Stormwater Control Measures:
Sand Filter

Water that runs off the urban land surface during rain storms (stormwater runoff) is typically collected in storm drains and eventually ends up in nearby lakes, rivers and streams (receiving waters). Left uncontrolled, stormwater runoff can cause flooding, stream erosion and pollution problems in our local water bodies.

A Sand Filter is a control measure used to capture this stormwater runoff and reduce pollutants using a filtration media, mainly composed of sand, atop an underdrain. Though there may be less vegetation, this makes Sand Filters simpler to maintain and often used in less visible areas. Sometimes Sand Filters are designed in conjunction with drainage control elements to double their function for flood mitigation.

Sand Filters are one of many forms of stormwater treatment called Low Impact Development, a sustainable land planning, engineering, and landscaping approach used to replicate natural watershed processes.

To learn more about the process, please scan the QR code.

CITY OF THORNTON



Key

1. Stormwater runoff from the surrounding area flows into the Sand Filter.
2. Stormwater pools on the surface and slowly soaks into the sand below flltering pollutants out of the water.
3. Below the sand layer is a gravel layer which provides storage and further filteration.
4. Treated stormwater infiltrates the underlying soils or enters the underdrain which flows to the outlet structure before leaving the feature.
5. Should the Sand Filter fill completely, such as in a flood condition, stormwater will flow into the outlet structure from the top and release in a controlled manner.