



BEN ALTAMIRANO FIELD

SILVER CITY, NEW MEXICO

As part of its efforts to control costs and conserve water for their town, The Town of Silver City New Mexico hired Water Management Inc. to implement water efficiency upgrades at one of their public fields. Water Management Inc. was tasked with installing a new “Smart Irrigation” system at the Ben Altamirano Ball Fields. The completion date for installation was August 1, 2013.

The scope of work consisted of installing a new weather based irrigation controller and retrofitting the existing rotors with new rotors that had a further throw of water and operated more efficiently at a lower pressure. A flow sensor was installed to record breaks in the mainline, missing rotors or breaks in the system. Prior the installation of the new system, a detailed audit was compiled a TDR testing. The results from the TDR testing are shown to the below. Wind screening is the most noticeable problem the field had prior to our program, with the dark blue showing an area with double wind screening on the outside fence which stops almost all of the wind, so the soil is not dried out as quickly. Broken heads were also noted by the dark spot on the JV Girls Baseball field. Effects from a solid cinder block wall can be seen on the Soccer field in the middle of the fields, a line of three light blue dots exist showing blockage of irrigation spray.

The overall sports complex had a DU of 61.9%. The Varsity Baseball Infield had the best distribution uniformity of all at 75.9% and the outfield had the worse DU at 55.4%. The throw of each rotor ideally needs to reach the other irrigation heads next to the rotor in order to have head to head coverage, the rotors on spaced such and have a nozzle size the keeps the radius of each water arc to 50 feet and the spacing of the rotors is 60 feet. This usually is adequate in non-windy situations; however on these fields the winds are high and cause high wind deflection. A next larger nozzle needs to be used. In some cases the nozzle size is simply not correct for the arc of the rotor and the landscape covered. The installation of the “smart” controller will eliminate this condition from occurring.

The water usage from completion to September 30, 2013 was 1,732,079 gallons. Water usage from the month of August through September 2010 – 2012 averaged 4,070,000 gallons, which equals a total of 57% savings for water conservation program.

