

# ***GUARANTEED SEWER BACK-UP SOLUTIONS***

**YOUR COMPREHENSIVE GUIDE TO REPAIRING  
OR REPLACING YOUR SEWER LINE**



**CallNuBlue.com**





# ***THE TYPICAL NETWORK OF PIPING IN YOUR HOME***

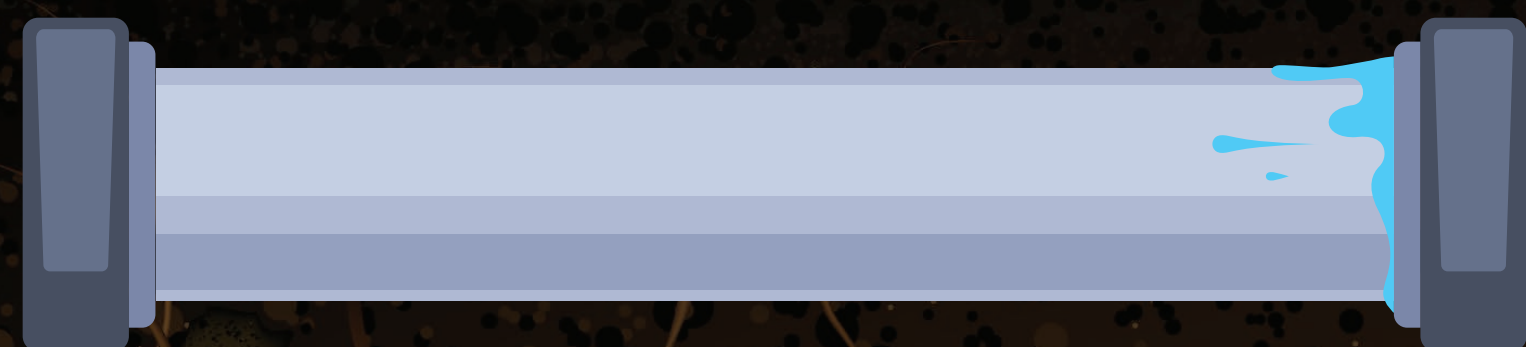


Water enters the house through the main water service line and is distributed to each fixture. Wastewater from every fixture in the home exits through the main sewer line out to the city sewer. A properly functioning sewer line should not back up.



# ***SIGNS OF SEWER LEAKS, BURSTS, & BACKUPS***

Sewer line issues can cause huge trouble for your home!  
Keep an eye out for these telltale warning signs and their possible causes!



**1**

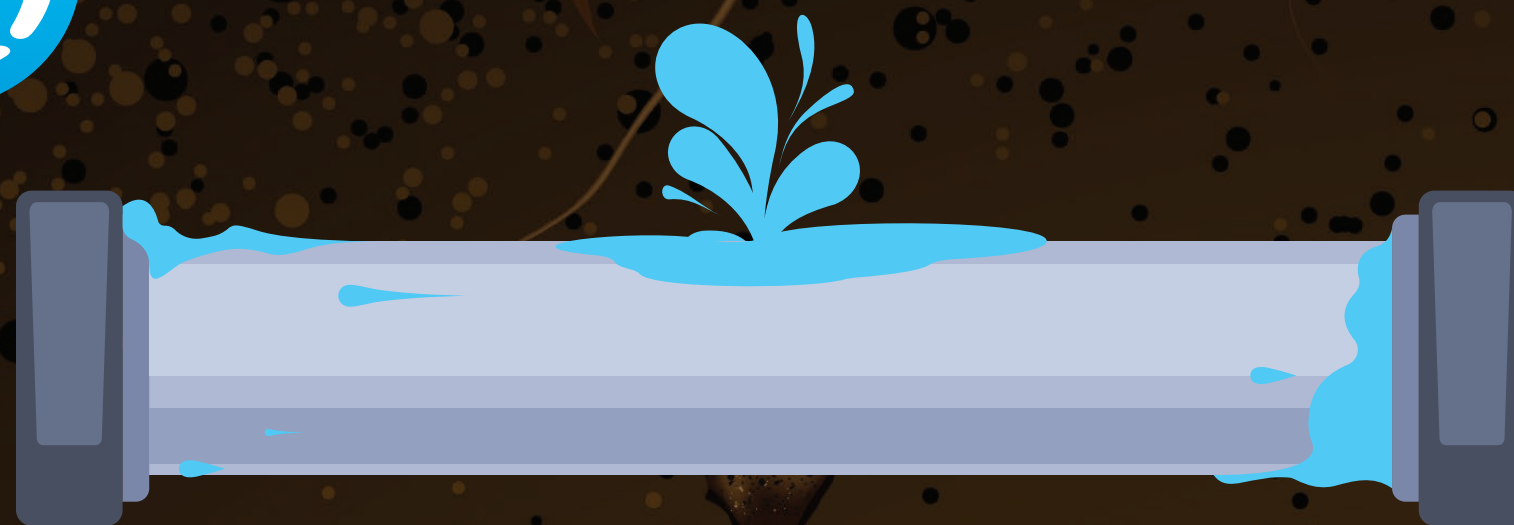
## **WATER DAMAGE AROUND FOUNDATION!**

Cause: Burst or leaking pipes pooling towards the house.

**2**

## **MOISTURE IN YOUR YARD!**

Cause: Heavy line leakage underground.



**3**

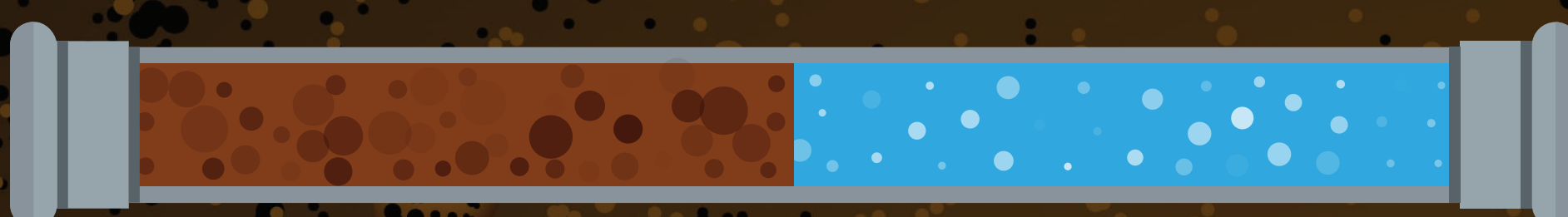
## **THE SOUND OF RUNNING WATER!**

Cause: Burst sewer line.

**4**

## **SOARING UTILITY BILLS!**

Cause: Sewer line leak underground.



**5**

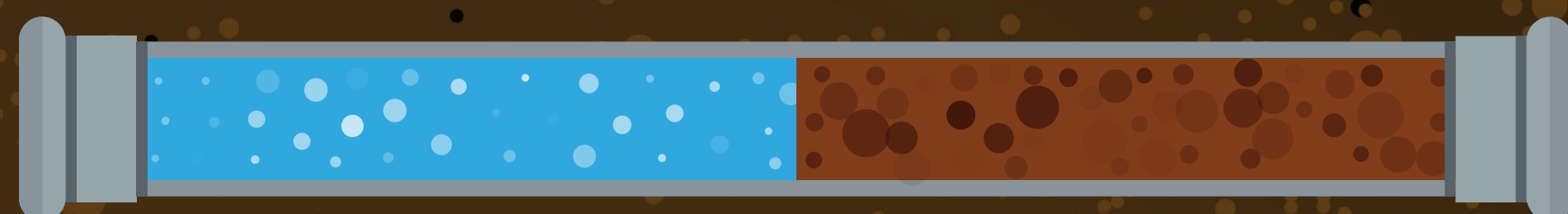
## **SLOW DRAINING SINKS & TUBS!**

Cause: Sewer drain backup.

