

# Water Market

Speech by Bob McIlvaine

Valve World Expo

June 25 2013



McIlvaine Company  
Northfield, IL

# Municipal Drinking water valve revenues will surpass \$ 4 billion in 2017

Municipal Drinking Water Valve Revenues \$ Million

<b>Subject</b>	<b>2017</b>
Total	4,236
Ball	781
Butterfly	548
Check	122
Gate	1,136
Globe	1,264
Industrial Plug	203
Other	169
Safety Relief	14

# East Asian municipalities will be largest purchasers

Municipal Drinking Water Valve Revenues by region \$ Million

World Region	2017
Total	4,236
Africa	187
CIS	181
East Asia	1,558
Eastern Europe	93
Middle East	193
NAFTA	626
South & Central America	330
West Asia	586
Western Europe	481

## East Asia Municipal Drinking Water Valve Revenue \$ millions- valve type

<b>Subject</b>	<b>2017</b>
Total	1,558
Ball	287
Butterfly	201
Check	45
Gate	418
Globe	465
Industrial Plug	75
Other	62
Safety Relief	5

## East Asia municipal Drinking Water Valve Revenues millions- by country

<b>Country</b>	<b>2017</b>
Total	1,558
Australia	32
China	1,048
Hong Kong	13
Indonesia	72
Japan	149
Malaysia	23
New Zealand	5
Other East Asia	8
Philippines	39
Singapore	10
South Korea	60
Taiwan	33
Thailand	31
Vietnam	35

## Municipal Wastewater Valve Revenues \$ millions- region

<b>World Region</b>	<b>2017</b>
Total	4,543
Africa	121
CIS	185
East Asia	1,421
Eastern Europe	145
Middle East	111
NAFTA	1,229
South & Central America	105
West Asia	91
Western Europe	1,135

**Municipal Wastewater Valve revenues \$ millions- valve type**

<b>Subject</b>	<b>2017</b>
Total	4,543
Ball	614
Butterfly	816
Check	140
Gate	936
Globe	1,030
Industrial Plug	761
Other	234
Safety Relief	12

## East Asia Municipal Wastewater Valve Revenues \$ millions- valve type

<b>Subject</b>	<b>2017</b>
Total	1,421
Ball	192
Butterfly	255
Check	44
Gate	293
Globe	322
Industrial Plug	238
Other	73
Safety Relief	4



## East Asia municipal wastewater revenues \$ millions- country

<b>Country</b>	<b>2017</b>
Total	1,421
Australia	41
China	770
Hong Kong	17
Indonesia	4
Japan	304
Malaysia	27
New Zealand	12
Other East Asia	1
Philippines	4
Singapore	20
South Korea	148
Taiwan	60
Thailand	12
Vietnam	1

Municipal Drinking Water % of world treatment capacity with the World in  
2010 as 100%

Country	2010	2015	2016	2017
United States	8.06	9.16	9.44	9.73
Canada	0.83	0.91	0.93	0.95
Mexico	2.08	2.52	2.62	2.73
Argentina	0.88	1.01	1.04	1.07
Brazil	3.35	4.45	4.72	5.01
Chile	0.40	0.51	0.53	0.56
Colombia	0.74	0.88	0.91	0.94
Ecuador	0.25	0.29	0.30	0.31
Guatemala	0.13	0.15	0.15	0.16
Peru	0.52	0.68	0.72	0.76
Venezuela	0.78	0.93	0.97	1.00
Other South & Central America	1.13	1.24	1.26	1.29

## North and South American Municipal Wastewater Sewage Treatment Capacity in 2014

Country	Wastewater Treatment				
	Primary Capacity (MGD)	Secondary Treatment (%)	Secondary Capacity (MGD)	Sewage Transport End of Year	
				(%) Increase	(MGD)
United States	41,844	94.00	39,333	1.20	43,936
Canada	3,250	79.00	2,567	1.00	4,225
Mexico	2,905	46.00	1,336	2.00	5,955
Argentina	981	31.00	304	1.20	2,748
Brazil	1,680	66.00	1,109	1.37	5,207
Chile	924	84.00	776	1.30	1,664
Colombia	351	40.00	141	6.67	2,259
Ecuador	103	23.00	24	1.50	636
Guatemala	29	28.00	8	1.60	193
Peru	232	43.00	100	9.48	1,009
Venezuela	166	41.00	68	2.00	1,063
Other South & Central America	1,065	0.41	4	1.30	5,060

