

Irrigation System Retrofit Alternatives

Existing Condition	Proposed Upgrade	Benefit
Fixed spray nozzles in turf	Rotary nozzles in turf	
Apply water at high precipitation rates Apply water at high flow rates Apply water in fine droplets Limited arc configurations Lower nozzle uniformity	Apply water at low precipitation rates Apply water at low flow rates Apply water in large droplets/multiple streams Adjustable arcs Higher nozzle uniformity	Reduce runoff potential, non point source pollution Reduce system pressure losses Reduce drift, improve uniformity Reduce overspray, hardscape runoff Reduce run times, runoff potential
Fixed spray nozzles in non-turf	Low volume in non-turf	
Apply water at high precipitation rates Apply water at high flow rates Apply water in fine droplets Limited arc configurations Nozzle deflection Apply water to entire area of coverage Apply water at same rate to all plants Overspray in confined spaces	Apply water at low precipitation rates Apply water at low flow rates Apply water directly to the soil Apply water directly to plant root zone Apply water directly to plant root zone Apply water directly to the plant root zone Apply water based upon individual plant water needs Apply water directly to the plant root zone	Reduce runoff potential, non point source pollution Reduce system pressure losses Reduce drift, improve uniformity Reduce overspray, hardscape runoff Increase uniformity, reduce runoff Reduce water use, weed growth Reduce overwater/underwater potential Reduce overspray, hardscape runoff
No rain shut off device	Rain shut off device	
Irrigation occurs during, or following a rain event	Irrigation cycle is interrupted during/after a rain event	Eliminate water waste, improve public perception
Non regulated pressure	Pressure regulation at valve/sprinkler	
Compromises sprinkler performance at excessive pressures	Water is applied more uniformly	Sprinkler performance is optimized reducing the need to overwater. Misting, drift potential are reduced
Standard controller	Weather based controller	
Schedules irrigation based upon pre-set program	Adjusts run times based upon changing weather conditions	Reduces water waste, runoff potential
Standard controller	Soil based controller	
Schedules irrigation based upon pre-set program	Allows irrigation only when soil has adequately dried to soil moisture threshold	Reduces waste, runoff potential, prevents irrigation after a rain event if soil moisture exceeds threshold