**6**

## **GURGLING TOILETS & BUBBLING SINKS**

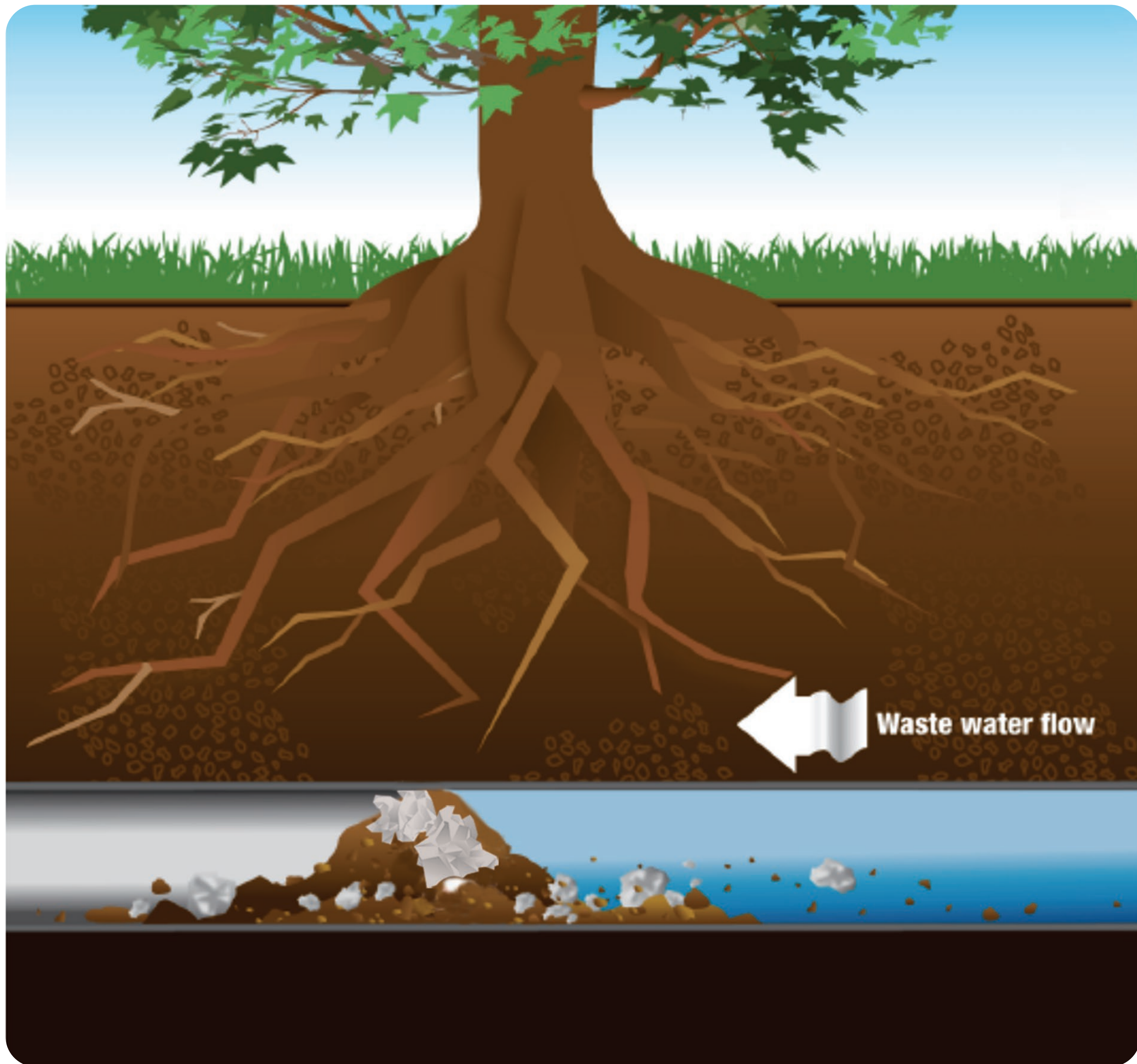
Cause: Sewer drain backup.





# WHAT CAUSES SEWER LINE BACKUPS?

## ***FOREIGN OBJECTS***



Drainage systems were designed for high gallon flushing capacity toilets which were able to carry material through the drain line to the main sewer. Due to lower gallon flushing capacity toilets, matter tends to accumulate which can restrict flow over time. Additionally, clever marketing for hygiene products may indicate “flushable”, but they tend to create clogs in the main sewer line. Other “foreign objects” includes paper towels, wipes, tissues, cotton swabs, disposable gloves, and other non-flushable items.



# WHAT CAUSES SEWER LINE BACKUPS?

## ***TREE ROOTS***



Video image of tree roots inside the sewer pipe.



Tree roots are a common culprit for main sewer stoppages, especially in homes that were built before 1970. Due to the ground settling over time, the pipes can shift enough to break the mortar seal at pipe connections, allowing moisture-seeking roots to penetrate the sewer line. Once the seal is broken, the roots gravitate to this water and nutrient-rich source, eventually overtaking the pipe.

