

FILE NUMBER _____
 REVIEWER _____
 DATE _____

MAXIMUM DAILY WATER USE FOR DOMESTIC PURPOSES

INPUTS

IN-HOUSE USE (AFY)

LAWN AND GARDEN IRRIGATION

ACRES IRRIGATED (AC)

ET_{PM} (IN/DAY)

APPLICATION EFF. (%)

POND

SURFACE AREA (SQ FT)

AVERAGE DEPTH (FT)

FILL OR REFL. RATE (CFS)

EVAPORATION (IN/DAY)

EVAPORATION (GPD per year)
 0.1848175 AF

SEEPAGE RATE (FT/DAY)

FLOW-THROUGH (CFS)
 (REFRESH RATE)

OTHER (GPD)

NOTES/SUGGESTED VALUES

IF UNKNOWN, USE LOWER STANDARD OF 0.4 AF FOR EACH HOUSE

CANNOT EXCEED 1/2 ACRE FOR PART A DOMESTIC*

IF UNKNOWN, USE REFERENCE ET_{PM} FOR TURF
 EXAMPLE 0.40 IN/DAY FOR LAGERMAN
 EXAMPLE 0.30 IN/DAY FOR STANLEY

IF UNKNOWN, USE 70% FOR SPRINKLERS

USE 0 IF FILLED NATURALLY FROM GW
 TOTAL DOMESTIC RATE CANNOT EXCEED 0.04 CFS FOR PART B DOMESTIC*

IF UNKNOWN, USE REFERENCE ET_{PM} FROM ABOVE

SUGGESTED VALUES FOR DIFFERENT SOIL TYPES:
 0 = NATURALLY FILLED FROM GW, OR LINED
 0.5 = CLAY SOILS
 1.5 = LOAMS
 3.0 = GRAVELS

TOTAL DOMESTIC RATE CANNOT EXCEED 0.04 CFS FOR PART B DOMESTIC*

STOCKWATER, SMALL BUSINESS USE, ETC.
 EITHER FROM POND OR SEPARATE USE

RESULTS

TOTAL IN-HOUSE USE

TOTAL LAWN AND GARDEN IRRIGATION

CAPACITY
 5400 CUFT
 10382 G

CONVERT TO GPD

REFERENCE EXAMPLE:
 ESTIMATED NUMBER OF DAYS
 TO FILL BASED ON PROVIDED
 INPUTS

0.31 DAYS
 8 HR

CONVERT TO GPD

CONVERT TO GPD

CONVERT TO GPD

REFERENCE EXAMPLE:
 ESTIMATED NUMBER OF DAYS
 TO REFRESH BASED ON
 PROVIDED INPUTS

1.56 DAYS
 38 HR

TOTAL POND

TOTAL OTHER

TOTAL WATER USE

FORMULAS

CONVERSION: 1 AFY = 852.74 GPD
 1 AF = 325,856 G

FORMULA: (ET_{PM}EFF.) * IRRIG. AREA = GPD
 CONVERSION: ET_{PM} = IN/DAY * FT/12IN = ACRE-FT/DAY PER ACRE
 1 AF = 325,856 G

FORMULA: SURFACE AREA * AVERAGE DEPTH = CAPACITY
 CONVERSION: 1 CUFT = 7.48 G

NOTE: GPD LIMITED BY POND CAPACITY
 CONVERSION: 1 CFS = 646,272 GPD

FORMULA: CAPACITY / FILL RATE = TIME TO FILL

FORMULA: EVAP * SURFACE AREA = POND EVAP
 CONVERSION: ET_{PM} = IN/DAY * FT/12IN = ACRE-FT/DAY PER ACRE
 1 AF = 325,856 G

NOTE: ASSUMES CONTINUOUS REPLACEMENT RATE

FORMULA: SA * SEEPAGE LOSS = POND SEEPAGE (CUFT/D)
 CONVERSION: 1 CUFT = 7.48 G
 NOTE: ASSUMES CONTINUOUS REPLACEMENT RATE

FORMULA: IF FILL RATE = 0 THEN GPD IS BASED ON CONTINUOUS FLOW
 IF FILL TIME > ONE DAY THEN GPD = 0
 IF FILL TIME < ONE DAY THEN GPD =
 (24 HR - FILL TIME) * FLOW THROUGH RATE
 CONVERSION: 1 CFS = 646,272 GPD

FORMULA: CAPACITY / FLOW RATE = REFRESH TIME

TOTAL = FILL RATE + EVAP + SEEPAGE + FLOW THROUGH

TOTAL = IN-HOUSE USE + IRR + POND + OTHER

* NOTE: MAXIMUM VOLUME FOR EXEMPTION = 12,000 GPD FOR PART A DOMESTIC
 MAXIMUM VOLUME FOR EXEMPTION = 2,600 GPD FOR PART B DOMESTIC

$$Capacity = 0.12 \text{ AF}$$

$$Evaporation = 0.19 \text{ AF}$$

$$Pond \quad 0.3 \text{ AF} \quad \text{ON APPLICATION.}$$