

# **Summary of water system types for the Pinon Park Splash Pad**

During the schematic design phase for the splash pad design, two water system types were selected for comparative analysis. Both systems have their positive and negative aspects. This report is a quick snapshot into a few highlights of both options. This comparison, along with the life-cycle cost analysis, provides the key information needed for the process of selecting the system type.

## **Flow Through (fresh water)**

As the name implies this system utilizes potable tap water to operate the features of the splash pad.

1. Minimal non-certified staff to maintain (can be accomplished with a level 1 staffer).
2. No annual permitting to operate or certifications for staff.
3. Lower initial construction costs.
4. Higher annual costs and water use.
5. Very minimal down time (minutes) from “user accident” recovery during operational hours.
6. Eliminates the mechanical and chemical systems and their associated maintenance/replacement costs.
7. Reduces potential downtime associated with mechanical or chemical system breakdowns.
8. Less liability associated with bacterial contaminations—**Water is safe to drink.**
9. Less wear and tear on equipment and play surface.
10. Larger closed system in that water is “reclaimed” following treatment at wastewater plant and used to water parks.

## **Recirculation (treated water)**

This system uses a reservoir tank and recirculates filtered, chemically treated water to operate the features of the splash pad.

1. Requires a ‘Certified Pool Operator’ classified staffer.
2. Daily checks/tests for water chemistry twice daily.
3. Higher initial construction costs.
4. Lower annual costs and water use.
5. Longer down times from “user accident” recovery (one-two hours) that requires personnel to temporarily close and flush system.
6. Chemical and Mechanical replacement costs on a 5-7-year timeframe.
7. Increases potential downtime associated with mechanical or chemical system breakdowns.
8. Higher liability associated with bacterial contaminations—**Water is not drinkable.**
9. Chemically treated water is harder on equipment and play surface.
10. Smaller closed system in that water is “re-used” in the operation of the splash pad.