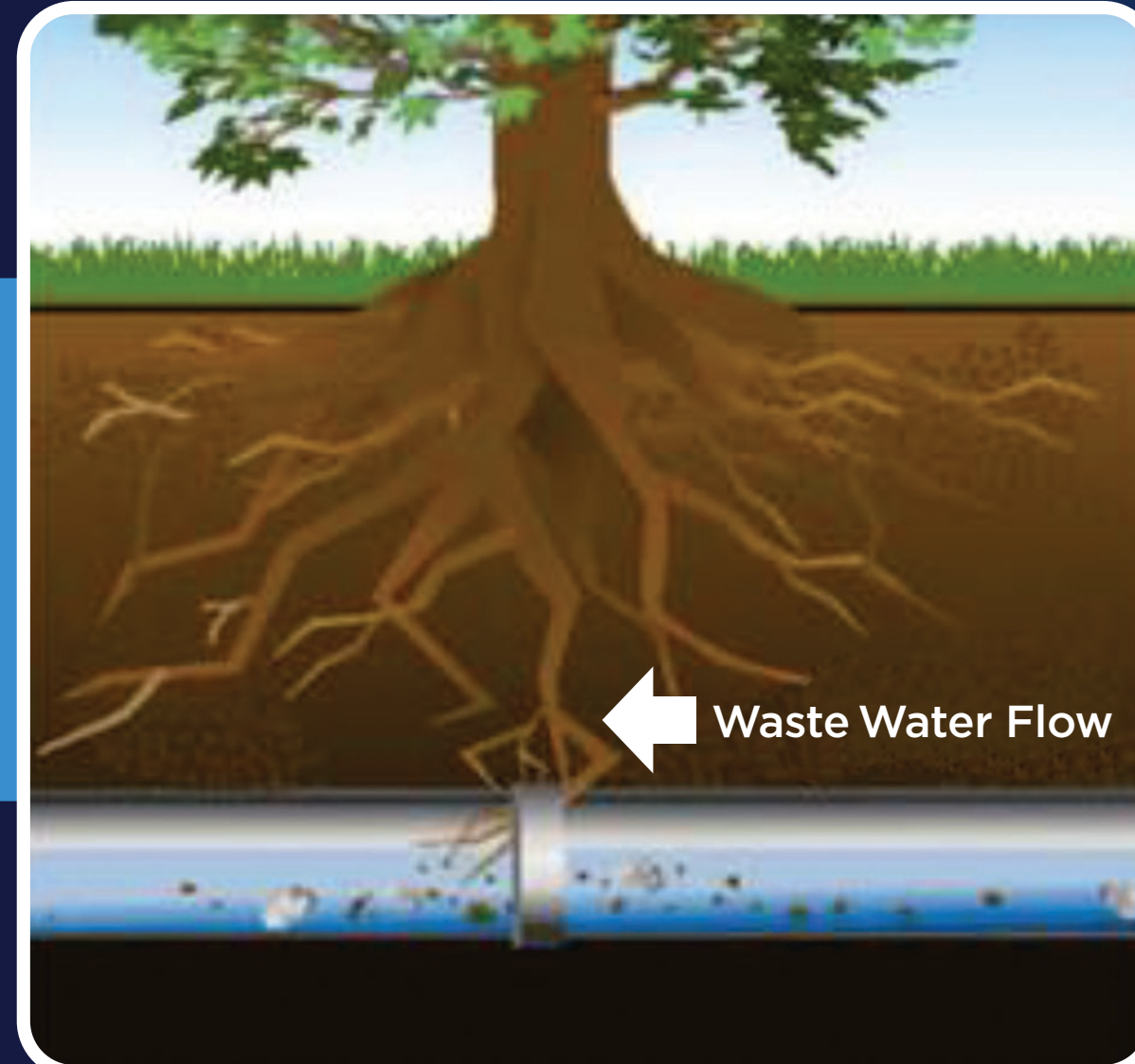


# WHAT CAUSES SEWER LINES TO COLLAPSE?

## ***TREE ROOTS***

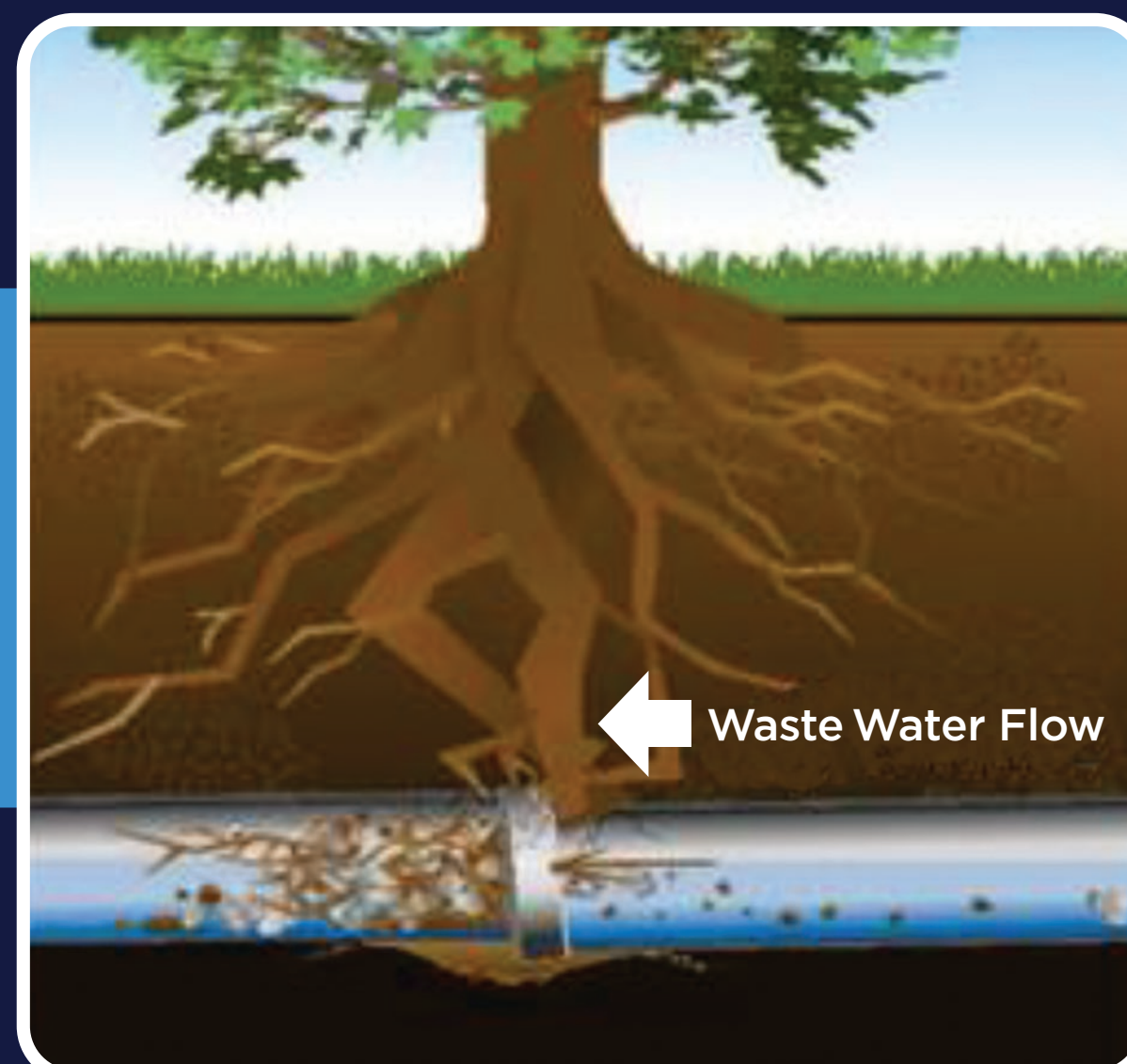
### PROGRESSION OF TREE ROOTS TO COLLAPSE

#### ***STAGE 1.***



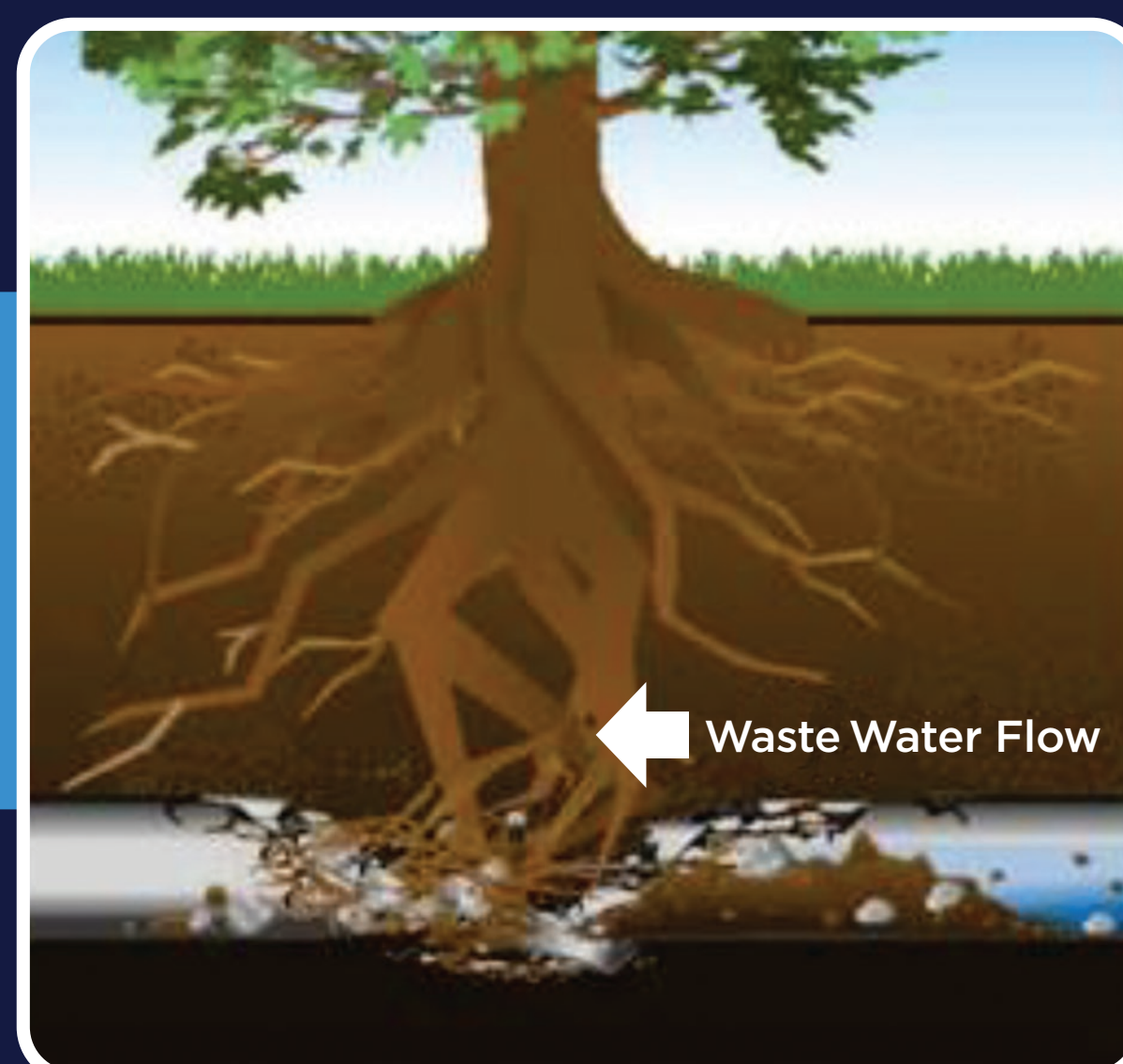
Thin roots begin to enter the sewer line, typically not enough to cause a blockage just yet. This is the first sign that you will need to consider replacing.

