

Project: Reach 11 Recreation Area Phase 1

Location: Phoenix, Arizona

Purpose

To provide a tournament-level soccer facility to attract state and regional play.

Intent

To conserve water and utilize alternative water sources as effectively as possible.

Includes

- *Nine natural grass regulation soccer fields irrigated with treated-effluent reclaimed irrigation water.*
- *One artificial sports turf regulation soccer stadium with large-radius “big-gun” sprinkler cooling system using potable water source.*



Role of Irrigation Consultant

The irrigation design consultant provided:

- *Booster pumping system for potable water source, due to higher pressure requirements of “big-gun” sprinklers.*
- *Effective separation of potable and reclaimed water systems to meet requirements of Maricopa County Environmental Services Department and City of Phoenix engineering standards.*
- *Development of reclaimed water source service connections to account for current and future demands based on anticipated phases of development.*
- *Development of central control systems that are compatible with local city maintenance-division standards, and are capable of expansion of communications with future phases of Development.*



Significance

- ***Provided responsible and appropriate use of two separate water sources, reclaimed and potable, on a single site based on the needs and restrictions associated with the site programming elements (cooling of artificial surfaces with potable water during periods of active use; irrigation of natural grass surfaces during periods of non-use).***
- ***The use of alternative water sources is especially significant in the Desert Southwest, a region known for frequent drought and limited availability of domestic potable water for irrigation use.***



Special Factors

- ***Provide means for physical separation of two water sources with varying supply pressures and different human-contact restrictions.***
- ***Provide specialized engineering and detailing of large-radius “big-gun” sprinklers on removable elevated riser pipe.***
- ***Design “big-gun” riser components to allow for individual sprinkler activation and control.***
- ***Specify appropriate materials and engineering of below-grade stability structure to overcome significant force vector and torque from “big-gun” sprinklers during operation.***
- ***Design for phasing of water source and control system to allow for system expansion as subsequent areas of overall recreation area is developed.***

