



**Legend**

-  UGRWCD Boundary
-  CRWCD Contract Area

Prepared for Upper Gunnison  
River Water Conservancy District

0 5 10 20 30  
Scale in Miles

N  


**EXHIBIT A**

Date: February 25, 2003

Rev. Date:

Job No. U213

Helton & Williamsen, P.C.

Drawn by: RLH  
Checked by: RLH

**Table 8A**  
**Lagged Streamflow Effects from Outdoor Water Use for Lawn Irrigation**  
(includes the alluvium of the mainstems of the Gunnison River & Tomichi Creek, and all areas north of these)  
Note: October depletions are not reflected herein

Elevation Range		Distance from the Stream	Lagged Stream Depletions from Irrigation of Blue Grass (ac-ft/ac)												Total
Lower	Upper		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
6600	6799	Less than 100	0.00	0.00	0.00	0.00	0.39	0.48	0.48	0.39	0.32	0.00	0.00	0.00	2.06
		100 to 499	0.01	0.01	0.01	0.00	0.30	0.42	0.44	0.39	0.34	0.08	0.03	0.02	2.06
		500 to 999	0.04	0.03	0.02	0.01	0.18	0.32	0.38	0.37	0.35	0.18	0.10	0.06	2.06
		Greater than 1000	0.10	0.06	0.04	0.04	0.06	0.17	0.26	0.31	0.34	0.30	0.22	0.14	2.06
6800	6999	Less than 100	0.00	0.00	0.00	0.00	0.38	0.46	0.46	0.38	0.31	0.00	0.00	1.99	
		100 to 499	0.01	0.01	0.01	0.00	0.29	0.41	0.43	0.38	0.33	0.07	0.03	0.02	1.99
		500 to 999	0.04	0.03	0.02	0.01	0.18	0.31	0.37	0.36	0.34	0.18	0.09	0.06	1.99
		Greater than 1000	0.09	0.06	0.04	0.04	0.06	0.17	0.25	0.30	0.33	0.29	0.21	0.14	1.99
7000	71999	Less than 100	0.00	0.00	0.00	0.00	0.37	0.45	0.45	0.37	0.30	0.00	0.00	1.93	
		100 to 499	0.01	0.01	0.01	0.00	0.28	0.40	0.42	0.37	0.31	0.07	0.03	0.02	1.93
		500 to 999	0.04	0.03	0.02	0.01	0.17	0.30	0.35	0.34	0.32	0.17	0.09	0.06	1.93
		Greater than 1000	0.09	0.06	0.04	0.04	0.06	0.16	0.24	0.29	0.31	0.28	0.20	0.13	1.93
7200	7399	Less than 100	0.00	0.00	0.00	0.00	0.35	0.43	0.43	0.35	0.29	0.00	0.00	1.86	
		100 to 499	0.01	0.01	0.01	0.00	0.27	0.38	0.40	0.35	0.30	0.07	0.03	0.02	1.86
		500 to 999	0.04	0.03	0.02	0.01	0.17	0.29	0.34	0.33	0.31	0.17	0.09	0.06	1.86
		Greater than 1000	0.09	0.06	0.04	0.04	0.06	0.16	0.24	0.28	0.30	0.27	0.20	0.13	1.86
7400	7599	Less than 100	0.00	0.00	0.00	0.00	0.34	0.42	0.42	0.34	0.28	0.00	0.00	1.80	
		100 to 499	0.01	0.01	0.01	0.00	0.26	0.37	0.39	0.34	0.29	0.07	0.03	0.02	1.80
		500 to 999	0.04	0.03	0.02	0.01	0.16	0.28	0.33	0.32	0.30	0.16	0.09	0.06	1.80
		Greater than 1000	0.09	0.06	0.04	0.04	0.06	0.15	0.23	0.27	0.29	0.26	0.19	0.12	1.80
7600	7799	Less than 100	0.00	0.00	0.00	0.00	0.33	0.40	0.40	0.33	0.27	0.00	0.00	1.73	
		100 to 499	0.01	0.01	0.01	0.00	0.26	0.36	0.37	0.33	0.28	0.06	0.03	0.02	1.73