#### ***STAGE 2.***



Roots overtake the pipe, choking off the sewer line flow and causing partial or complete blockages. There is usually still an opportunity to rehabilitate the existing line.

#### ***STAGE 3.***

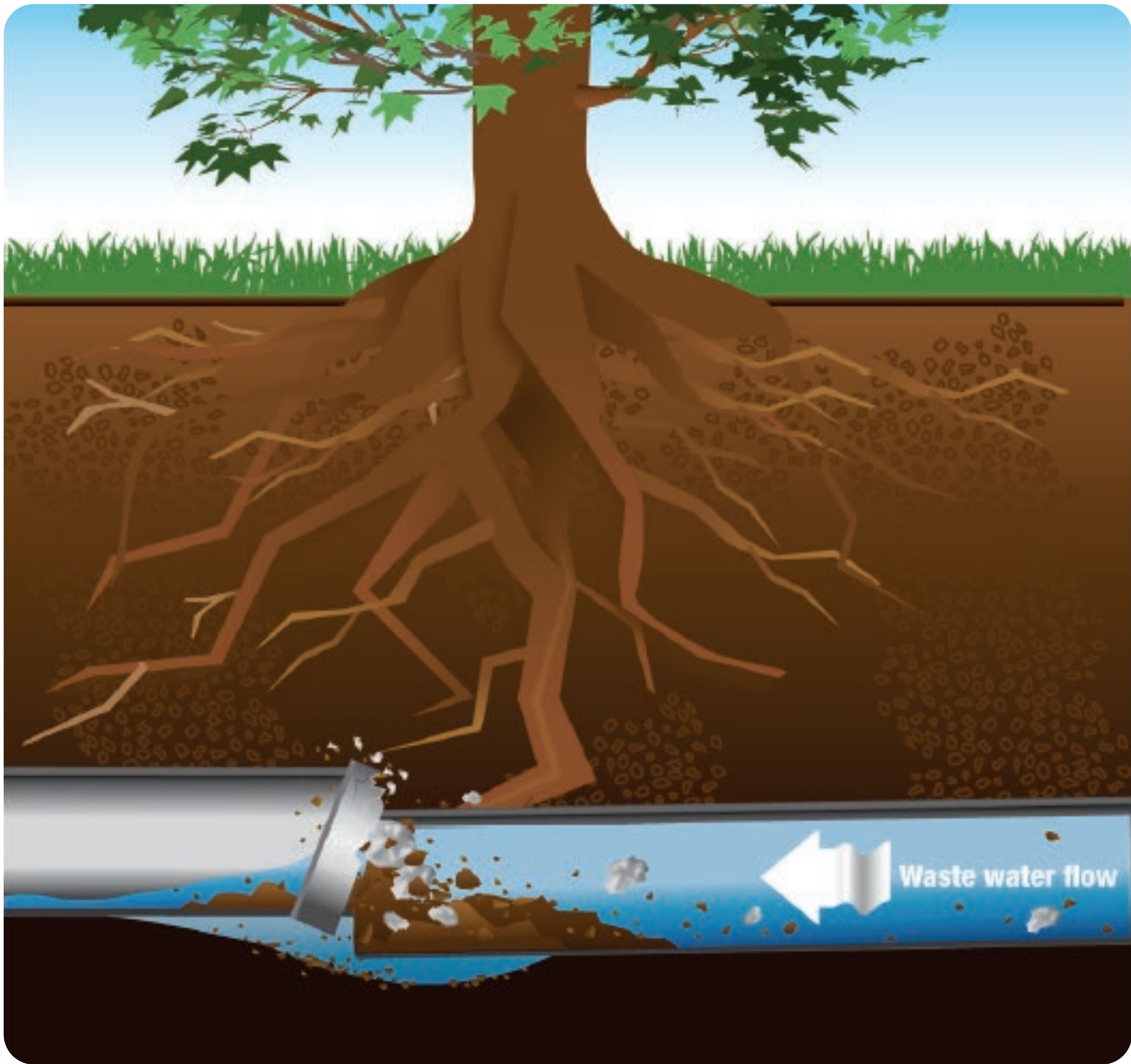


The roots have compromised the pipe's integrity, and the pipe is beyond rehabilitation. Pipe replacement is typically needed.



# WHAT CAUSES SEWER LINE BACKUPS?

## ***PIPE MISALIGNMENT***



Pipe misalignment can occur due to improper installation. Insufficient gravel bedding can cause the pipe to shift from ground settling. As the pipe shifts, water begins to leak out and erode the earth beneath the pipe.

