Discussion of Option Packages for NCWS Serving < 1,000 (with analyses)

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This Presentation

Objectives

Provisions

System compliance

Improvement

Small NCWS Options

Research

Objectives of Presentation

- Discuss and seek resolution of difference in options applicable to NCWS < 1000
- Present results of analysis for NCWS < 1,000 including:
  - Number of systems that would qualify for reduced monitoring under different criteria
  - Number of systems with TC+, acute violations and Level 1 triggers
  - Cost estimates
  - Breakdown by 12 categories (TNCWS / NTNCWS, Disinfection Status, Population) provided in detail in appendix

Assumptions for Analysis

- Used package criteria to estimate number of systems doing reduced monitoring
  - All qualified systems are doing the reduced monitoring
- Cost estimates do not include any costs for demonstrating compliance with reduced monitoring with reduced monitoring criteria (e.g. site visit)
- All numbers presented in tables are based on data from current rule with no assessment or correction
  - Do not reflect impact of shifting to assessment paradigm

Number of NCWS Systems < 1,000 by Subcategory

Population	Type	Disinfected (Yes/No)	Number of Systems
0 – 100	TNCWS	Yes	14,266
0 - 100	TNCWS	No	48,999
0 – 100	NTNCWS	Yes	2,880
0 - 100	NTNCWS	No	6,432
101 – 500	TNCWS	Yes	5,572
101 – 500	TNCWS	No	14,107
101 – 500	NTNCWS	Yes	2,788
101 - 500	NTNCWS	No	4,137
501 – 1,000	TNCWS	Yes	722
501 – 1,000	TNCWS	No	1,308
501 – 1,000	NTNCWS	Yes	899
501 – 1,000	NTNCWS	No	994
Total			103,104

Reduced Monitoring Criteria

- Modeling reduced monitoring required use of several different data sources :
  - SDWIS database for MCL and M&R violations
  - 6-year review database for history of TC+
  - GWR EA for disinfection status
  - ASDWA / State data on sanitary surveys
  - State information on CCC programs

Number of Systems Qualifying for Reduced Monitoring (NCWS provisions only)

Option	Provision	% Systems that Qualify	
		SW	GW
A	Protected GW, Clean SS	0	18 - 50
B & F	M&R 3-yr, no TC+ 3-yr, Clean SS	0	0 - 89
	GW < 1000 that disinfect	0	0 – 93
	GW < 1000 with no TC+ 3-yr	0	0 – 81
	Protected GW, Clean SS	0	0 – 75
	State licensure with training, etc.	?	?
C	M&R 3-yr, no TC+ 3-yr, Clean SS, site visits	0	0 - 96
D	MCL 2-yr, M&R 2-yr, Clean SS, CCC prog.	0	0 – 56
E	Clean SS, MCL 1-yr, M&R 1-yr, site visit	0	0 – 95
	Clean SS, MCL 1-yr, M&R 1-yr, site visit	0	0 - 96

Summary of Option Packages (all NCWS < 1,000)

Option / Element	A (Current)	B	C	D	E	F
# Systems on Reduced Monit.	46,756	75,977	3,008	33,314	75,977	75,977
Routine Monitoring Costs /yr	$35.2M	$18.3M - $24.3M	$68.9M	$50.5M	$23.5M - $23.6M	$18.3M - $24.3M
Repeat Monitoring Costs /yr	$3.2M	$1.4M - $1.9M	$5.1M	$4.6M	$1.8M	$1.4M - $1.9M
Additional Routine Monit Costs /yr	$5.3M	0	$1.9M	$7.5M	$0.7M	0
Repeats on Add'l Rout. Monit. Cost /yr	$3.2M	0	$0.9M	$4.5M	$0.4M	0
# Systems Triggered Level 1	0 (8,610)	3,902 – 5,180	11,824	12,160	5,208 – 5,239	3,902 – 5,180
Assessment Costs /yr (Implemented)	0 ($0.9M)	$0.7M - $2.8M	$2.1M - $6.3M	$2.2M - $6.5M	$0.9M - $2.8M	$0.7M - $2.8M
PN Costs /yr *Non-Acute + Acute	$0.9M*	$41,000 - $55,000	$0.1M	$0.1M	$58,000	$41,000 - $55,000
Total Annual Cost	$47.8M ($48.7M)	$20.4M - $29.1M	$79.0M - $83.2M	$69.4M - $73.7M	$27.4M - $29.4M	$20.4M - $29.1M

