

## Appendix S-7: Irrigation Water Consumption

### GENERAL WATER CONSUMPTION GUIDELINES IRRIGATION SYSTEMS

#### SPRAY IRRIGATION

Type of Sprinkler	AREA 1 acre (43,560 sq. ft.)	Gallons (1/2" water over 1 acre)
<b>Pop-up Spray Head - 15' spacing:</b> Used for small lawns, boulevards, narrow areas of grass, shrubs Average of 2.0 gallons per minute (gpm) per head	715 gpm x 19 minutes	13,585
<b>Pop-up mid-range Rotary Sprinkler - 40' spacing:</b> Used for large lawns, and similar open areas Average of 3.0 gallons per minute (gpm) per head	160 gpm x 85 minutes	13,600
<b>Pop-up long-range Rotary Sprinkler – 55' spacing:</b> Used for athletic fields, golf courses, and similar large open areas Average of 15 gallons per minute (gpm) per head	300 gpm x 45 minutes	13,500

Note: 1" of water over 1 acre = 27,154 Gallons. Double the total gallons to achieve 1" per acre.

#### DRIP IRRIGATION Amount of Dripline Needed

Calculations based on 1 Acre	Gallons Per Minute
12" Drip @1.53 GPM/100 Feet	666.5 (43,560 Feet of Dripline)
18" Drip @ 1.02 GPM/100 Feet	296.2 (29,040 Feet of Dripline)
24" Drip @ .77 GPM/100 Feet	167.7 (21,780 Feet of Dripline)

Formula to Determine Dripline Need Based on Size of Irrigated Area:  
(Area in Square Feet x 12)/Lateral Row Spacing in Inches

#### DRIP IRRIGATION Application Rate

Calculations Based on .9 Gallons per Hour	Inches Per Hour
12" Drip	1.44
18" Drip	.64
24" Drip	.36

Formula to Determine Application Rate:  
(Emitter Flow Rate in Gallons Per Hour)/(Lateral Row Spacing in Inches x Emitter Spacing in Inches)