

Small System Characteristics

Public Water System
Compliance Using Point-of-Use
and Point-of-Entry Treatment
Technologies Conference

The Basics of Small Systems

- Universe of Community Water Systems (CWS)
- Universe of Nontransient noncommunity water systems
- Universe of small water systems

Ownership

Physical

Financial

Universe of CWS

- Definitions

- CWS- Community water system serves 15 service connections or 25 resident persons year round

- Small System- Serves 25-3300 population

- NTNCWS- Nontransient noncommunity public water system serves at least 25 of the same nonresident persons per day for more than six months per year

UNIVERSE of CWS (cont'd)

- TNCWS- Transient noncommunity water system servers water to at least 25 persons, six months of the year, who are not residents and are not the same persons every day

Universe of CWS

SYSTEM SIZE (Population)	PERCENT OF SYSTEMS
25-3300	86
3301-10000	8
> 10000	6

Universe of CWS

SYSTEM SIZE (Population Served)	PERCENT OF POPULATION SERVED
25-3300	8
>3300	92

UNIVERSE of CWS – smallllll... systems

System size	25-100	101-500	501- 1000	1001-3300
No. of systems (54,700 total)	15,300	17,100	5,900	8,200
Percent of total CWSs	28	31	11	15

Small Systems –CWS Source Water

System Size	25-100	101-500	501- 1000	1001-3300
Groundwater	14,200	15,100	4,700	5,726
Surface Water	973	1,900	1,200	2,408

Universe of NTNCWS

SYSTEM SIZE (Population served)	Percent of Systems (no. of systems)
25-3300	99.5 (19,990)
3301- 10,000	0.4 (80)
>10,000	0.07 (20)

Universe of TNCWS

SOURCE	Groundwater	Surface Water
No of Systems	93,600	2,000

Small Systems – CWS Ownership (percent)

System Size	25-100	101-500	501-1000	1001-3300
Public	11	33	62	73
Private	86	64	36	26
Other	3	3	2	1

Small Systems-CWS Water Sales (\$) By Ownership

System Size	25-100	101-500	501-1000	1001-3300
Public	7,200	29,300	80,400	184,700
Private	6,800	31,200	81,200	186,900

Small Systems-CWS % of Annual Sales

System Size	25-100	101-500	501-1000	1001-3300
Class of Customer				
Residential	95	82	73	62
Commercial	1	6	9	13

Small Systems-CWS Median Water Bill (\$)

Region	National	MW	NE	S	W
System Size					
25-500	228	169	206	279	308
501-3300	199	146	239	203	213

Small Systems-CWS MHI(\$) by Region (1999)

Region	National	MW	NE	S	W
System Size					
25-500	39,900	39,900	44,500	37,300	40,000
501-3300	37,997	40,169	44,900	32,500	38,300

Small System-CWS MHI (\$) Urban vs. Rural

Year	1995	1997	1999
Area			
Urban	36,100	39,400	42,800
Rural	27,800	30,100	33,000

What Have You Learned

- Small systems are those that serve a population of 25-3300 people
- Small systems make up 85% of all CWSs
- Small systems serve 8% of the population on public water supply
- Most Small systems use ground water as the source of water

What Have You Learned

- Most Small systems are private water systems
- Small system water sales are similar for public and private systems
- % of annual sales for small systems is derived from residential customers. The range is 95% for the smallest to 62% for the largest

What have you Learned

- MHI is the highest in the NE and the lowest in the South for system sizes 25-500 and 501-3300
- Median water bill varies from \$146 - \$308 with the average being about \$213
- Rural area MHI is \$9,700 less than urban area MHI

AND.....

- Approach compliance issues concerning small systems with a small systems perspective to find solutions that will work.