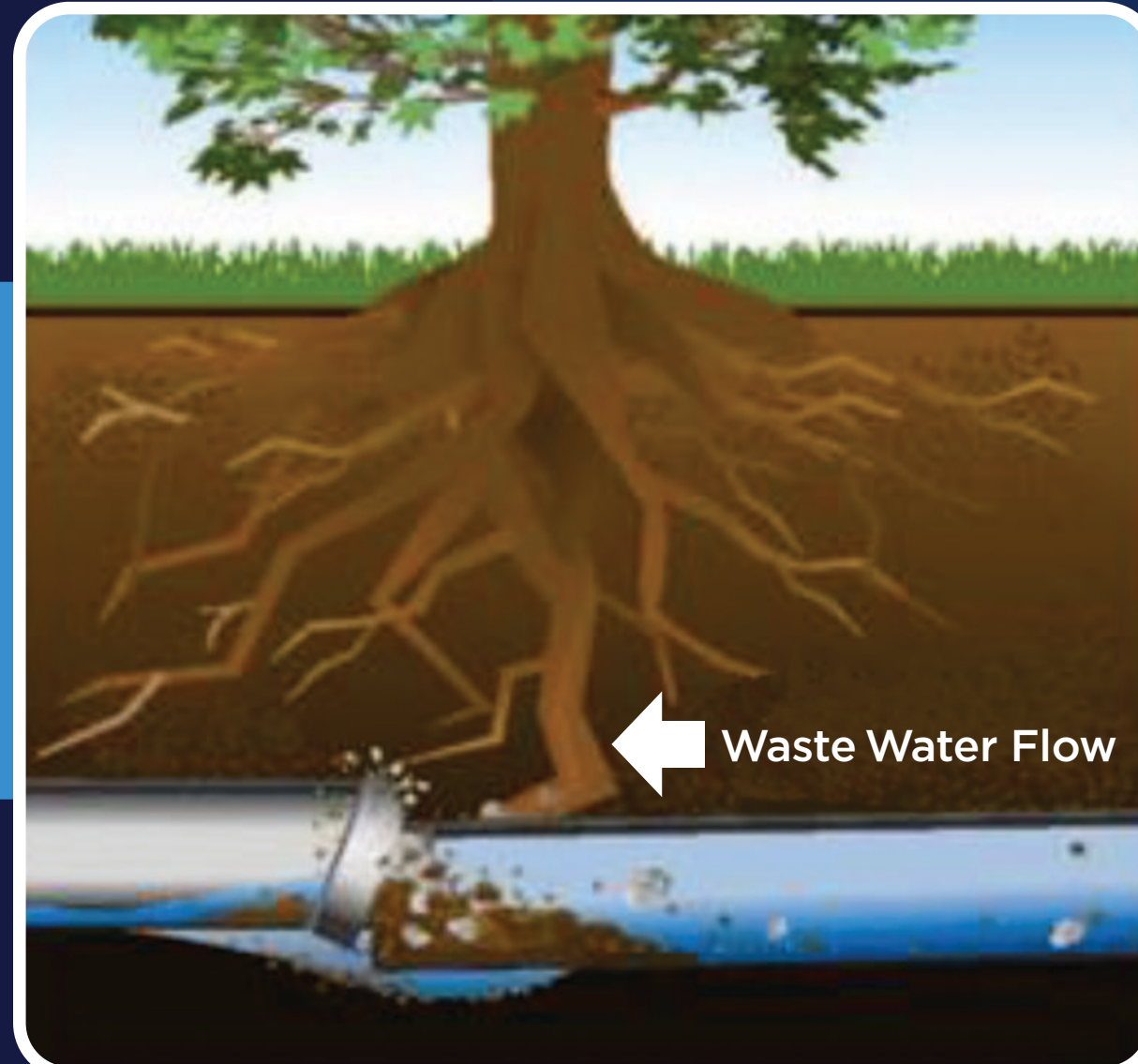


# WHAT CAUSES SEWER LINES TO COLLAPSE?

## ***PIPE MISALIGNMENT***

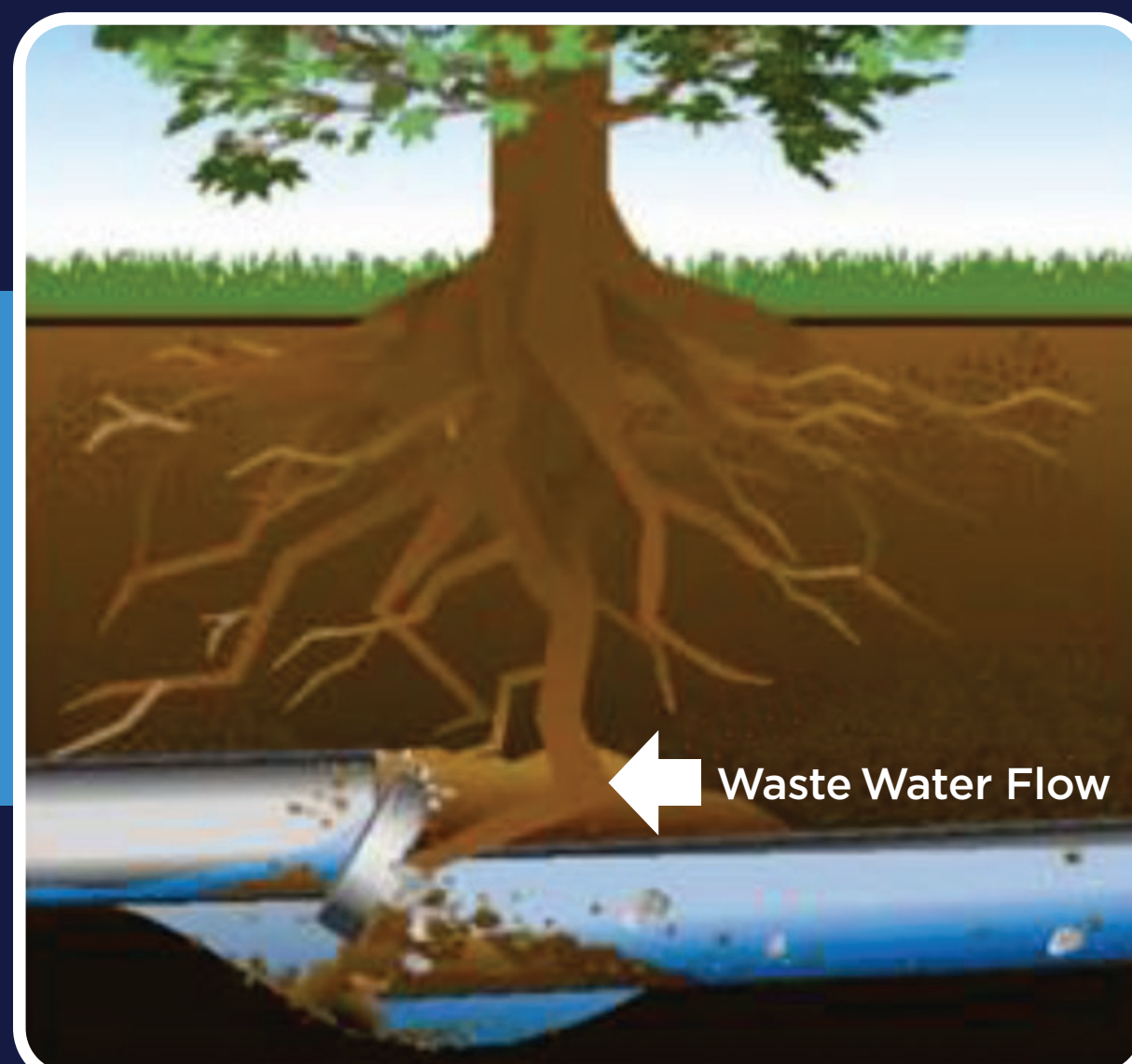
### PROGRESSION OF MISALIGNMENT TO COLLAPSE

#### ***STAGE 1.***



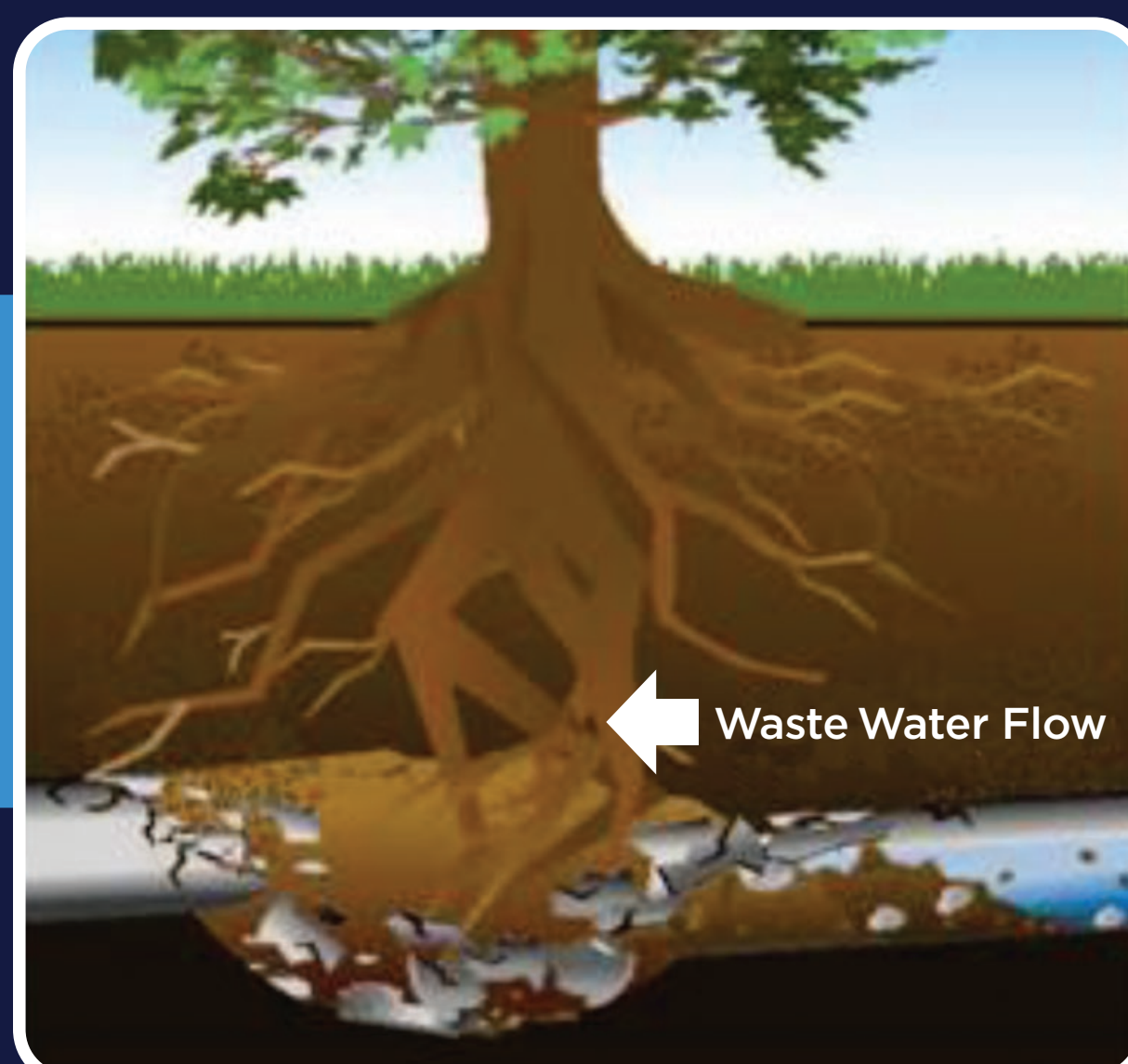
Normal settling of the ground causes the pipe to shift slightly, and wastewater begins to leak outside of the pipe.