		500 to 999	0.04	0.03	0.02	0.01	0.15	0.27	0.32	0.31	0.29	0.15	0.08	0.05	1.73
		Greater than 1000	0.08	0.05	0.04	0.04	0.05	0.15	0.22	0.26	0.28	0.26	0.18	0.12	1.73
7800	7999	Less than 100	0.00	0.00	0.00	0.00	0.32	0.39	0.39	0.32	0.26	0.00	0.00	1.67	
		100 to 499	0.01	0.01	0.01	0.00	0.25	0.34	0.36	0.32	0.27	0.06	0.03	0.02	1.67
		500 to 999	0.04	0.03	0.02	0.01	0.15	0.26	0.31	0.30	0.28	0.15	0.08	0.05	1.67
		Greater than 1000	0.08	0.05	0.04	0.04	0.05	0.14	0.21	0.25	0.27	0.25	0.18	0.11	1.67
8000	8199	Less than 100	0.00	0.00	0.00	0.00	0.30	0.37	0.37	0.30	0.25	0.00	0.00	1.60	
		100 to 499	0.01	0.01	0.01	0.00	0.24	0.33	0.35	0.30	0.26	0.06	0.03	0.02	1.60
		500 to 999	0.03	0.03	0.02	0.01	0.14	0.25	0.30	0.29	0.27	0.14	0.08	0.05	1.60
		Greater than 1000	0.08	0.05	0.03	0.03	0.05	0.13	0.20	0.24	0.26	0.24	0.17	0.11	1.60
8200	8399	Less than 100	0.00	0.00	0.00	0.00	0.29	0.36	0.36	0.29	0.24	0.00	0.00	1.54	
		100 to 499	0.01	0.01	0.01	0.00	0.23	0.32	0.33	0.29	0.25	0.06	0.02	0.02	1.54
		500 to 999	0.03	0.02	0.02	0.01	0.14	0.24	0.28	0.28	0.26	0.14	0.07	0.05	1.54
		Greater than 1000	0.07	0.05	0.03	0.03	0.05	0.13	0.19	0.23	0.25	0.23	0.16	0.11	1.54
8400	8599	Less than 100	0.00	0.00	0.00	0.00	0.28	0.34	0.34	0.28	0.23	0.00	0.00	1.47	
		100 to 499	0.01	0.01	0.01	0.00	0.22	0.30	0.32	0.28	0.24	0.05	0.02	0.02	1.47
		500 to 999	0.03	0.02	0.02	0.01	0.13	0.23	0.27	0.26	0.25	0.13	0.07	0.05	1.47
		Greater than 1000	0.07	0.05	0.03	0.03	0.05	0.12	0.19	0.22	0.24	0.22	0.15	0.10	1.47
8600	8799	Less than 100	0.00	0.00	0.00	0.00	0.27	0.33	0.33	0.27	0.22	0.00	0.00	1.41	
		100 to 499	0.01	0.01	0.01	0.00	0.21	0.29	0.30	0.27	0.23	0.05	0.02	0.01	1.41
		500 to 999	0.03	0.02	0.01	0.01	0.13	0.22	0.26	0.25	0.24	0.13	0.07	0.04	1.41
		Greater than 1000	0.07	0.04	0.03	0.03	0.04	0.12	0.18	0.21	0.23	0.21	0.15	0.10	1.41
8800	8999	Less than 100	0.00	0.00	0.00	0.00	0.25	0.31	0.31	0.25	0.21	0.00	0.00	1.34	
		100 to 499	0.01	0.01	0.01	0.00	0.20	0.28	0.29	0.25	0.22	0.05	0.02	0.01	1.34
		500 to 999	0.03	0.02	0.01	0.01	0.12	0.21	0.25	0.24	0.23	0.12	0.06	0.04	1.34
		Greater than 1000	0.06	0.04	0.03	0.03	0.04	0.11	0.17	0.20	0.22	0.20	0.14	0.09	1.34
Greater than 9000		Less than 100	0.00	0.00	0.00	0.00	0.24	0.30	0.30	0.24	0.20	0.00	0.00	1.28	
		100 to 499	0.01	0.01	0.01	0.00	0.19	0.26	0.28	0.24	0.21	0.05	0.02	0.01	1.28
		500 to 999	0.03	0.02	0.01	0.01	0.11	0.20	0.24	0.23	0.22	0.11	0.06	0.04	1.28
		Greater than 1000	0.06	0.04	0.03	0.03	0.04	0.11	0.16	0.19	0.21	0.19	0.13	0.09	1.28

