

SUMP PUMPS

An Information Workshop
Presented by



Sponsored by



Drainage Services Branch

OUTLINE

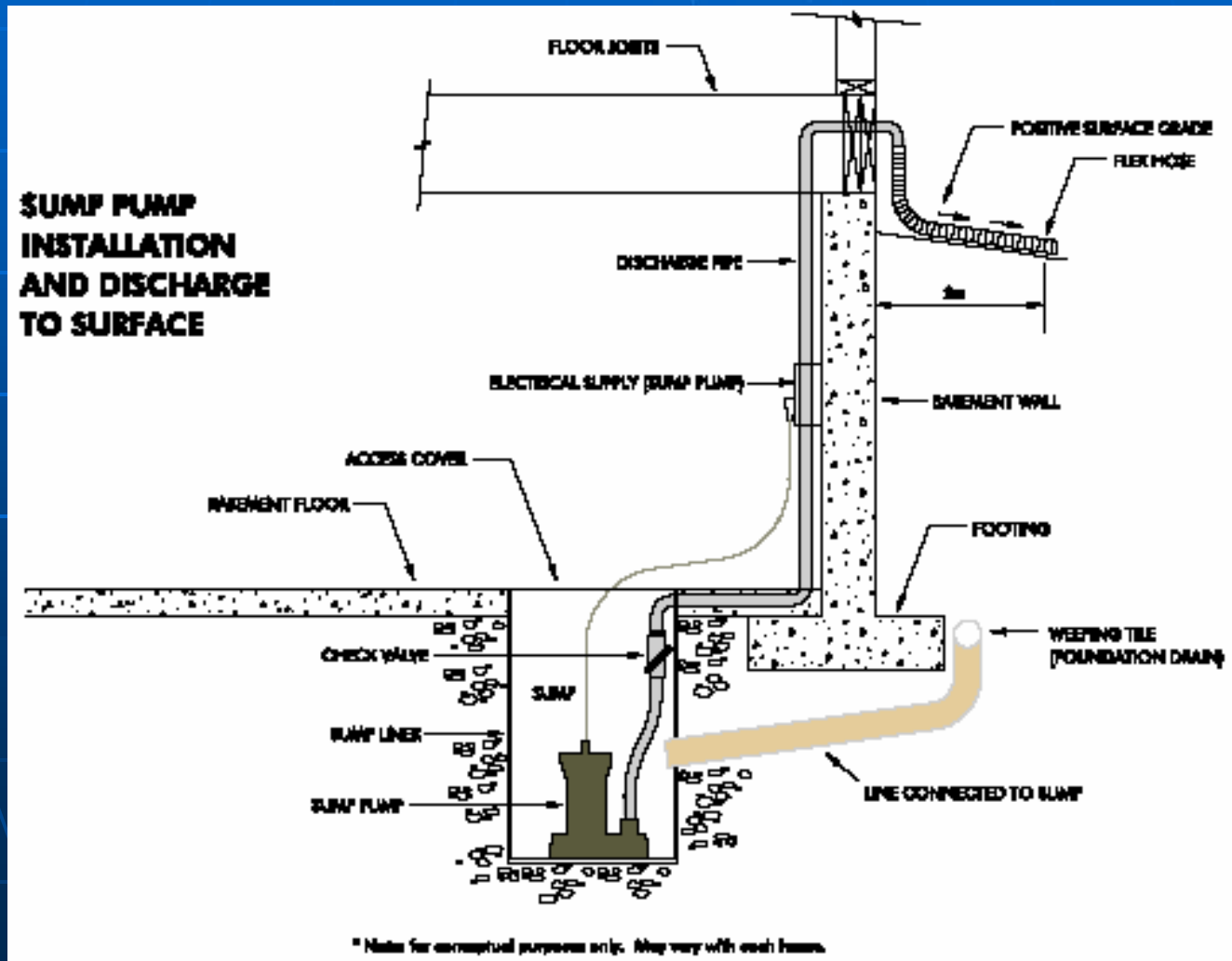
- Purpose of a Sump Pump
- Location/ Installation of a Sump Pump
- Applications
- Types/Models
- Maintenance
- Activation Switches
- Shopping Tips
- Potential Cost
- Questions