#### ***STAGE 2.***



The void beneath the pipe grows larger due to wastewater erosion, and the pipe loses its natural support.

#### ***STAGE 3.***

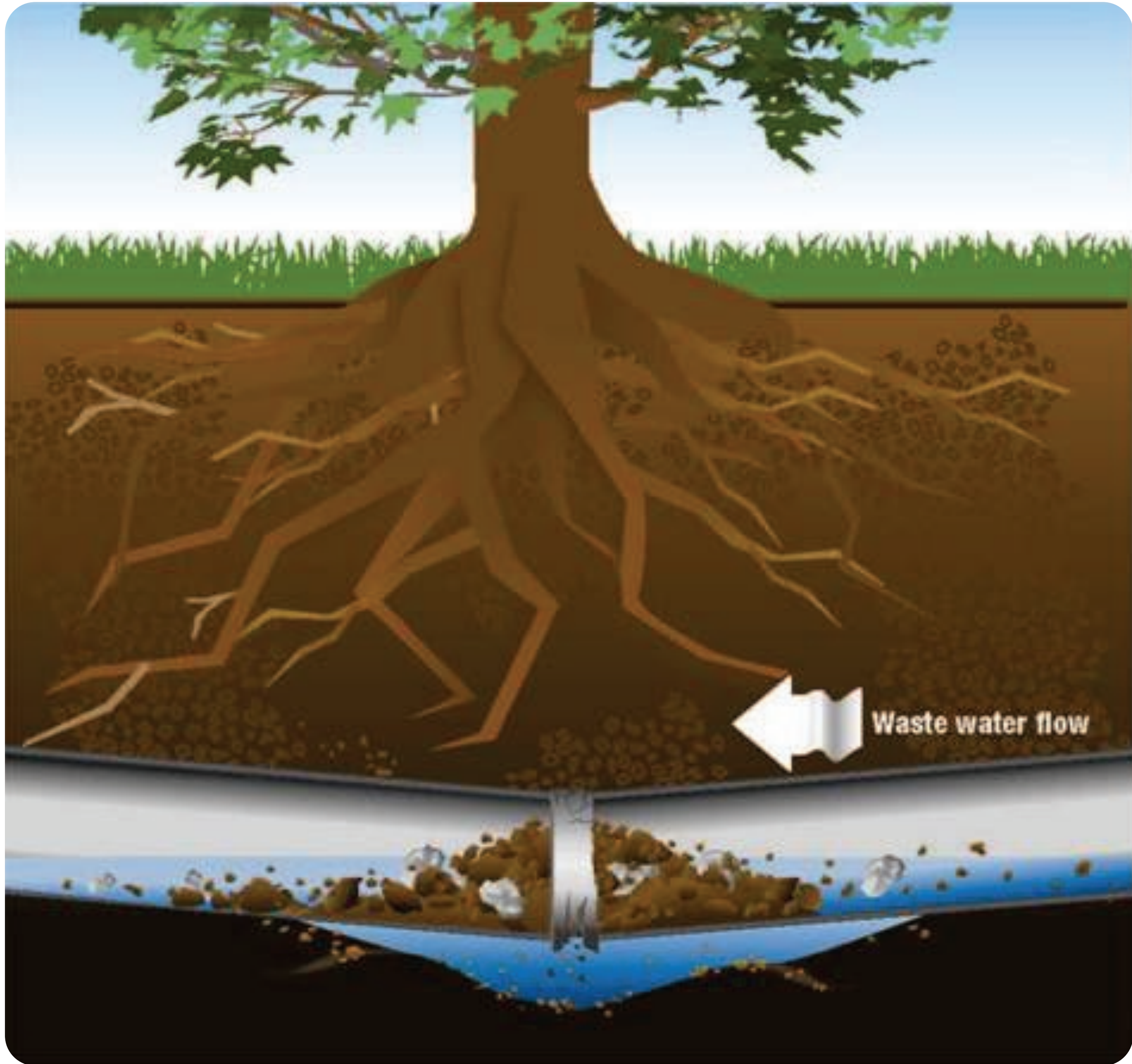


The foundation for supporting the pipe is completely compromised, and the weight of the earth collapses the pipe completely.



# WHAT CAUSES SEWER LINE BACKUPS?

## ***PIPE BELLY***



Pipe bellies usually occur due to improper installation where the pipe is not adequately pitched downward.

