

June 16, 2022



Green Valley Turf Co.
Littleton, CO.

Dear Green Valley Turf Co.,

Using data from Golden, CO.¹ in west Denver and published research on relative water use rate of various turfgrass species and varieties², the following lawn irrigation requirement projection is constructed.

Estimated monthly irrigation requirements are shown March-October for three scenarios:

1. Kentucky bluegrass lawn with typical overhead irrigation system watering to 80% of the water deficit or Precipitation –Evapotranspiration (ET).
2. ‘Tahoma 31’ hybrid Bermudagrass watered at 50% of water deficit, like what might be expected using a good overhead irrigation system.
3. ‘Tahoma 31’ hybrid Bermudagrass watered at 30% of water deficit as might be expected using subsurface emitter irrigation.

Golden, CO. (West Denver) Monthly Lawn Irrigation Estimates Kentucky bluegrass vs ‘Tahoma 31’ hybrid Bermudagrass for Denver, CO. USA

Month	Average ET (in)	Average Precip (in)	Water deficit (Precip-ET)	Bluegrass @ 80% of water deficit	T31 @ 50% of water deficit	T31@ 30% of water deficit	Gal/sq. ft. Bluegrass @ 80% Water deficit	Gal/sq. ft. T31 at 50% of Water deficit	Gal/sq. ft. T31 at 30% of Water deficit
March	3.58"	1.34"	-2.24"	1.80"	1.12"	.67"	1.12	.70	.42
April	4.30"	1.79"	-2.51"	2.00"	1.26"	.75"	1.25	.79	.48
May	5.49"	2.89"	-2.60"	2.08"	1.3"	.78"	1.30	.81	.49
June	6.71"	1.63"	-5.08"	4.06"	2.54"	1.53"	2.53	1.58	.95
July	6.86"	1.94"	-4.92"	3.94"	2.46"	1.48"	2.45	1.53	.92
August	6.36"	.99"	-5.37"	4.30"	2.69"	1.61"	2.68	1.68	1.00
September	4.46"	1.21"	-3.25"	2.6"	1.63"	.98"	1.62	1.01	.61
October	3.14"	1.01"	-2.13"	1.70"	1.07"	.64"	1.06	.67	.40
Totals (Mar-Oct)	40.9"	12.80"	-28.1"	22.48"	14.07"	8.44"	14.01	8.77	5.27

1- Goldencoweather.com

2- 2004 *Minimum Water Requirements of Four Turfgrasses in the Transition Zone*. Jinmin Fu, Jack Fry and Bingru Huang. Kansas State University.