Purpose of a Sump Pump

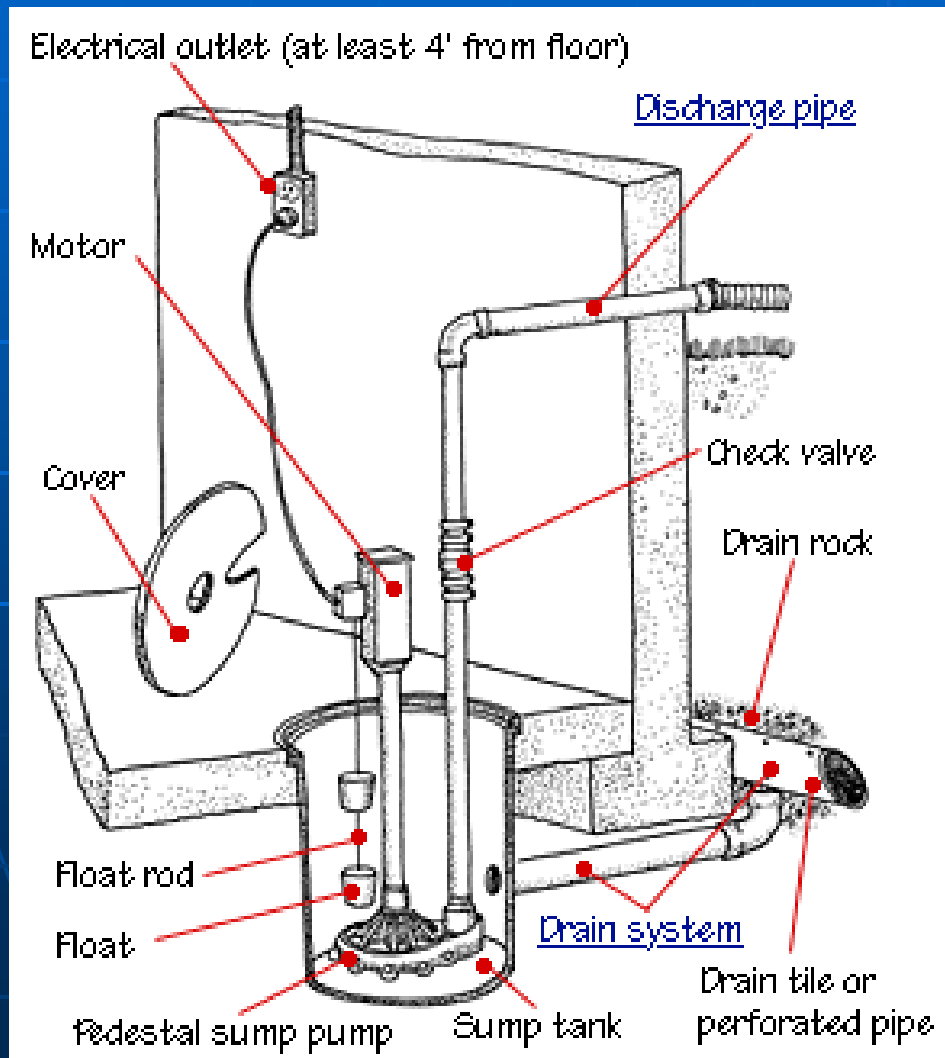
- Provides protection against flooding of your home – last line of defense
- Removes water to a safer location away from your home's foundation.