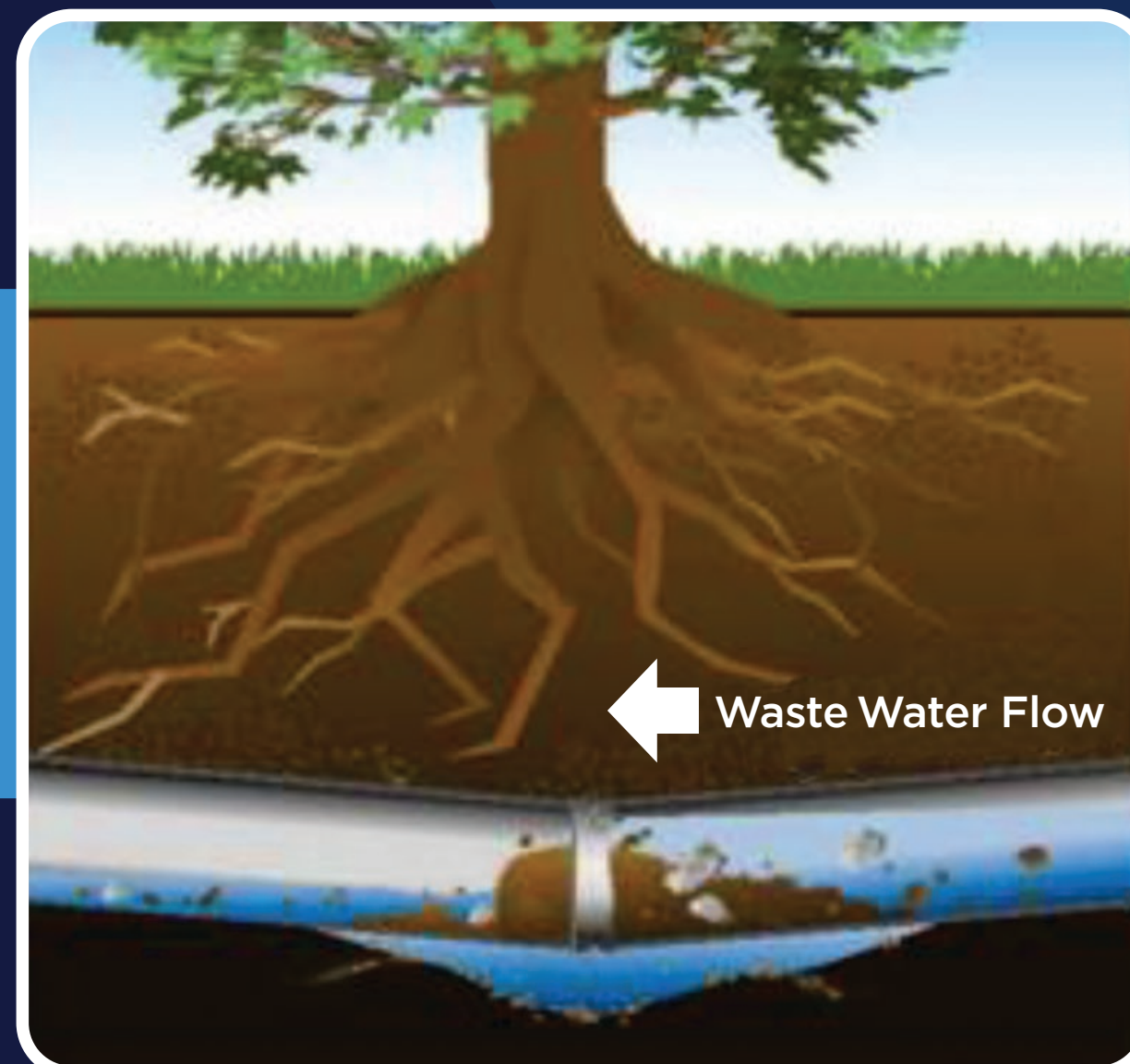


# WHAT CAUSES SEWER LINES TO COLLAPSE?

## ***PIPE BELLY***

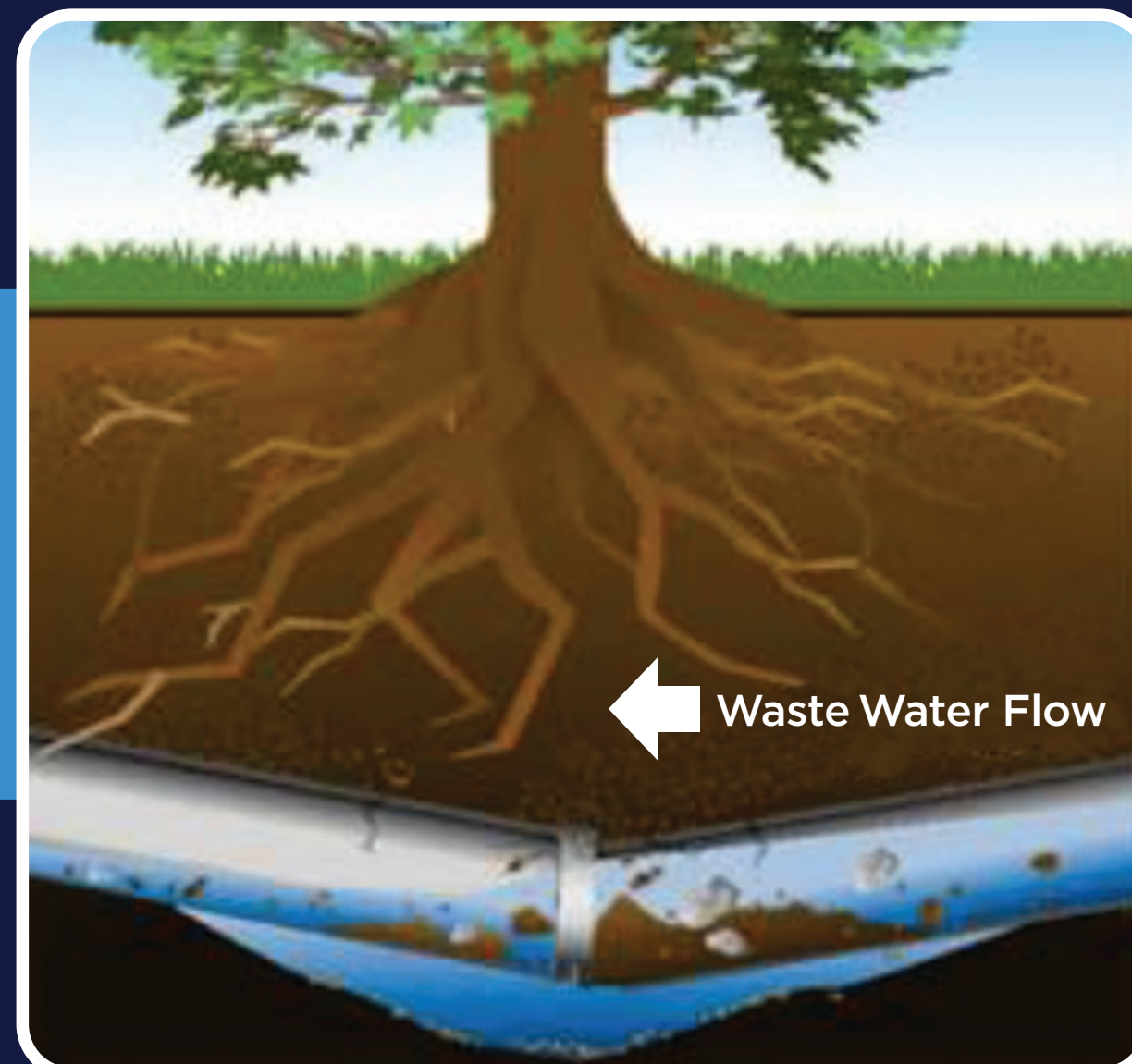
### PROGRESSION OF PIPE BELLY TO COLLAPSE

#### ***STAGE 1.***



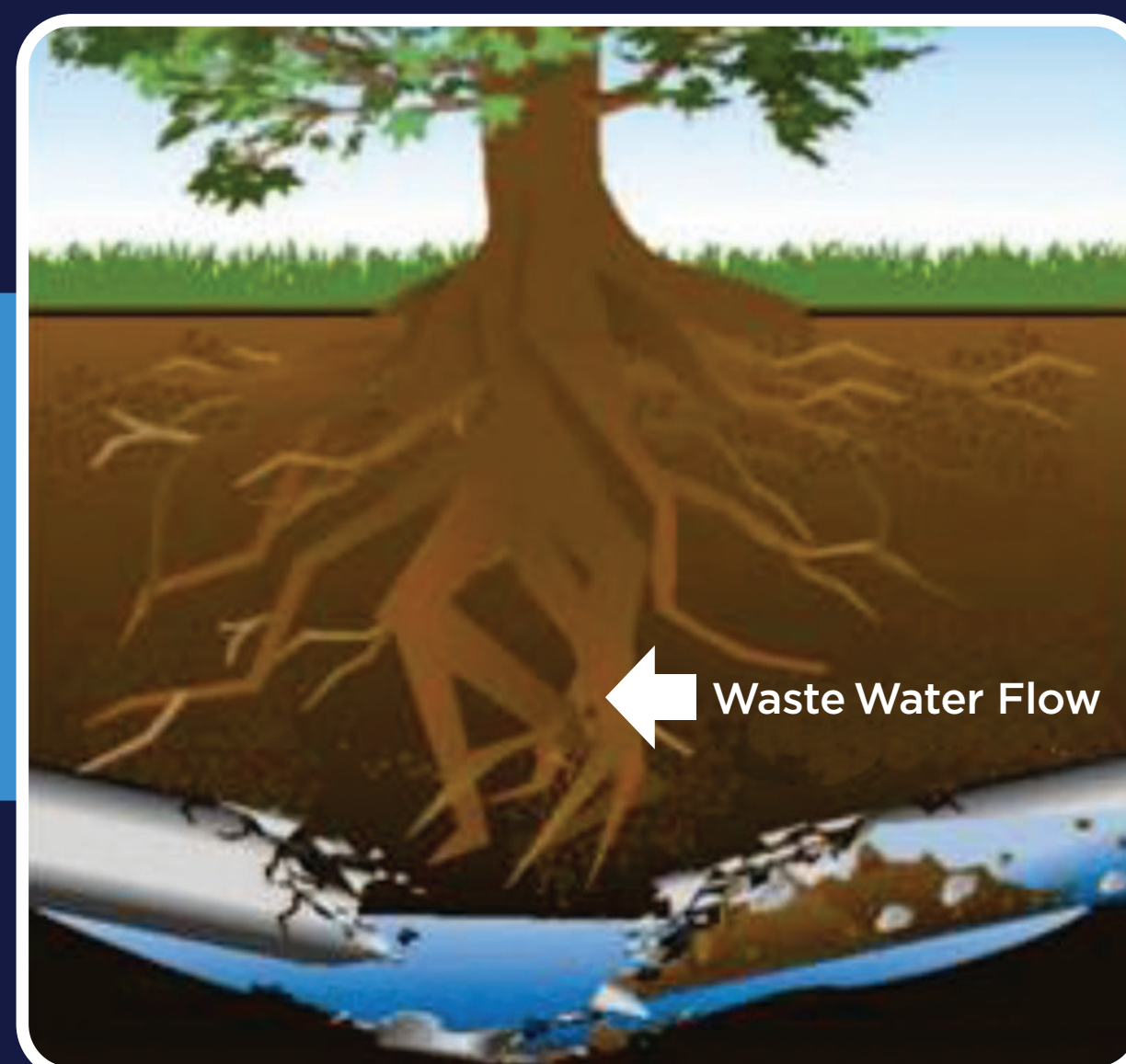
Water will always hold in the line, reducing velocity of the material passing through the sewer.

#### ***STAGE 2.***



Matter collects in a low spot of the pipe, preventing the sewer from flowing properly.

#### ***STAGE 3.***



The pipe cannot withstand the downward pressure of the earth where the pipe is not properly supported, leading to total collapse. The pipe needs to be replaced with elevation changes allowing for properly supported, downward pitch.