## Eastern European Municipal Wastewater Sewage Treatment Capacity in 2014

Country	Wastewater Treatment				
	Primary Capacity (MGD)	Secondary Treatment (%)	Secondary Capacity (MGD)	Sewage Transport End of Year	
				(%) Increase	(MGD)
Bulgaria	456.7	78.00	356	5.00	639
Czech Republic	1,288.1	92.00	1,185	2.00	1,675
Hungary	577.0	79.00	456	0.00	808
Poland	2,788.1	93.00	2,593	1.00	3,903
Romania	2,256.4	71.00	1,602	8.00	3,159
Slovakia	572.3	69.00	395	1.50	801
Other Eastern Europe	81.2	65.00	53	2.50	114

## Middle Eastern Municipal Wastewater Sewage Treatment Capacity in 2014

Country	Wastewater Treatment				
	Primary Capacity (MGD)	Secondary Treatment (%)	Secondary Capacity (MGD)	Sewage Transport End of Year	
				(%) Increase	(MGD)
Iran	529.9	67.00	355	2.60	2,014
Iraq	286.7	34.00	97	2.00	516
Israel	400.4	93.00	372	1.70	721
Saudi Arabia	723.3	56.00	405	7.50	1,664
Syrian Arab Republic	411.1	94.00	386	4.00	658
Turkey	2,174.7	63.00	1,370	1.90	3,480
United Arab Emirates	701.3	100.00	701	2.30	1,122
Other Middle East	73.7	44.00	32	4.20	162

## East Asian Municipal Wastewater Sewage Treatment Capacity in 2014

Country	Wastewater Treatment				
	Primary Capacity (MGD)	Secondary Treatment (%)	Secondary Capacity (MGD)	Sewage Transport End of Year	
				(%) Increase	(MGD)
China	30,608.1	85.00	26,017	3.75	41,627
Hong Kong	728.4	83.00	605	1.00	991
Indonesia	709.3	9.00	64	2.80	2,979
Japan	12,805.9	89.00	11,397	0.20	14,983
Malaysia	112.0	38.00	43	3.00	152
New Zealand	571.1	77.00	440	2.00	668
Philippines	517.9	43.00	223	4.15	2,072
Singapore	577.5	95.00	549	0.00	647
South Korea	6,610.0	83.00	5,486	0.60	7,800
Taiwan	2,264.7	88.00	1,993	14.00	2,265
Thailand	1,027.6	42.00	432	5.00	2,158
Vietnam	269.3	11.00	30	3.00	673
Other East Asia	3.6	30.00	1	0.60	9

## West Asian Municipal Wastewater Sewage Treatment Capacity in 2014

Country	Wastewater Treatment				
	Primary Capacity (MGD)	Secondary Treatment (%)	Secondary Capacity (MGD)	Sewage Transport End of Year	
				(%) Increase	(MGD)
Bangladesh	85.1	41.00	35	16.87	1,787
India	4,324.8	63.00	2,725	4.17	10,812
Myanmar	6.8	20.00	1	1.25	225
Pakistan	190.6	8.00	15	5.32	1,487
Sri Lanka	18.5	9.00	2	0.50	236
Other West Asia	3.9	18.00	1	5.00	93

# 1900 Active Municipal Wastewater Treatment Projects in the U.S. and Canada

- Municipalities in Canada and the U.S. will construct new sewage treatment plants to supply a growing population. They will also replace and upgrade existing facilities.

Sewage Treatment Treatment Type	U.S mgd x 1,000			Canada mgd x 1,000		
	2014	Increase	2015	2014	Increase	2015
Transport	44	-	44	4.2	0.1	4.3
Primary	41	1	42	3.2	0.1	3.3
Secondary	39	1	40	2.5	0.1	2.6

