

Division of Drinking Water – Water System Capacity Calculation Sheet (Last Update 3/30/2017)

Enter the green cells only

System Name **Emigration Improvement District**

System Number **18143**

1.1 Indoor Water Use

Convert "Number of other connections" (Cell E9) to ERCs here. [ERCs of other connections = peak day demand of other connections in gal per day / 800 gpd]

Number of residential connections -----

300

Number of other connections --- **1**

ERCs of other connections

10.0

(Example: water use of 2 factories equals to water use of 55 homes.)

Enter number of non-residential connections, e.g., 2 industrial connections.

Total Equivalent Residential Connections (ERCs) **310.0**

MIN. REQUIREMENTS FOR INDOOR WATER USE			
Source		Storage	
gpd/ERC	Total (gpm)	Gallons/ERC	Total (gallons)
800	172.2	400	124,000

1.2 Outdoor Water Use

Is the drinking water used for outdoor irrigation?

Yes No

Residential ERCs using drinking water for irrigation -----

50

Percentage of Residential ERCs using DW for irrigation -----

17%

Average irrigated acreage per residential connection -----

0.05

Total irrigated acreage of other connections (park, school, etc.) -----

10.00

(Enter notes here regarding whether and what % of irrigation water is supplied by PWS.)

Enter total irrigated acres of other connections here.

Enter estimated irrigated acre per residential lot here.

Irrigation zone **3**

Select Irrigated Zone # from the pick list. See "Irrigation Demands & Map" tab on the bottom of the screen or WaterLink.

MIN. REQUIREMENTS FOR IRRIGATION USE			
Source		Storage	
gpd/ERC	Total (gpm)	Gallons/ERC	Total (gallons)
244	42.4	126	31,600

1.3 Fire Flow Water Use

Does the water system provide fire protection?

Yes No

Maximum fire flow demand (in gpm) for water system or pressure zone -----

1,000

Maximum fire suppression duration (in hours) for water system or pressure zone -----

1

Required Fire Suppression Storage (in gallons) -----

60,000

(*Verify req'd fire flow and duration with local fire code officials.* Enter notes here, e.g. fire official contact info or comments.)

Enter duration in hours.

Enter fire flow in gpm.

2. Summary of Water System Capacity Requirements

MINIMUM REQUIREMENTS FOR WATER SYSTEM			
Source (indoor + outdoor)		Storage (indoor + outdoor + fire)	
gpd/ERC	Total (gpm)	Gallons/ERC	Total (gallons)
1,044	214.6	526	215,600

2.1 Does this system have adequate source capacity (per R309-510-7)?

This source capacity assessment is a general overall system calculation. It may not reflect the variations in individual areas or pressure zones.

Required Source Capacity 214.6 **gpm**

Existing Source Capacity 590.0 **gpm**

Source Capacity Deficit None **gpm**

Existing % of Total Req'd **274.9%**

Autolink to 2 "Total Source" cell above.

Autolink to 4.2 "Total Existing Source Capacity" cell below.

Source deficit indicates that: (1) additional source capacity is needed, and (2) source deficiency should be assessed.

Less than 100% indicates: (1) additional source capacity is needed, and (2) source deficiency should be assessed.

2.2 Does this system have adequate storage capacity (per R309-510-8)?

This storage capacity assessment is a general overall system calculation. It may not reflect the variations in individual areas or pressure zones.

Total Required Storage	215,600	gal	Autolink to 2 "Total Storage" cell above.
Existing Storage Capacity	1,300,000	gal	Autolink to 4.3 "Total Existing Storage Capacity" cell below.
Storage Capacity Deficit	None	gal	Storage deficit indicates that: (1) additional storage volume is needed, and (2) storage deficiency should be assessed.
Required Fire Storage	60,000	gal	
Is storage deficiency solely due to fire storage?	Not Applicable		If NO, answer one of question set 2.01 to 2.05 in ESS. If YES, answer one of question set 2.06 to 2.10 in ESS.
Existing % of Total Req'd	603.0%		Less than 100% indicates: (1) additional storage capacity is needed, and (2) storage deficiency should be assessed.

3. Transient PWS Indoor Water Use – ERC Calculation (See R309-510, Tables 510-1, 2, & 4 for other facility types.)

Facility Type	MINIMUM REQUIREMENTS FOR INDOOR USE		ERC/site or pad	Total # of sites/pads	ERCs
	Source	Storage			
	GPD/person*	GPD/site or pad	Gallons/person	Gallon/site or pad	
Modern Recreation Camp	60	0	30	0	0.00
Semi-Developed Camp w/ flush toilets	20	0	10	0	0.00
Semi-Developed Camp w/o flush toilets	5	0	2.5	0	0.00
RV Park	N/A	100	N/A	50	0.13
Number of people per camp site	If applicable, enter number of people per camp site here.				
	Source (GPD/vehicle)	Storage (Gal./vehicle)	ERC/1000 vehicles served	Vehicles served/day	ERCs
Roadway Rest Stop w/ flushometer valves					

If applicable, use this number in cell I8 or cell I9 on Page 1.

4. Data Input for Calculating ERCs, Source and Storage
Emigration Improvement District

4.1 Projected ERCs Calculation (optional)

Total Projected ERCs	300
Existing Residential Connections	300
Obligated Future ERCs (enter below)	

Use this number in Cell I8 ("Number of residential connections") on Page 1 to calculate PROJECTED demand & req'ts (including both existing & future connections).

Diaphragm or air pressure tanks shall NOT be considered effective storage volume for (1) community systems, or (2) NTNC with significant demand UNLESS an exception has been granted.

(Enter notes here. If additional space is needed, click the "Additional Notes" tab on the bottom of the screen.)

4.2 Summary - Existing Sources (enter in green cells below)

Total Existing Source Capacity (in gpm)	590	
WS001	Freeze Creek	60
WS005	Well #2	250
WS004	Upper Freeze Creek Well	280
Maximum ERCs (assuming indoor use only)		1062

4.3 Summary - Existing Storage Tanks (enter below)

Total Existing Storage Cap. (in gallons)	1,300,000	
ST001	Emigration/Oak Reservoir	300,000
ST002	Wildflower Reservoir	1,000,000