

# Division of Drinking Water Water System Capacity Calculation Sheet (revised June 23, 2011)

Enter the green cells only.

System Name: Fable Haven Town

System Number: 11111

## 1. Indoor Water Use

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

Number of residential connections ----- 600

Number of other connections --- 3 ERCs of other connections 75.0 (Example: water use of 2 factory is equivalent to 30 homes.)

Enter number of non-residential connections (e.g., 2 factory connections).

Total Equivalent Residential Connections (ERCs) 675

MINIMUM REQUIREMENTS FOR INDOOR WATER USE					
Source		Storage		Water Rights	
Per ERC (gpd/ERC)	Total (gpm)	Per ERC (gallons/ERC)	Total (gallons)	Per ERC (ac-ft/yr)	Total (ac-ft/yr)
800	<b>375.0</b>	400	<b>270,000</b>	0.45	<b>303.75</b>

## 2. Outdoor Water Use

Enter estimated irrigated acre

Is the drinking water used for outdoor irrigation?  Yes  No

Residential ERCs using drinking water for irrigation ----- >>> 360

Percentage of Residential ERCs using DW for irrigation ----- >>> 60%

Average irrigated acreage per residential connection ----- >>> 0.05

Total irrigated acreage of other connections. ----- >>> 35.00

(Enter notes here. Check whether and what % of outdoor irrigation is supplied by drinking water.)

Enter total irrigated acres of other connections here.

Irrigation zone 3

Select Irrigated Zone # from the list (see "Irrigation Demands & Map" tab on the bottom of the screen).

MINIMUM REQUIREMENTS FOR OUTDOOR WATER USE					
Source		Storage		Water Rights	
Per ERC (gpd/ERC)	Total (gpm)	Per ERC (gallons/ERC)	Total (gallons)	Per ERC (ac-ft/yr)	Total (ac-ft/yr)
244	<b>179.7</b>	126	<b>133,984</b>	0.08	<b>87.98</b>

## 3. Fire Flow Requirement

Enter fire flow in gpm.

Does the water system provide fire protection?  Yes  No

Maximum fire suppression **demand** for water system or pressure zone (gpm) ----- >>> 1,500

Maximum fire suppression **duration** for water system or pressure zone (hours) ----- >>> 2

Required Fire Suppression Storage (gallons) ----- >>> 180,000

(Enter notes here. Verify minimum fire flow and duration with local fire authority.)

Enter duration in hours.

### Total Water System Requirements (= indoor use + outdoor use + fire flow demand)

MINIMUM REQUIREMENTS FOR WATER SYSTEM					
Source		Storage		Water Rights	
Per ERC (gpd/ERC)	Total (gpm)	Per ERC (gallons/ERC)	Total (gallons)	Per ERC (ac-ft/yr)	Total (ac-ft/yr)
1,044	<b>554.7</b>	526	<b>583,984</b>	0.53	<b>391.73</b>

### Does this system have adequate source capacity per R309-510-7?

IPS points may be assessed for lacking adequate source capacity to meet peak day and/or average yearly flow requirements.

<b>Existing Sources:</b>	560.0	<b>gpm</b>	Linked to Cell I99 below.
<b>Required Source Capacity:</b>	554.7	<b>gpm</b>	Linked to Cell C51 above.
<b>% of Req'd Capacity:</b>	101.0%		Negative number means (1) additional source capacity is needed, and (2) IPS points should be assessed.
<b>Difference:</b>	5	<b>gpm</b>	

**Does this system have adequate storage capacity per R309-510-8?**

IPS points may be assessed for lacking adequate storage capacity.

<b>Existing Storage:</b>	520,000	gal
<b>Required Storage Capacity:</b>	583,984	gal
<b>% of Req'd Capacity:</b>	89.0%	
<b>Difference:</b>	-63,984	gal

Linked to Cell I118 below.

Linked to Cell E51 above.

Negative number means (1) additional storage volume is needed, and (2) IPS points should be assessed.

Non-Community Water Systems, ERCs for Indoor Water Use (*See R309-510, Tables 510-1, 2, and 4, for other facility type calc.)							
Facility Type	MINIMUM REQUIREMENTS FOR INDOOR USE		ERC/site or pad	# of Sites or pads	ERCs		
	Source	Storage					
	GPD/person*	Calculated GPD/site or pad	GPD/person	Gallon/site or pad			
Modern Recreation Camp	60	0	30	0	0.00	0	0.0
Semi-Developed Camp w/ flush toilets	20	0	10	0	0.00	0	0.0
Semi-Developed Camp w/o flush toilets	5	0	2.5	0	0.00	0	0.0
RV Park	N/A	100	N/A	50	0.13	0	0.0
*Number of people per camp site	0	If applicable, enter number of people per camp site here.					
	Source (GPD/vehicle)	Storage (Gal./vehicle)	ERC/1000 vehicles served	# of Vehicles served	ERCs		
Roadway Rest Stop w/ flushometer valves	7	3.5	8.75	0	0.00		

**Fable Haven Town**

Equivalent Residential Connection Calc.	
Existing Residential Connections	600
Number of Obligated Future ERCs	0
<b>Total Projected Number of ERCs</b>	<b>600</b>

Linked to Cell I8 above.

Source (in gallons per minute)		
WS001	A Spring	50
WS005	B Well	110
WS007	next town wholesale	400
<b>Total Source Capacity</b>		<b>560</b>
Max. ERC allowed (for indoor use only)		1008

Storage (in gallons)		
ST001	South Tank	100,000
ST002	East Tank	300,000
ST003	West Tank	20,000
ST004	North Tank	50,000
ST005	Middle Tank	50,000
<b>Total Storage Capacity</b>		<b>520,000</b>

If you need to calculate projected future demand (including existing & future connections), insert this number to Cell I8 "Number of residential connection."

(Enter notes here if needed.)

Diaphragm or air pressure tanks shall not be considered effective storage volume for community systems or NTNC with significant demand.