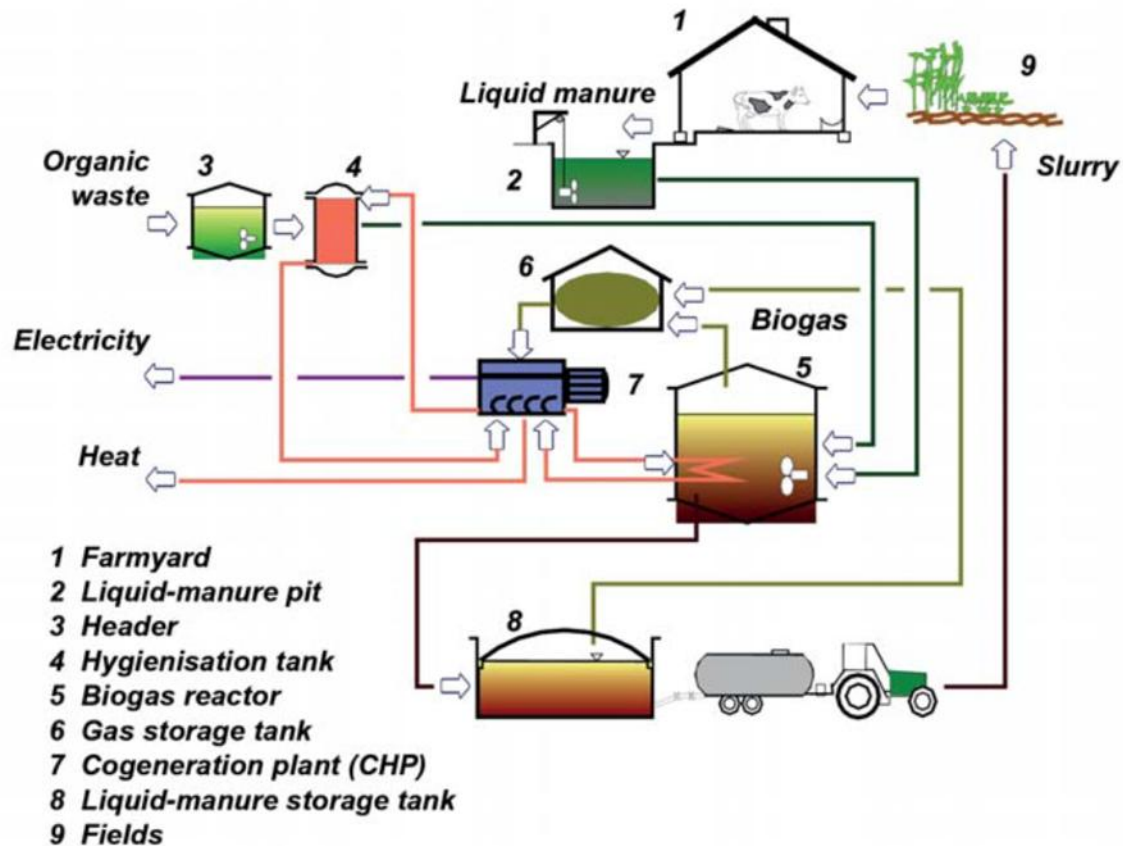
- there are hundreds of projects under way at the 4000 existing plants with more than 1 mgd of capacity and many more projects underway at the 12,000 smaller plants.
- This results in more than 1,900 active projects.



# Biogas Valve Market

- One of the fastest growing but smaller markets for low pressure safety relief valves is biogas.
- Overall investment will rise to over \$ 30 billion/yr by 2020
- The market in Germany has been fully exploited but it is now poised to expand rapidly in other areas. Increasing demand among farmers, municipalities, and industrial processors for waste treatment technologies, on the one hand, and widening opportunities for renewable natural gas in transportation and cogeneration applications on the other, signal steady growth for the biogas industry over the next decade.
- Global installed production capacity is now more than 800 billion cubic feet per year, representing nearly 14.5 gigawatts (GW) of installed distributed and grid-scale

# Biomass Process



# Marine Market

- Marine vessels are purchasing air and liquid flow control and treatment equipment at an accelerating rate due to new limits on both emissions to the atmosphere and to the water.
- This rule is just one of a number passed by various different governmental bodies around the world. These rules will impact nearly 70,000 ships which use international ports. The average cost of treatment systems to kill invasive organisms will range from as little as \$300,000 to more than \$3 million
- Another fast growing segment is the treatment of the stack gases from fuel burning. Wartsila and others are selling scrubber systems which remove both particulate and SO<sub>2</sub>. NO<sub>x</sub> control systems are also being purchased for some vessels

# Desalination

- Desalination plant flow control and treatment expenditures are now just 1.5 percent of the \$340 billion dollar flow control and treatment market. While the market as a whole will increase at 5.5 percent, the growth in the desalination sector will be nearly twice as high.

<b>Year</b>	<b>Cumulative Capacity Million m<sup>3</sup>/day</b>
2005	40
2010	65
2015	100
2020	160