Location/Installation of a Sump Pump



Sump Pump Components



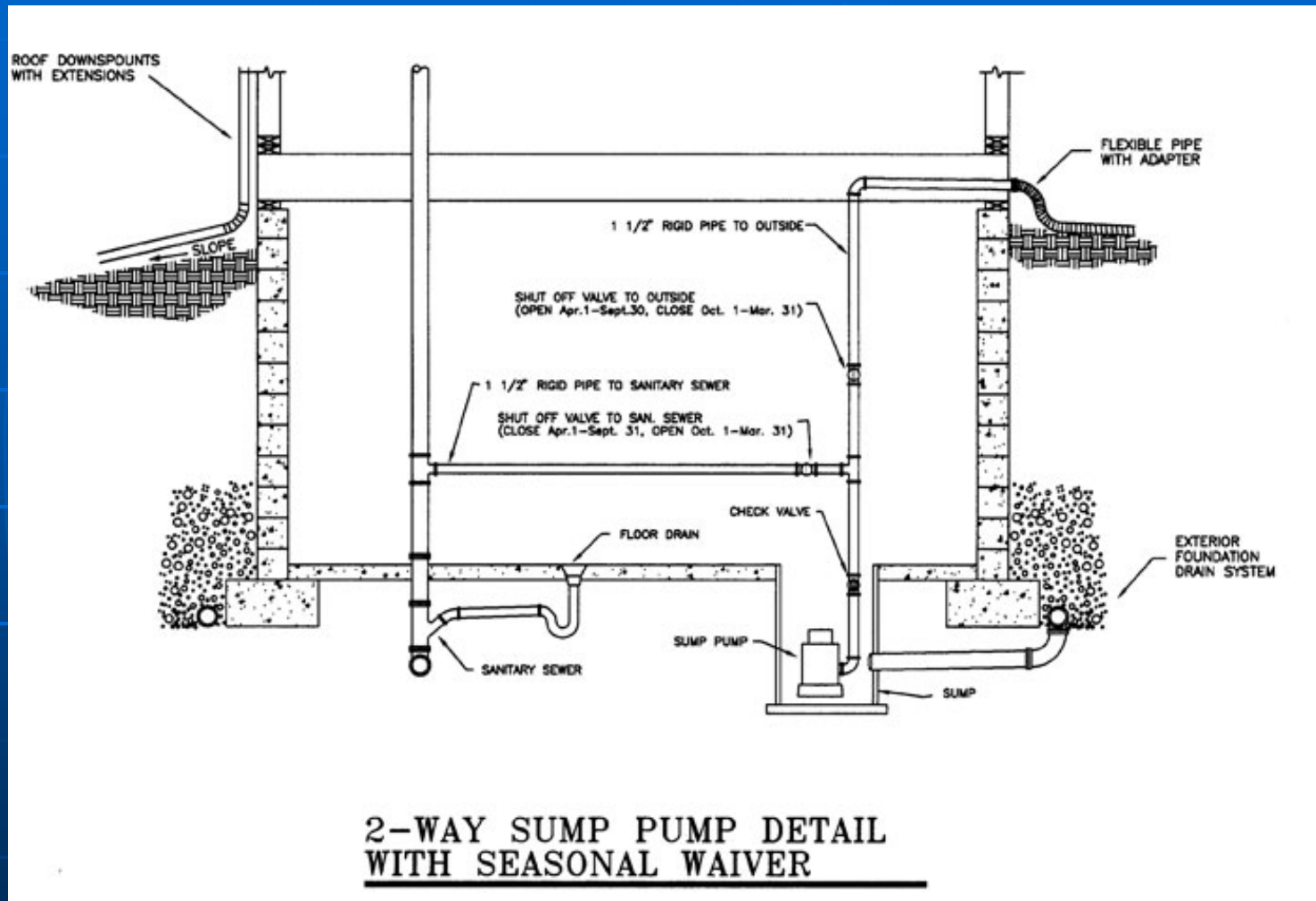
Discharge is directly outside via pipe and hose connection.

Discharge piping must never be reduced in size.

NOTE

The following application is for exceptional circumstances only and can only be installed with an appropriate executed agreement with the City of Edmonton. This application is approved on a case-by-case basis only and is not the preferred means of installing a sump pump.

