a backflow preventer, backwater valve, and drain backflow preventer. Its simple design requires no power source or complicated installation. Compared to traditional backflow prevention methods like overhead sewers and backwater valves, Clever Cleanout provides comprehensive protection at a fraction of the cost.

The damaging effects of sewage backflow make prevention an essential safeguard for any homeowner. Clever Cleanout provides reliable and affordable protection against flooded basements, contamination, and expensive repairs. With one simple device, you can gain peace of mind knowing your home and family are protected.

To learn more about how Clever Cleanout can defend your home against backflow damage, visit the Sewer Sentry website. You can also find a licensed plumber in your area to install Clever Cleanout and take advantage of Sewer Sentry's lifetime functionality warranty. Protect your property and prevent health hazards with the ingenious Clever Cleanout backflow prevention system.