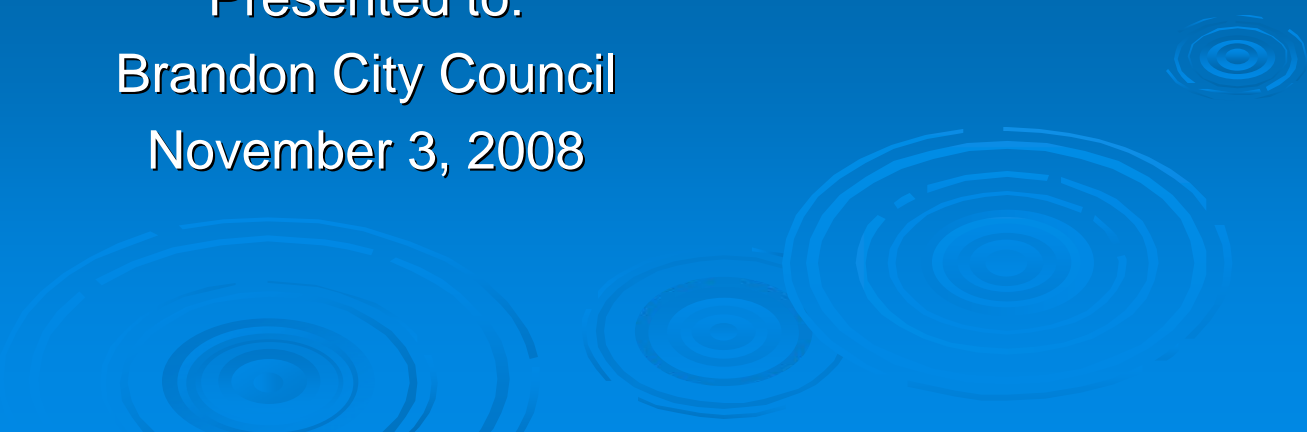


WASTEWATER BACK FLOWS and BACK FLOW VALVES

Presented to:
Brandon City Council
November 3, 2008

The background of the slide is a solid blue color. In the lower right quadrant, there are several faint, concentric circular ripples that resemble water droplets hitting a surface, creating a subtle decorative effect.

City household plumbing systems are, for the most part, gravity flow systems.

- Are not pumped;
- Water flows downhill.

“EXCEPT”