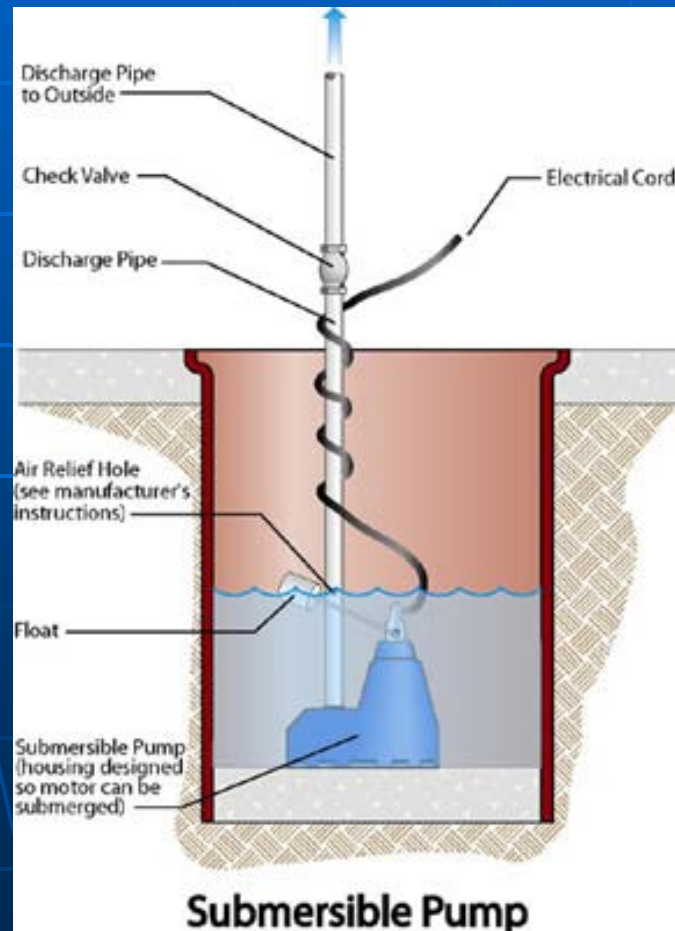
Sump Pump Applications



Discharge can either be to the outside or into the building sewer

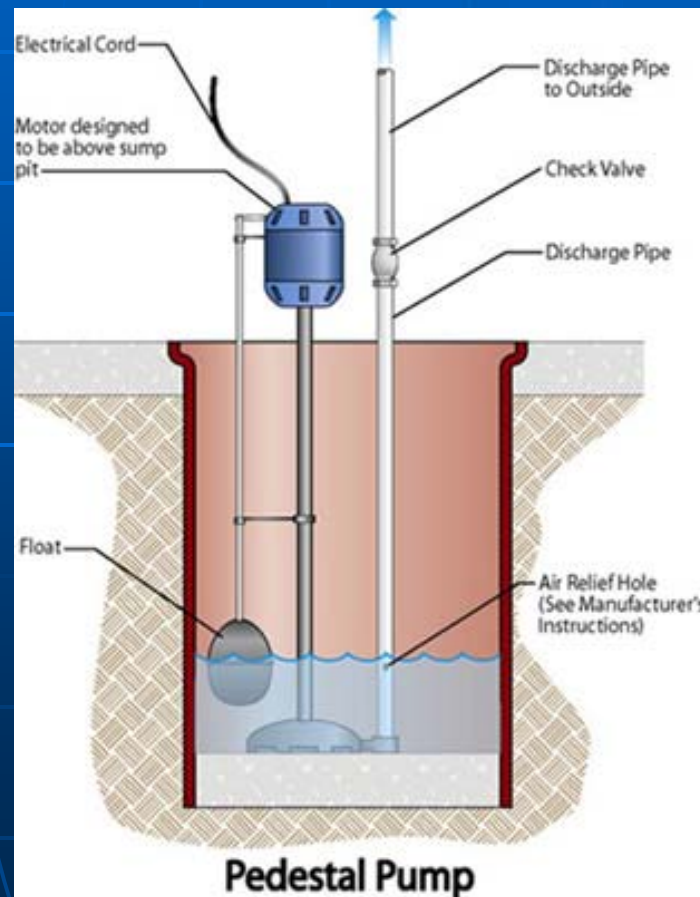
Types of Sump Pumps

Submersible



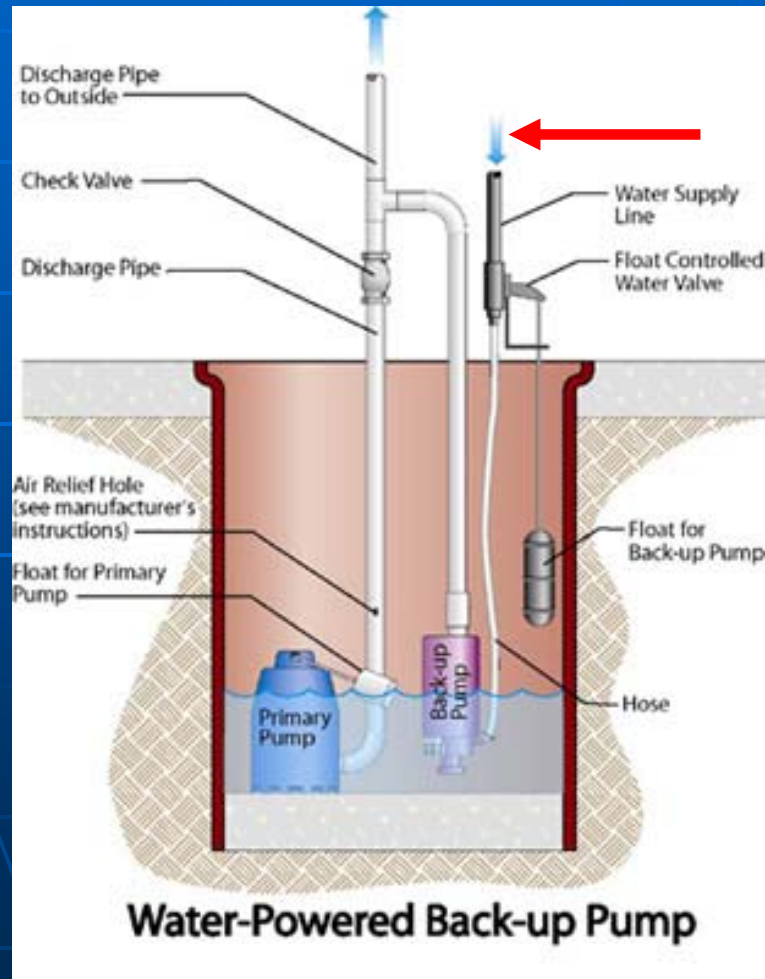