**Table 1**  
**Lake Evaporation Rates**

Elevation Range	Net Lake Evaporation (feet) (calculated as lake evaporation minus effective precipitation using SEO SWSP Guidelines)												Total		
	Lower	Upper	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct		Nov	Dec
6,600	6,799	0.00	0.00	0.00	0.28	0.40	0.50	0.48	0.48	0.37	0.33	0.21	0.10	0.00	2.65
6,800	6,999	0.00	0.00	0.00	0.28	0.39	0.49	0.48	0.48	0.37	0.33	0.21	0.10	0.00	2.65
7,000	7,199	0.00	0.00	0.00	0.27	0.39	0.49	0.47	0.47	0.36	0.32	0.21	0.10	0.00	2.61
7,200	7,399	0.00	0.00	0.00	0.27	0.39	0.49	0.47	0.47	0.36	0.32	0.21	0.10	0.00	2.61
7,400	7,599	0.00	0.00	0.00	0.27	0.38	0.48	0.47	0.47	0.36	0.32	0.21	0.10	0.00	2.58
7,600	7,799	0.00	0.00	0.00	0.24	0.37	0.47	0.47	0.45	0.35	0.31	0.20	0.09	0.00	2.48
7,800	7,999	0.00	0.00	0.00	0.21	0.36	0.46	0.46	0.44	0.34	0.30	0.19	0.09	0.00	2.39
8,000	8,199	0.00	0.00	0.00	0.18	0.35	0.45	0.43	0.43	0.33	0.29	0.19	0.09	0.00	2.31
8,200	8,399	0.00	0.00	0.00	0.15	0.34	0.44	0.42	0.42	0.32	0.28	0.18	0.09	0.00	2.22
8,400	8,599	0.00	0.00	0.00	0.12	0.33	0.43	0.41	0.41	0.31	0.27	0.17	0.09	0.00	2.13
8,600	8,799	0.00	0.00	0.00	0.09	0.32	0.43	0.40	0.40	0.30	0.27	0.17	0.09	0.00	2.07
8,800	8,999	0.00	0.00	0.00	0.06	0.31	0.42	0.39	0.39	0.29	0.26	0.16	0.09	0.00	1.98
Greater than 9,000		0.00	0.00	0.00	0.00	0.29	0.39	0.36	0.36	0.27	0.24	0.15	0.08	0.00	1.79

**RATES FOR OFF-CHANNEL LAKES**

Elevation Range	Lake Evaporation (feet) (lake evaporation with no effective precipitation offset)												Total		
	Lower	Upper	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct		Nov	Dec
6,600	6,799	0.00	0.00	0.00	0.31	0.43	0.53	0.55	0.55	0.44	0.38	0.26	0.14	0.00	3.02
6,800	6,999	0.00	0.00	0.00	0.31	0.42	0.53	0.54	0.54	0.44	0.37	0.25	0.14	0.00	3.00
7,000	7,199	0.00	0.00	0.00	0.30	0.42	0.52	0.54	0.54	0.44	0.37	0.25	0.14	0.00	2.98
7,200	7,399	0.00	0.00	0.00	0.30	0.42	0.52	0.54	0.54	0.44	0.37	0.25	0.13	0.00	2.97
7,400	7,599	0.00	0.00	0.00	0.30	0.42	0.52	0.53	0.53	0.43	0.37	0.25	0.13	0.00	2.95
7,600	7,799	0.00	0.00	0.00	0.27	0.41	0.51	0.53	0.53	0.43	0.36	0.25	0.13	0.00	2.89
7,800	7,999	0.00	0.00	0.00	0.23	0.41	0.50	0.52	0.52	0.42	0.36	0.24	0.13	0.00	2.81
8,000	8,199	0.00	0.00	0.00	0.20	0.40	0.50	0.51	0.51	0.42	0.35	0.24	0.13	0.00	2.75
8,200	8,399	0.00	0.00	0.00	0.17	0.39	0.49	0.50	0.50	0.41	0.35	0.24	0.13	0.00	2.68
8,400	8,599	0.00	0.00	0.00	0.14	0.39	0.48	0.50	0.50	0.40	0.34	0.23	0.12	0.00	2.60
8,600	8,799	0.00	0.00	0.00	0.10	0.38	0.47	0.49	0.49	0.40	0.34	0.23	0.12	0.00	2.53
8,800	8,999	0.00	0.00	0.00	0.07	0.38	0.47	0.48	0.48	0.39	0.33	0.23	0.12	0.00	2.47
Greater than 9,000		0.00	0.00	0.00	0.00	0.36	0.45	0.47	0.47	0.38	0.32	0.22	0.12	0.00	2.32