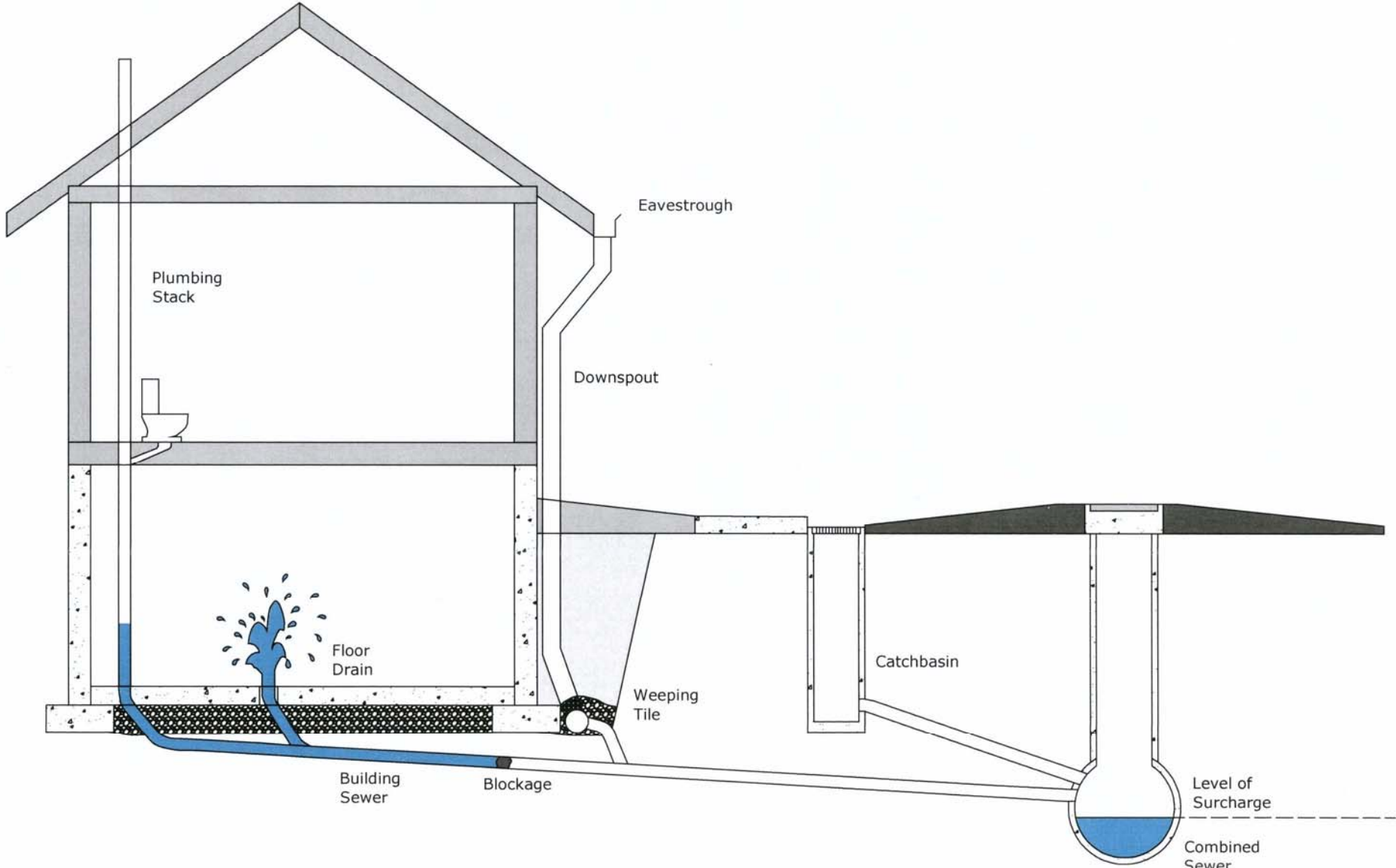
When there is an obstruction in the pipes:

- In the building;
- On property; and
- In the street mains.

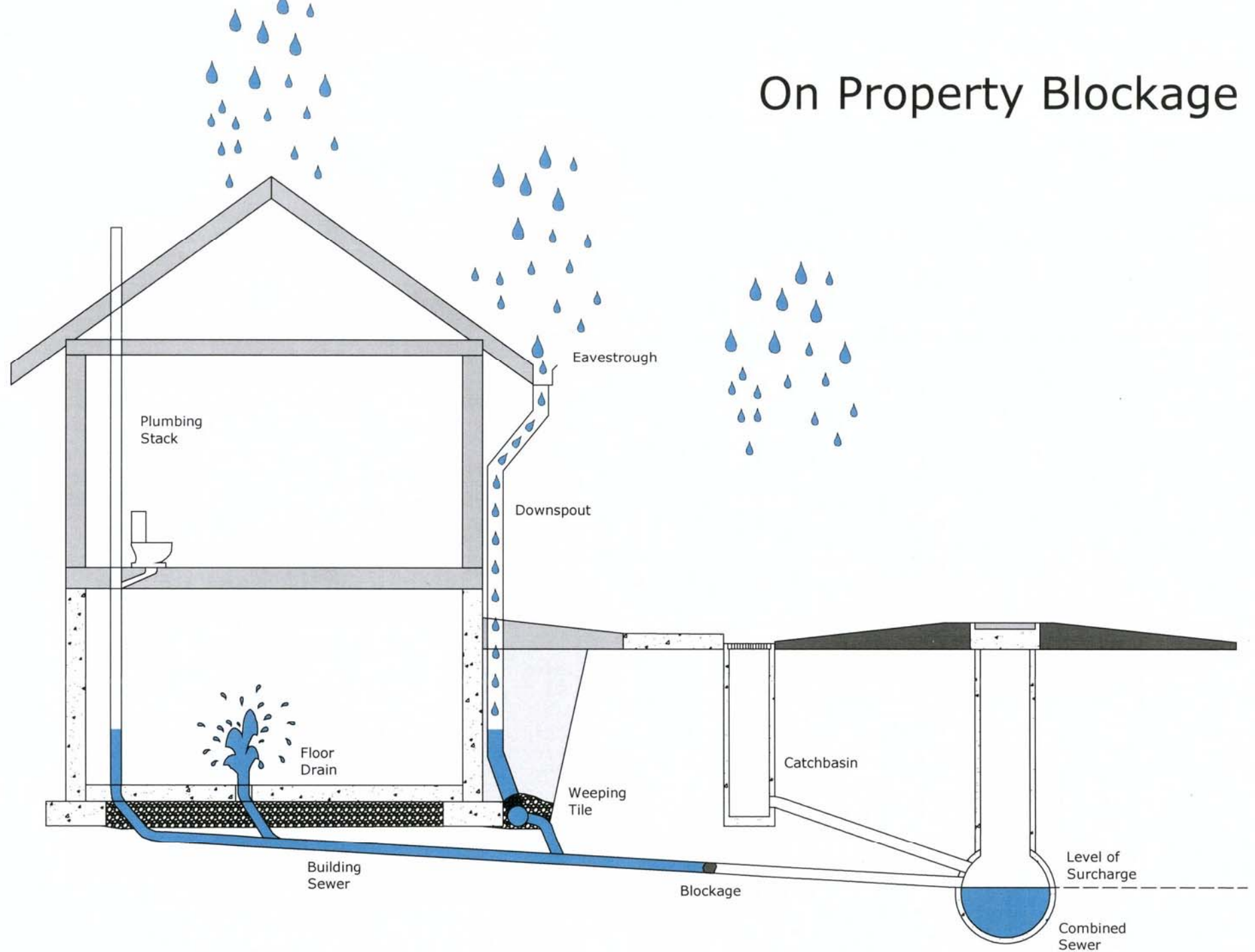
In building/on-property obstruction:

- Blockage of your pipes;
- Usually food waste or toys;
- Shower water, washing machine water comes up your floor drain;
- Generally a nuisance type clean-up;
- Your own wastewater, not someone else's.

In Building Blockage



On Property Blockage



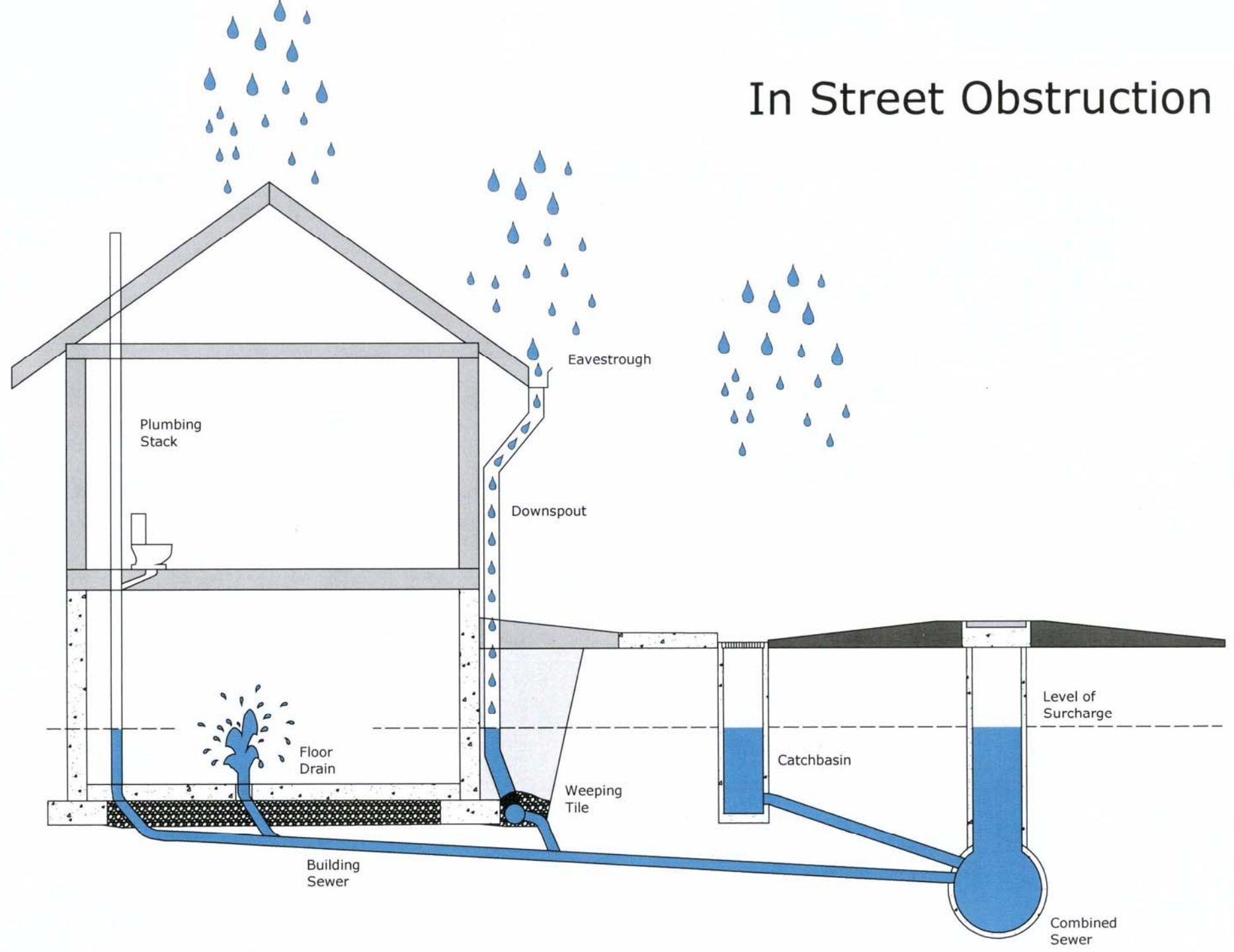
Protection Available:

- sump area with high water alarm; or
- observe water, usually mm or inches of water on the lowest point on the floor.

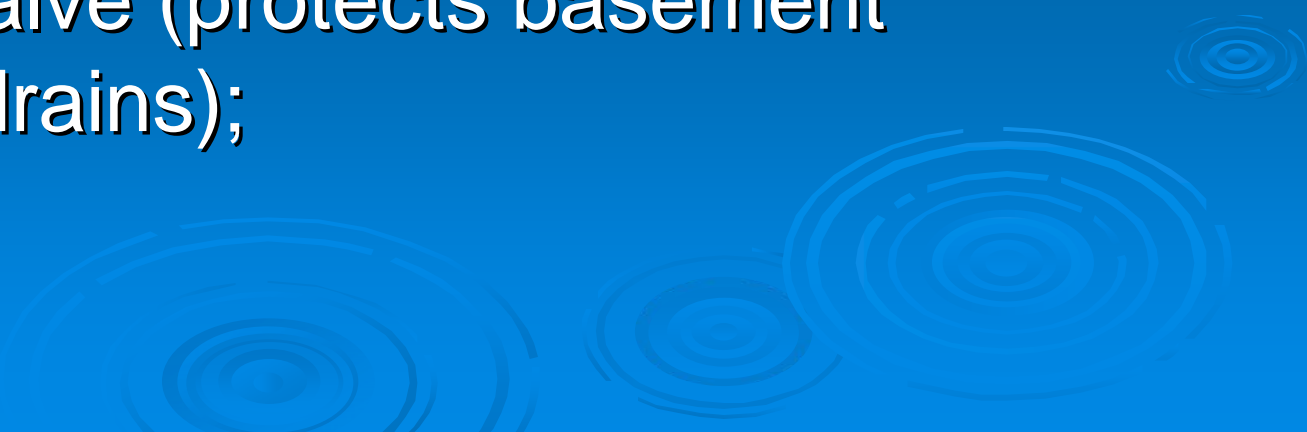
In street main obstructions:

- blockage of main:
 - debris (sticks, paper, dirt, etc.)
 - food grease (yours or someone else's)
 - structural failure of main (collapsed pipe)
 - hydraulic overload (typically combined sewer or can be failed pumps).
- Will be wastewater from the public system;
- Amount you get depends on:
 - Elevation of your basement and the wastewater elevation in the street – inches (mm) to feet (m).