Types of Sump Pumps

Pedestal



Types of Sump Pumps

Water Powered

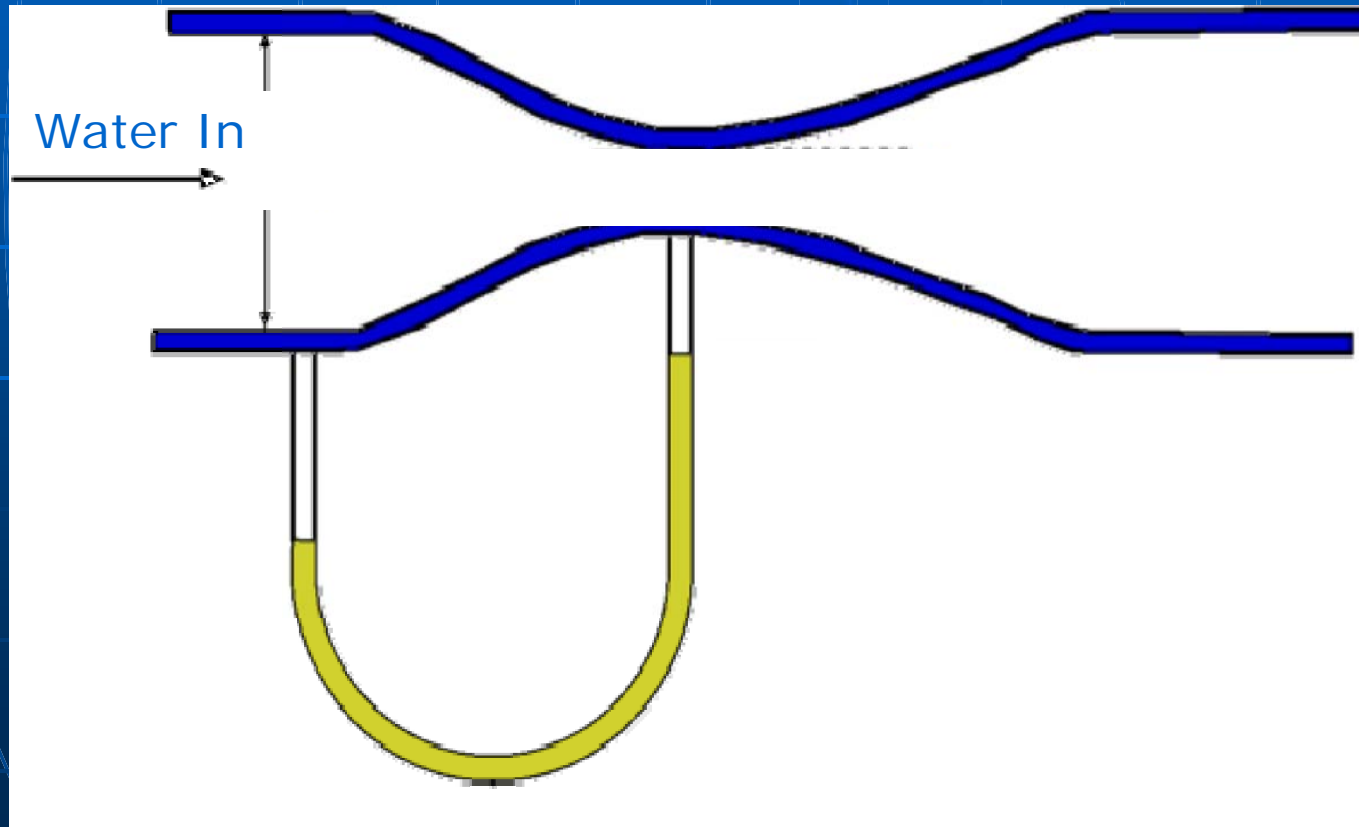


★ Note ★

Whenever connecting a potable water system to any outside potential contamination you **MUST** install an appropriate cross-connection device.

