



Right Size Water Meter - Instructions

The **Water Customer Data Sheet** is available as a self-calculating Microsoft Excel spreadsheet to help determine demand and select meter without need for using charts or applying Pressure Adjustment Factors.

Irrigation

Irrigation areas must be divided into zones, with a maximum irrigation demand of 25 GPM. Provide a detailed irrigation plan and calculations with appropriately designed zones.

Fixed Demand

Provide detailed description and backup for this demand.

Meter Selection

The Town has standardized water meters and only accepts Neptune positive displacement or ultrasonic meters with a R450 meter interface unit.

Town of Burlington Water Customer Data Sheet				
Customer:	Type of Occupancy: <input type="text"/>			
Building Address:	By: <input type="text"/>			
	Phone: <input type="text"/>			
Fixture	Value	@	Number of Fixtures	Total Value
Bathub	8	x	<input type="text"/>	= <input type="text"/>
Bedpan Washers	10	x	<input type="text"/>	= <input type="text"/>
Bidet	2	x	<input type="text"/>	= <input type="text"/>
Dental Unit	2	x	<input type="text"/>	= <input type="text"/>
Drinking Fountain - Public	2	x	<input type="text"/>	= <input type="text"/>
Kitchen Sink	2.2	x	<input type="text"/>	= <input type="text"/>
Lavatory	1.5	x	<input type="text"/>	= <input type="text"/>
Showerhead (Shower Only)	2.5	x	<input type="text"/>	= <input type="text"/>
Service Sink	4	x	<input type="text"/>	= <input type="text"/>
Toilet - Flush Valve	35	x	<input type="text"/>	= <input type="text"/>
Toilet - Tank Type	4	x	<input type="text"/>	= <input type="text"/>
Urinal - Pedestal Flush Valve	35	x	<input type="text"/>	= <input type="text"/>
Urinal - Wall Flush Valve	16	x	<input type="text"/>	= <input type="text"/>
Wash Sink (Each Set of Faucets)	4	x	<input type="text"/>	= <input type="text"/>
Dishwasher	2	x	<input type="text"/>	= <input type="text"/>
Washing Machine	6	x	<input type="text"/>	= <input type="text"/>
Hose (50 ft. Wash Down) - 1/2 in.	5	x	<input type="text"/>	= <input type="text"/>
- 5/8 in.	9	x	<input type="text"/>	= <input type="text"/>
- 3/4 in.	12	x	<input type="text"/>	= <input type="text"/>
Combined Fixture Value Total				= <input type="text"/>
Pressure Adjustment Factor: <input type="text"/>				
Water Flow Demand: <input type="text"/> 0 GPM				
Customer Peak Demand (Press. Adj. Factor) X (Water Flow Demand) = <input type="text"/> 0 GPM				
Add Irrigation				
Irrigation areas must be divided into zones, with a maximum irrigation demand of 25 GPM. Provide a detailed irrigation plan and calculations with appropriately designed zones. <input type="text"/> 0 GPM				
Added Fixed Load				
Provide detailed description and backup for this demand. <input type="text"/> 0 GPM				
TOTAL FIXED DEMAND <input type="text"/> 0 GPM				
Select Meter Size/type: <input type="text"/>				

Figure 4-5 Water customer data sheet Adapted from AIWWA Manual M22

Download the Water Meter spreadsheet at Burlington.org, go to [Public Works Department](#), select [Permits & Applications](#), then [Water Meter](#).

Water Customer Data Sheet Instructions using Microsoft Excel spreadsheet

1. Use Drop-down box to select *Residential* or *Commercial* application.
2. *Combined Fixture Value Total* auto calculated from fixture count.
3. *Water Demand* is auto calculated based on Figure 4-2 or 4-3
4. Use Drop-down box to select *Pressure Adjustment Factor* (data from Table 4-1.)
5. *Customer Peak Demand* is auto calculated (*Water Demand* x *Pressure Factor*)
6. Add *Irrigation* demand (provide detailed design & calculations)
7. Add *Fixed Load* demands. (provide detailed description and backup)
8. *Total Fixed Demand* is auto calculated.
9. Use Drop-down box to select meter based on meter *Maximum Operating Capacity* that matches *Total Fixed Demand*.