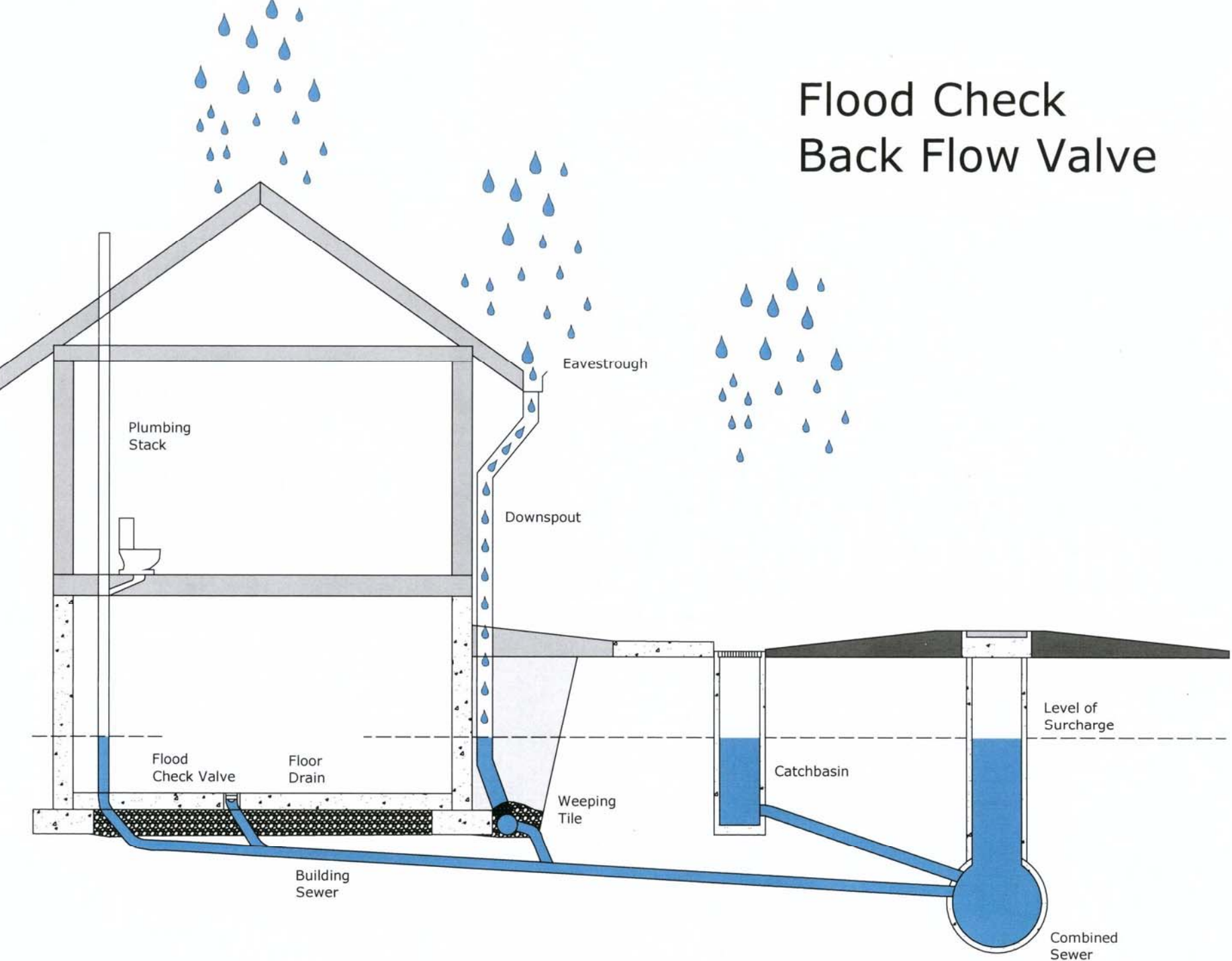
In Street Obstruction



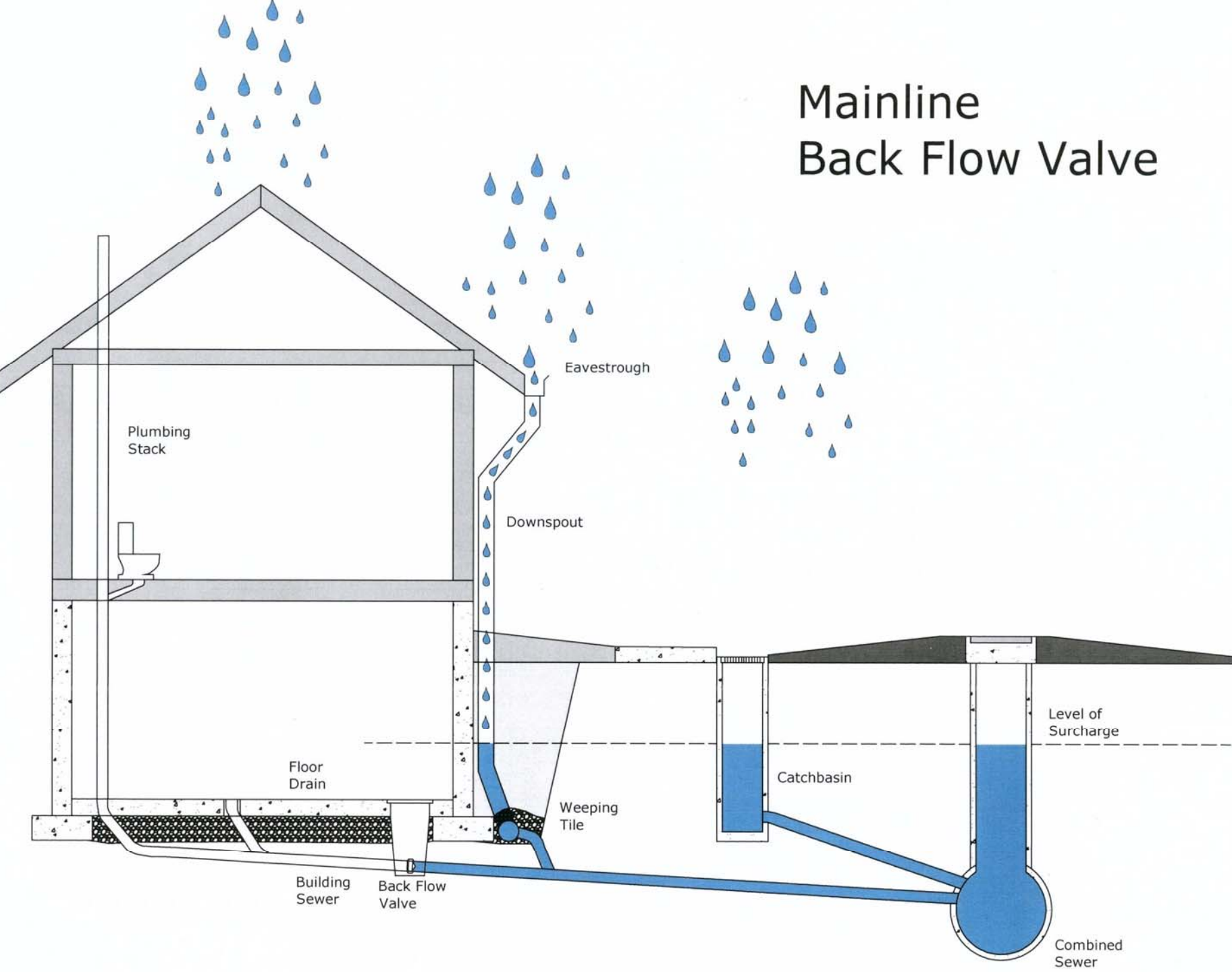
Protection available with back flow valves:

- Flood check (on flood drain);
 - Branch line valves (protects fixture groups i.e. sink/toilet, shower);
 - Mainline valve (protects basement plumbing drains);
- 

Flood Check Back Flow Valve



Mainline Back Flow Valve



➤ Disadvantages of a back flow valve:

- you need to know where they are in your system;
- need to be accessible; and
- they will require regular maintenance and/or repair if damaged.

➤ Advantage of back flow valves:

- Stops sewage back flow from contaminating your living space;
- Reduces or eliminates property damage;
- Maintains your living environment such that e-coli, viruses, intestinal worms and parasites remain in the sewer pipe; and
- Helps disaster-proof your home.