

ADMINISTRATOR'S MEMORANDUM
Application Processing Memo#60
Adjudication Memo # 44

To: Water Management Division
Adjudication Bureau

From: Norman C. Young

Re: Irrigation Diversion Rate for Turf Grass in Public Areas

Date: August 15, 1996

Irrigation of turf grass in public areas such as golf courses, parks, schools, and cemeteries often requires that the irrigation occur during the night or early morning hours. Since water cannot be applied continuously over a 24-hour period, the irrigation diversion rate is often higher than the statutory standard of 0.02 cfs per acre.

In some cases, a holding pond or regulation pond may eliminate the necessity of diverting a higher rate from the source. A holding pond is used to store the daily requirements of the irrigation system. The diversion rate from the source to the holding pond is based on the continuous-use irrigation requirement and the diversion rate from the pond to the irrigation system is based on the actual hours of operation of the system.

In situations where a holding pond is not practical, a higher rate is considered reasonable and necessary. The diversion rate for a new water right should be based on the requirements of a modern irrigation system with proper management. In an adjudication of water rights, the diversion rate recommended cannot exceed the historical diversion rate nor the amount determined to be reasonably necessary using acceptable irrigation practices. In both cases, a condition is required that limits the daily volume of water diverted.

To calculate the irrigation diversion rate for turf grass for irrigation systems that can not apply water continuously, divide the diversion rate based on continuous operation by the ratio of actual hours of operation per day to 24 hours per day.

Example: A golf course irrigates every day from 10 p.m. to 6 a.m. (eight hours per day) . Based on an analysis of the irrigation diversion requirements, the irrigation diversion rate is calculated to be 0.02 cfs per acre under continuous operation. The diversion rate based on the reduced operation time would be 0.06 cfs per acre (0.02 divided by 8/24) . The diversion rate of 0.06 cfs per acre is considered reasonable and necessary due to the operation time limitations of the system. This water right must include a condition which limits the daily volume of water diverted.



IDAHO DEPARTMENT OF WATER RESOURCES

SNAKE RIVER BASIN ADJUDICATION - BASIN 29

RIGHT ID 29 4433
POD ID 203373
Quad Pocatello South
Claim Type L
Easting 631419
Northing 191737
GPSID A0012677

Diversion Description

WELL, PUMP & PIPELINE TO SPRINKLER SYSTEM. Running at 1200 gpm, 60 HP Fairbanks Morse pumps to lake, then boosters supply irrigation system. Tag placed on step inside door. EPE 14 ft. Motor manufacturer is Pamona.

Assumptions

Invoice #

Phase-0 (No Attention)
Phase-I (Ready to Go to Field)
Phase-II (Site Visit - Data Missin
Phase-III (Complete w/issues)
Phase-IV (Total Complete)

Linked

Photos

EPE (ft)

Date (M/D/Y)

Time

Flow Rate (CFS)

Open Channel Flow

Complete one box from both Area and Calculation sections

Cross Sectional Area

☐ Circular Channel

- ☐ Less than half full
☐ Half full
☐ More than half full
☐ Full

Diameter

Depth

☐ Rectangular Channel

Width

Depth

Flow Calculation

☐ Continuity

Velocity

0

☐ Orifice

(Use only for head over a pipe flowing full with free discharge)

Depth of Water
above orifice
centerline

☐ Weir

(Use only for water flowing freely over weir)

Height of water
above nappe

Width of weir

☐ Manning (If used, include photo of representative channel section)

Channel Slope

Channel Description	Concrete lined	.016
	Smooth earth	.025
	Earth	.033
	Rough bed, weeds on sides	.04
	Smooth natural stream	.033
	Rough natural stream	.1

Pumped System



HP

Pressure Head (psi)

10

Elevation Head (ft)

20

Motor Mfg

Motor Serial #

F380714

Pump Type

Vertical Turbine

Pump Mfg

Fairbanks Morris

Pump Serial#

P20242

New Contact Information



New Contact Comments

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