- Notes:
- 1) Values shown for the 6,600 to 6,799 elevation range are the rates from Table 2 for a small reservoir located near Crystal Reservoir which is located at an approximate elevation of 6,760 feet
  - 2) Values shown for the 7,400 to 7,599 elevation range are the rates from Table 2 for a small reservoir located near Blue Mesa Reservoir which is located at an approximate elevation of 7,500 feet
  - 3) Values shown for the greater than 9,000 feet elevation range are the rates from Table 2 for a small reservoir located near Taylor Park Reservoir which is located at an approximate elevation of 9,330 feet
  - 4) Values for intermediate elevation ranges determined by linear interpolation.
  - 5) The on-stream criteria for ponds can only be used for Mine Land Reclamation Division permitted gravel pits and ponds on a year-around live stream.

GUIDELINES ON  
INDIVIDUAL SEWAGE DISPOSAL SYSTEMS  
REVISED 2000

COLORADO STATE BOARD OF HEALTH  
AUTHORITY: CHAPTER 25, ARTICLE 10  
Colorado Revised Statutes, 1973,  
as Amended

COLORADO DEPARTMENT OF HEALTH  
WATER QUALITY CONTROL DIVISION  
4300 Cherry Creek Drive South  
DENVER, CO 80246-1530

For Biodegradable Wastes Only

**TABLE I**  
**QUANTITIES AND BOD STRENGTH OF SEWAGE**  
**FOR VARIOUS TYPES OF USES**

TYPE OF ESTABLISHMENT	GALLONS/PERSON/DAY (AVERAGE) (UNLESS OTHERWISE STATED)	LBS. BOD5/PERSON/DAY (UNLESS OTHERWISE STATED)
<b>Residential</b>		
Single-family dwellings (two people per bedroom)	75	.20
Separate Distribution of Flows - Individual Residential use		
Bath/Shower	14.7	.014
Dishwasher	1.8	.002
Kitchen sink	4.4	.045
Additional for garbage grinder	1.4	.052
Laundry washer	19.5	.037
Lavatory	8.4	.021
Water closet	24.8	.029
Hotels and Motels - per room (without private baths)	50	.15
Hotels and Motels - per room (with private baths)	75	.15
Multiple-family dwellings or apartments	75	.20
Boarding and Rooming houses	50	.15
Mobile Home Parks (per space)	75	.20
	300	.80
<b>Commercial</b>		
Airports (per passenger)	5	.02
(per employee)	10	.06
Barber and Beauty Shops (per chair)	100	.70*
Bowling Alleys (per lane - toilet wastes only)	5	.03*
Bus Service Areas (not including food)	5	.02