Table 4-1 Pressure Adjustment Factors

Working Pressure at Meter Discharge (psi)	Pressure Adjustment Factor
35	0.74
40	0.80
50	0.90
60	1.00
70	1.09
80	1.17
90	1.25
100	1.34

Adapted from AWWA Manual M22 table 4-1

Neptune Water Meter Components

Register	E-Coder absolute encoder
Water Meters	T-10 Positive Displacement TRU/FLO Compound
Meter Interface	R450 (MIU)

Neptune Water Meter Operating Characteristics

Meter Type	Max. Operating (gpm)	Operating Range (gpm)	Low Flow (gpm)
Positive Displacement			
5/8"	20	1 - 20	1/8
3/4"	30	2 - 30	1/4
1"	50	3 - 50	3/8
1 1/2"	100	5 - 100	3/4
2"	160	8 - 160	1
Ultrasonic			
5/8"	25	0.1 - 20	0.05
1"	55	0.4 - 55	0.25
3"	500	0.5 - 450	1/2
4"	1250	1 - 1000	3/4
6"	2000	2 - 2000	1

Town of Burlington
Right Size Instructions
Mar.2021

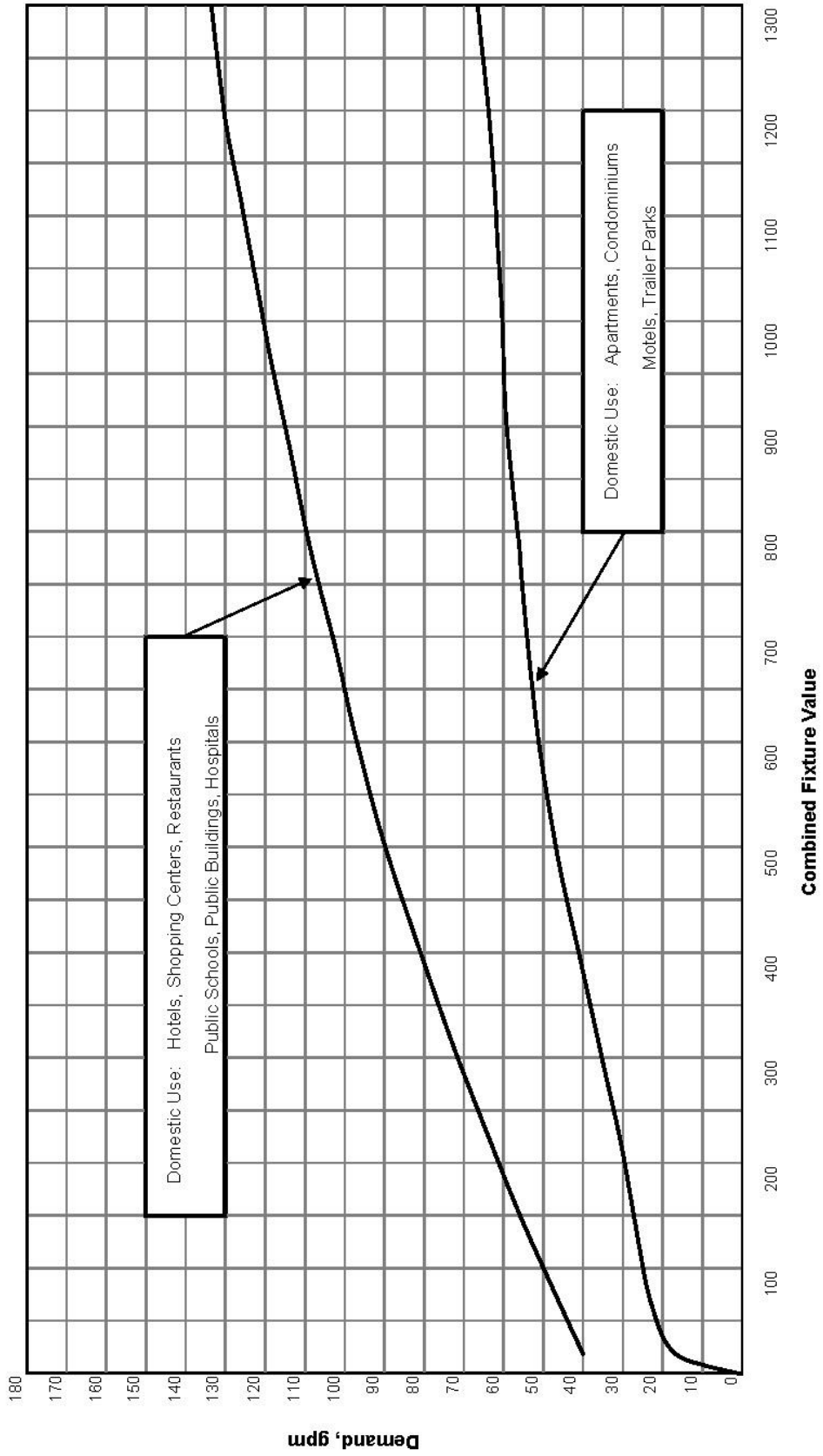


Figure 4-2 Water flow demand per fixture value - low range

Wilmington
 Engineering
 March 2021

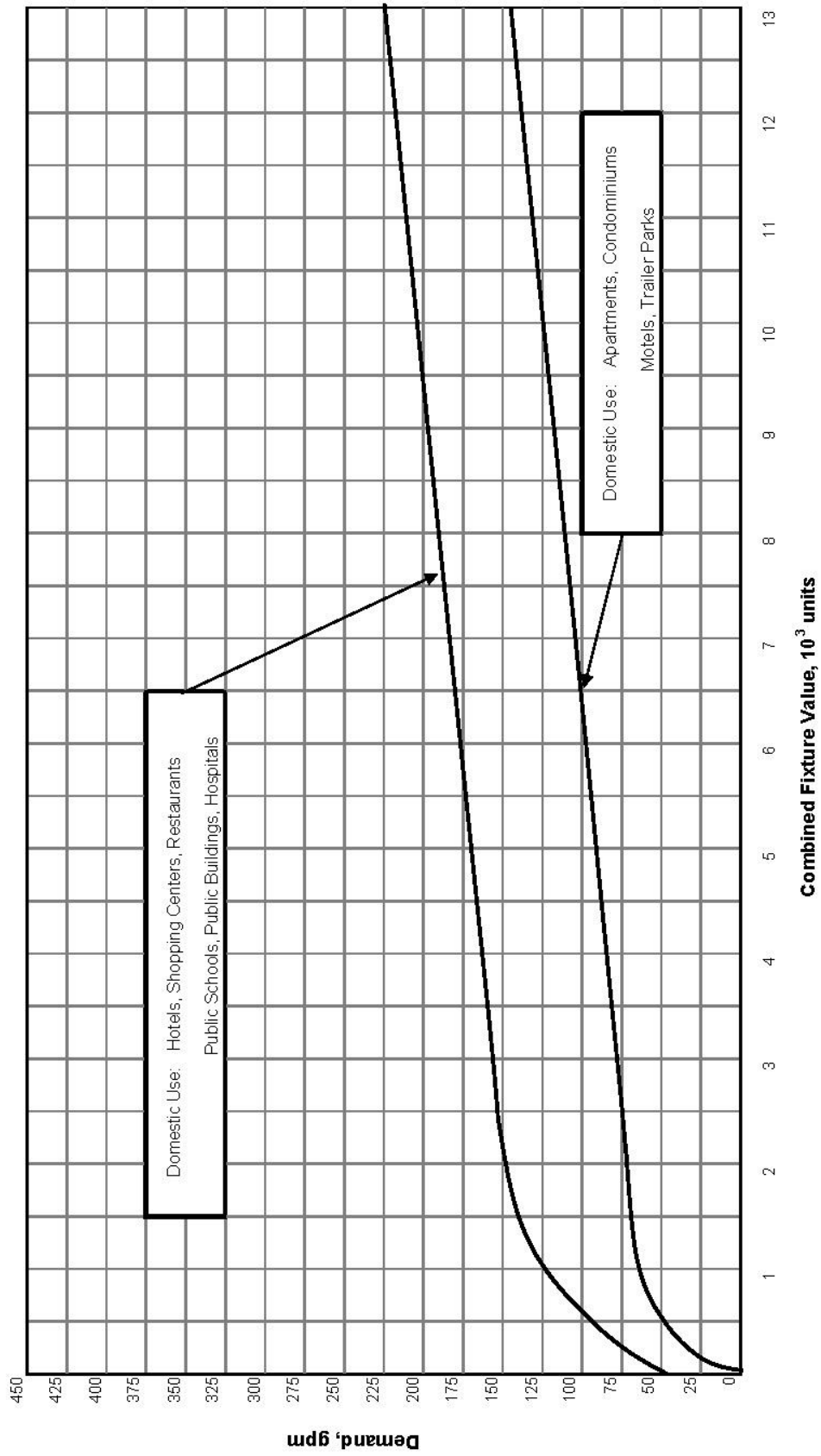


Figure 4-3 Water flow demand per fixture value - High range

