



# Storm Water Storage

## Why puddles? Why basins in public parks?

### Roadways

Roads or streets serve many purposes—travel ways for traffic, community structure, non-developable area to house utilities underground, and in the storm water world=conveyance.

Streets are humped in the middle and slope down-grade to the curb and gutter. This helps channel storm water runoff towards drains and keep streets more safe for travel.

So why then is there still areas in streets that often hold water during large storm events? Some areas are designed to intentionally hold water. The purpose of this design is to save tax payer money on pipe infrastructure underground. Storm water pipes are intended to convey the 10-year storm (a smaller rainstorm for the area) away and to a more safe area for infiltration into the ground or into a body of water such as rivers and lakes. In most cases for Orem, we use infiltration because our soils are very rocky and allow large amounts of water to be absorbed quickly.

So because the pipe can only convey so much water volume at once, ponding at the surface occurs until more time has passed to allow water to move into the infiltration area or a local storage area such as a dry pond.

### Basins

Speaking of dry ponds, that's another name for a large grassy or rocked basin that at times will fill with storm water. Other names for these basins are retention or detention basins. Orem's master plan says:

“Detention Basins should be designed to have capacity for the 25-year design storm event, and have an emergency overflow with capacity greater than the 100-year storm event that directs water away from private property and into the streets or other secondary conveyance facilities.”

In order to make these storage areas very cost effective compared to the alternative of large expensive conveyance pipes in the road, we often utilize the basins as public open space. They are very often part of public parks, parkway strips, or bordering parking lots. This way the area can serve more than one purpose.

Some of the more prominent basins are at Bonneville Park, Neilson's Grove, and Springwater. There are many others. Next time you are in Orem right after or during a large storm event, follow the storm water run off! Watch how it flows to drains and enjoy the temporary puddle or pond created knowing that money is saved while also keeping more water on site to closely match undeveloped conditions. Win for the environment, win for the people.