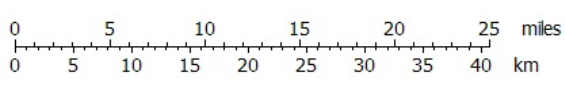
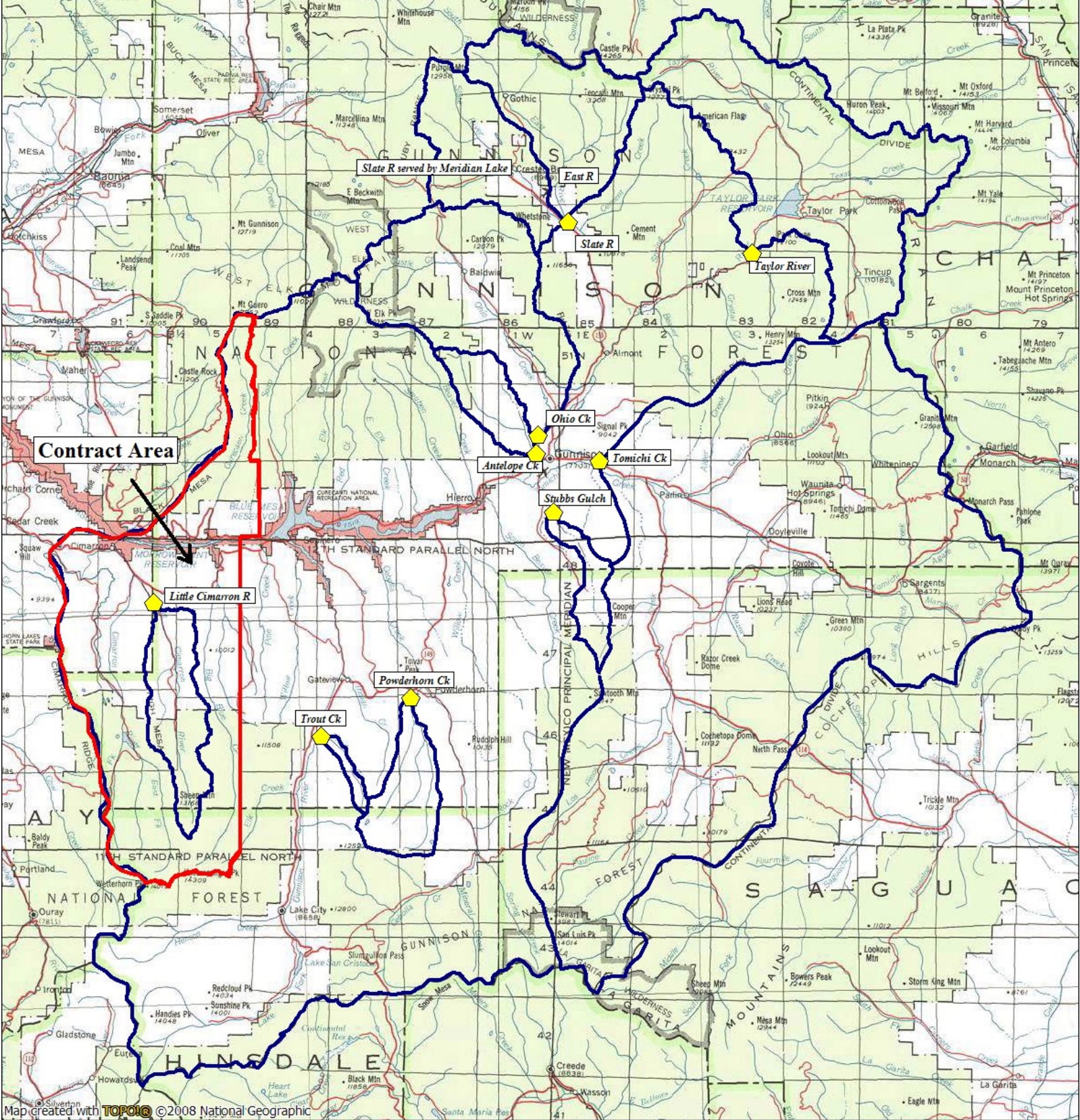
Country clubs		
(per member)	30	.02
(per employee)	20	.06
Dentist offices	50	.14*
(per non-wet chair)		
Doctors offices (per doctor)	250	.80*
Fairgrounds	5	.02
(per person attending)		
Factories and plants		
(exclusive of industrial wastes)		
(per employee per 8-hour shift-no showers)	20	.05
(per employee per 8-hour shift - showers provided)	35	.08
Food service establishments		
(per seat)		
Restaurant (Open 1 or 2 meals)	50	.06/meal served
24-hour Restaurant	75	.07/meal served
Restaurant with paper service only	25	.01/meal served
Additional for bars and cocktail lounges	30	.02
Drive-in Restaurant (per car space)	50	.02
Kennels (per dog)	30	.20
Laundries, self-service (per commercial washer)	400	.75
Office Buildings	15	.06
(per employee per 8-hour shift)		
Stores and Shopping Centers	.1	.01*
(per square foot of Retail space)		
Service Stations (per toilet fixture)	250	.50*
Stadiums, Race Tracks, Ball Parks (per seat)	5	.02
Theaters (Movie, Indoor, or Auditorium)	5	.17
Work or construction camps (semi-permanent - with flush toilets)	50	.02
Work or construction camps (semi-permanent - without flush toilets)	35	.02
Institutional (does not include kitchen wastewater flows)		
Churches (not including food)	5	.01