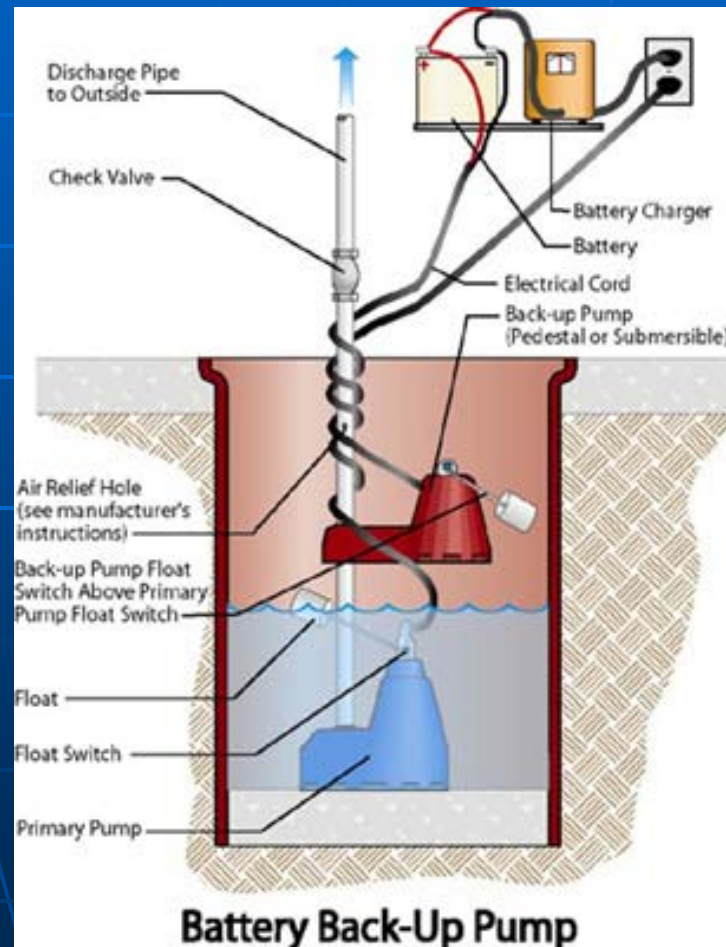
Types of Sump Pumps

Venturi – Principle of operation for the water powered sump pump



Types of Sump Pumps

Battery Back-up Sump Pump



Maintenance

- **Fill the sump pit with water to make sure the pump is working properly.**
- **Go outside to check that the pump is actually discharging water (sometimes the pump will run but it won't pump any water out).**
- **Check that the operation of the float is not restricted. check for any debris blocking the suction intake, especially after a heavy rainfall.**
- **Listen for any strange noises coming from the motor. if oil appears in the sump it could be an indication of a failed pump seal.**

Maintenance

- **Replace the battery on the back-up sump pump every second or third year.**
- **Any major maintenance should be carried out by a qualified technician, i.e. anything that requires internal cleaning, adjustment.**
- **A visual check every few months is good preventive maintenance.**



Activation Switches

- Diaphragm Switch – water pressure sensitive membrane.
- Vertical Action Float – force of buoyancy causes float to rise up a metal rod and trigger switch to turn on pump.

Activation Switches

- Tethered Float – a free floating ball that activates a switch when it rises past a certain point
- Electronic Switch – uses a wire probe that is located at a given level in the sump and is triggered by contact with water.

SHOPPING TIPS

- Consider style – pedestal vs submersible
- Quality of water entering the sump - Clear or slurry?
- Horsepower required
- Quality will cost more

Potential Cost

- Price range of \$150 to \$300 and up
- Compare pump performance, reliability, and cost
- Speak to plumbing professionals

Questions

- Thank you for your time and attention
- We hope that you have found this information helpful