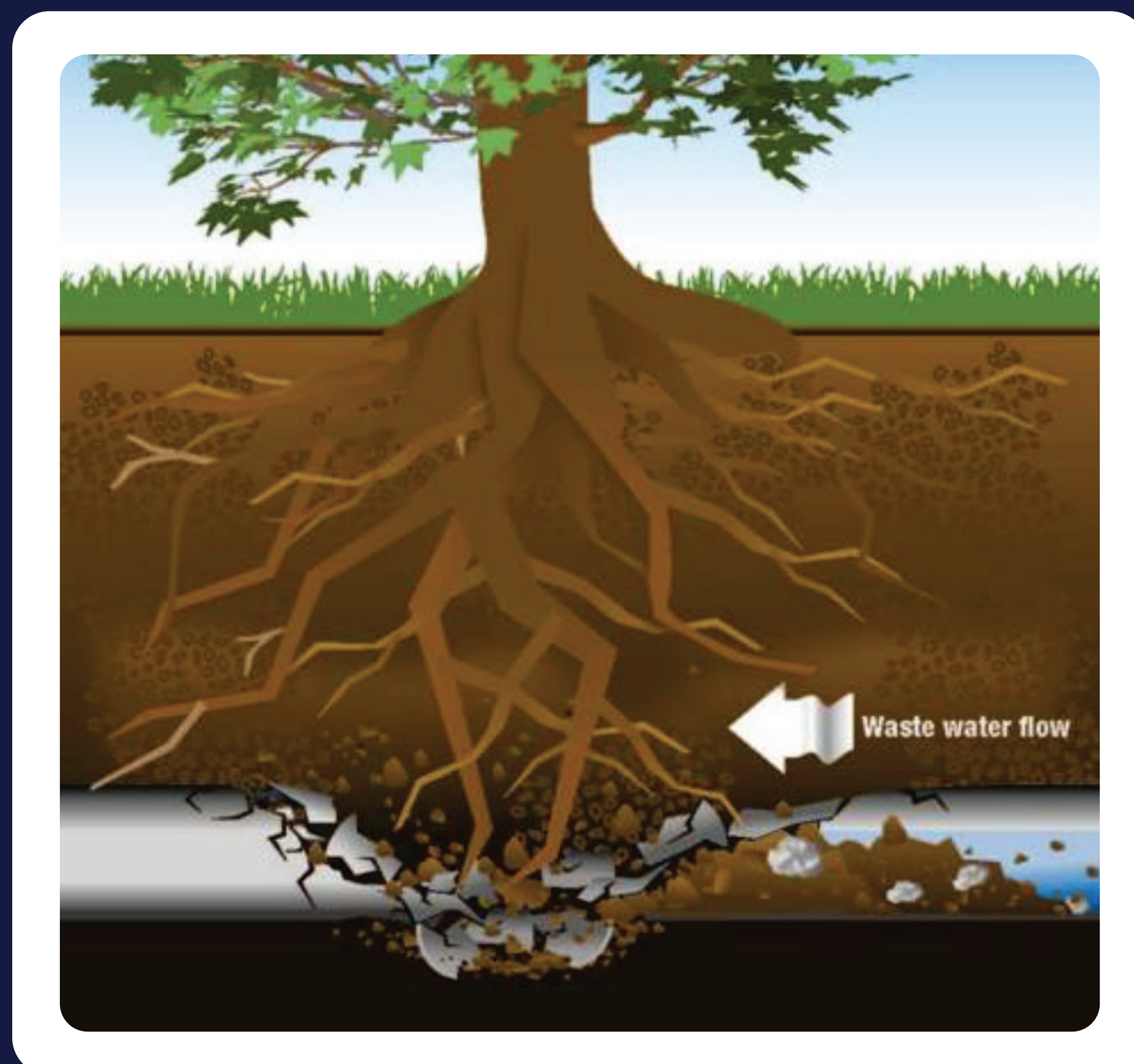


# WHAT CAUSES SEWER LINE BACKUPS?

## ***PARTIALLY COLLAPSED PIPE***



## ***FULLY COLLAPSED PIPE***





# TYPICAL TYPES OF SEWER LINE MATERIALS

## CAST IRON



The common lifespan of a cast iron pipe is 30 years.



Porous by nature and susceptible to scale, rust and waste buildup.



The thickness of a cast iron pipe wall is often not true, causing metal to become thin or brittle over time.



Waste build up happens much faster



Doesn't take well to acidic foods



## CONCRETE



The common lifespan of a concrete pipe is 30 years.



Durable but Bulky & heavy



Transportation is difficult and expensive



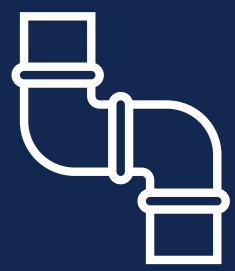
Complicated for cuts and custom fit





# TYPICAL TYPES OF SEWER LINE MATERIALS

## ORANGEBURG



Composed of paper and tar.



All Orangeburg pipe must be replaced per code. Unable to properly adapt new pipe to this material.



## PVC



100-year life expectancy



Non-corrosive



Non-porous



Low friction



Thick, even pipe wall all the way around



Gasketed or solvent weld connections prohibit root penetration





# TYPICAL TYPES OF SEWER LINE MATERIALS

## CLAY



The common lifespan of clay pipe is 30 years.



Unforgiving mortar joints crack due to ground settling, allowing roots to find their way into the pipe, leading to pipe collapse.



Porous surface



Magnet for tree roots



Very likely to crumble after intrusion occurs





# ***REPAIR, REPLACE, OR REHABILITATE?***

## **REPAIR YOUR SEWER LINE IF...**



- It is reasonably accessible.
- There is not an existing and adequate full-size cleanout access.
- Has a reasonable life expectancy after the cost of repair.
- The remainder of the sewer line has been updated or is in excellent condition.

## **REPLACE YOUR SEWER LINE IF...**



- The existing pipe is Orangeburg.
- The pipe is bellied, back-pitched, or collapsed.
- It's deformed, cracked, or deteriorated.
- It's beyond or near the life expectancy of the pipe material.
- You are interested in preventing flood control from city sewer backflow.
- There are multiple sections of existing pipe that are compromised and in need of repair.
- Tree roots have begun to penetrate.
- You desire to have a worry-free solution to your sewer issue.
- System was poorly installed.



# ***THE REPAIR AND REPLACEMENT PROCESS***

## **ASSESSING THE SITUATION**



- We will pinpoint pipe location and depth.
- We will assess potential damage.
- We will contact utility to mark important underground utilities.
- We will coordinate the entire job from securing permits, crew, equipment, material and arrange for certified inspections of our work.



# ***THE REPAIR AND REPLACEMENT PROCESS***

## **PIPE REPLACEMENT USING THE EXCAVATION METHOD**



- Extreme care is taken to protect and preserve your landscape and property.
- Pipe foundation is examined and rebuilt if necessary to a grade of a 1/8" or more per foot slope.
- Safety precautions are taken to protect property and personnel.



# ***THE REPAIR AND REPLACEMENT PROCESS***

## **PIPE REPLACEMENT USING THE EXCAVATION METHOD**



- The new pipe is reconnected to the existing pipe with code-approved connections.
- All exposed pipe is bedded in compacted gravel to prevent shifting or settling.
- The trench is backfilled with spoil and mound left to settle. If the excavation was beneath a hard surface, all spoils will be hauled away and the trench will be filled.
- The landscape features are reset.



## CORE VALUES

# NEXT UP MENTALITY

The **NU** in **NUBLUE** stands for **NEXT UP**.

This Next Up Mentality is centered around **STAYING HUNGRY** to go the extra mile, **HUMBLY LEARNING** through continuous training, and a commitment to remain focused on **WORKING SMART** to deliver a new level of service excellence.

### **HUNGRY**

Being committed and willing to **STEP UP & GO THE EXTRA MILE** when needed.

### **SMART**

Always looking for the best way to utilize our **SKILLS, TOOLS, & TEAM** to deliver the highest level of service possible.



### **HUMBLE**

Embracing the opportunity to continually **LEARN, GROW, & DEVELOP OURSELVES.**





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REDEFINING SERVICE EXCELLENCE

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