Hospitals (per bed space)	250	.20
Nursing Homes (per bed space)	100	.17
Schools, Boarding	100	.17
Schools, Day	15	.04
(without cafeteria, gym or showers)		
(with cafeterias, no gym or showers)	20	.08
(with cafeterias, gym and showers)	25	.10
(additional for school workers)	15	.06
<b>Recreational and Seasonal</b>		
Camps, day (no meal served)	15	.12
Luxury Resort	125	.17
Resort (night and day)	50	.12
Campground (seasonal occupancy - per unit)**	50	.12
Public Park (during hours when park is open)		
- Flush Toilet (per fixture per hour)	36	.04 lbs./ fixture
- Urinal (per fixture per hour)	10	.01 lbs./fixture
- Shower (per fixture per hour)	100	.10 lbs./ fixture
- Faucet (per fixture per hour)	15	.04 lbs./ fixture
Swimming pools and bathhouses	10	.06
Travel trailer parks	50	.12
(with individual water and sewage hookup - per unit) **		
(without individual water and sewage hookup - per unit) **	50	.12

\* = BOD Levels needing further verification

\*\* = Laundry facilities are to be calculated on a per commercial washer basis in accordance with other elements of this table.





TN  
MN  
10°  
03/31/09



## LEGAL DESCRIPTIONS

### POINTS OF DIVERSION FOR LOCAL CALLING RIGHTS

Biebel Ditches Nos. 1 & 2: WD 28;

Biebel Ditches Nos. 1 & 2 is located within the NE/4 NW/4 SW/4 of Section 3, Township 49 North, Range 1 East, N.M.P.M., at a point 2122 feet north of the south section line and 1088 feet east of the west section line.

Graham Ditch: WD 28;

Graham Ditch is located within the SE/4 SW/4 NW/4 of Section 24, Township 49 North, Range 1 West, N.M.P.M., at a point 2317 feet south of the north section line and 935 feet east of the west section line.

Schecker Ditch: WD 62;

Schecker Ditch is located within the NE/4 SW/4 NW/4 of Section 5, Township 46 North, Range 2 West, N.M.P.M., at a point 1700 feet south of the north section line and 1150 feet east of the west section line.

Johnson Ditch: WD 62;

Johnson Ditch is located within the SE/4 NE/4NW/4 of Section 19, Township 46 North, Range 3 West, N.M.P.M., at a point 706 feet south of the north section line and 2905 feet west of the east section line.

McKinley Ditch: WD 62;

McKinley Ditch is located within the NW/4 NW/4 NW/4 of Section 12, Township 47 North, Range 6 West, N.M.P.M., at a point 58 feet south of the north section line and 220 feet east of the west section line.

East River No. 2 Ditch: WD 59;

East River No.2 Ditch is located within the SW/4 SW/4 NE/4 of Section 17, Township 14 South, Range 85 West, 6<sup>th</sup> P.M., at a point 2076 feet south of the north section line and 2020 feet west of the east section line.

Hamor Ditch: WD 59;

Hamor Ditch is located within the SW/4 SW/4 NE/4 of Section 27, Township 50 North, Range 1 West, N.M.P.M., at a point 1044 feet north of the south section line and 1981 feet west of the east section line.

McMinn Ditch: WD 62;

McMinn Ditch is located within the SE/4 SW/4 NW/4 of Section 5, Township 47 North, Range 6 West, N.M.P.M., at a point 2675 feet north of the south section line and 1182 feet east of the west section line.