Details – Routine Monitoring

Option / Element	A (Current)	B	C	D	E	F
# Systems	103,104	103,104	103,104	103,104	103,104	103,104
# Systems Monthly	56,437	27,127	100,096	69,970	27,127	27,127
# Systems Quarterly	14,604	59,012	3008	33,314	70,931	71,546
# Systems Annual	32,152	16,965	0	0	5,046	4,431
# Routine Samples Collected	615,261	319,814 – 424,390	1,205,310	883,475	410,476 – 412,909	319,814 – 424,390
Routine Monitoring Cost /yr	$35.2M	$18.3M - $24.3M	$68.9M	$50.5M	$23.5M - $23.6M	$18.3M - $24.3M

Details – Repeat &Additional Routine Monitoring

Option / Element	A (Current)	B	C	D	E	F
# Systems	103,104	103,104	103,104	103,104	103,104	103,104
# TC+ in Routines	20,305	11,936 – 16,178	43,076	29,237	15,481 – 15,578	11,936 – 16,178
Repeat Monitoring Costs /yr	$3.2M	$1.4M - $1.9M	$5.1M	$4.6M	$1.8M	$1.4M - $1.9M
Add'l Routine Monit. Costs /yr	$5.3M	0	$1.9M	$7.5M	$0.7M	0
Repeats on Add'l Routine Monit. Costs /yr	$3.2M	0	$0.9M	$4.5M	$0.4M	0
Total Monitoring Cost /yr	$43.7M	$18.3M - $24.3M	$71.8M	$62.5M	$24.5M - $24.6M	$18.3M - $24.3M

Details – Assessment

Option / Element	A (Current)	B	C	D	E	F
# Systems	103,104	103,104	103,104	103,104	103,104	103,104
# Systems with Level 1 Trigger	0 (8,610)	3,902 – 5,180	11,824	12,160	5,208 – 5,239	3,902 – 5,180
Level 1 Cost /yr (Impl.)	0 ($0.9M)	$0.7M - $2.8M	$2.1M - $6.3M	$2.2M - $6.5M	$0.9M - $2.8M	$0.7M - $2.8M
# Systems with Acute Violations	1,022	412 - 550	1,401	1,452	580 - 584	412 - 550
Public Notif. Cost for Non-acute /yr	$0.8M	0	0	0	0	0
Public Notif. Cost for Acute /yr	$0.1M	$41,000 - $55,000	$0.1M	$0.1M	$58,000	$41,000 - $55,000

Details – Breakdown

* Includes only elements with costs shown

	Option / Element	A (Current)	B	C	D	E	F
	# Systems	103,104	103,104	103,104	103,104	103,104	103,104
	National Cost*	$47.8M ($48.7M)	$20.4M - $29.1M	$79.0M - $83.2M	$69.4M - $73.7M	$27.4M - $29.4M	$20.4M - $29.1M
Non-Triggered Systems	System Monit. Cost /yr	$322	$171 - $226	$645	$464	$223 - $224	$171 - $226
	System Assess. Cost /yr	0	0	0	0	0	0
Triggered Systems	System Monit. Cost /yr	$1,543	$345 - $413	$1,077	$1,665	$508 - $509	$345 - $413
	System Assess. Cost /yr	($100)	$180 - $590	$180 - $590	$180 - $590	$180 - $590	$180 - $590

Findings

- Differences in cost and number of systems triggered are driven by the number of systems on reduced monitoring
  - Differences in routine sampling have greater implications for national costs because of the large number of NCWS < 1,000

Appendix