Appendices to the Economic Analysis for the Final Stage 2 Disinfectants and Disinfection Byproducts Rule
Volume II (F-H)

Office of Water (4606-M) EPA 815-R-05-010 December 2005 www.epa.gov/safewater

Appendix F
Valuation of Stage 2 DBPR Benefits

Matrix of Appendix F Contents

Applicable Rule Alternative(s)	Applicable DBP(s)	Non-fatal Case Valuation	Exhibit Description	Applicable Source Water Type(s)	Applicable System Size	Exhibit Number
All Alternatives	TTHM & HAA5	All	Valuation Inputs	All	All	F.1a
		All	CPI Projections	All	All	F.1b
		All	Income Elasticity Inputs	All	All	F.1c
		All	Population, GDP, & Income Projections	All	All	F.1d
		All	Income Elasticity Factors	All	All	F.1e
		All	Valuation Factors	All	All	F.1f
Preferred Alternative	TTHM	Non-Fatal Lymphoma	Valuation of Cases Avoided	Surface	<100	F.2a
					101-500	F.2b
					501-1,000	F.2c
					1,001-3,300	F.2d
					3,301-10K	F.2e
					10,001-50K	F.2f
					50,001-100K	F.2g
					100,001-1M	F.2h
					>1 Million	F.2i
					All	F.2j
				Ground	<100	F.2k
					101-500	F.2l
					501-1,000	F.2m
					1,001-3,300	F.2n
					3,301-10K	F.2o
					10,001-50K	F.2p
					50,001-100K	F.2q
					100,001-1M	F.2r
					>1 Million	F.2s
					All	F.2t
				All	All	F.2u
			Present Value of Benefits at 3% Discount Rate	All	All	F.2v
			Present Value of Benefits at 7% Discount Rate	All	All	F.2w
			Present Value of Benefits at 3% Discount Rate by Small and Large Size Categroies	Surface	All	F.2x
			Present Value of Benefits at 7% Discount Rate by Small and Large Size Categroies		All	F.2y
			Present Value of Benefits at 3% Discount Rate by Small and Large Size Categroies	Ground	All	F.2z
			Present Value of Benefits at 7% Discount Rate by Small and Large Size Categroies		All	F.2aa
			Present Value of Benefits at 3% by System Size	All	All	F.2ab
			Present Value of Benefits at 7% by System Size	All	All	F.2ac
		Chronic Bronchitis	Valuation of Cases Avoided	Surface	<100	F.3a
					101-500	F.3b
					501-1,000	F.3c
					1,001-3,300	F.3d
					3,301-10K	F.3e
					10,001-50K	F.3f
					50,001-100K	F.3g
					100,001-1M	F.3h
					>1 Million	F.3i
					All	F.3j
				Ground	<100	F.3k
					101-500	F.3l
					501-1,000	F.3m
					1,001-3,300	F.3n
					3,301-10K	F.3o
					10,001-50K	F.3p
					50,001-100K	F.3q
					100,001-1M	F.3r
					>1 Million	F.3s
					All	F.3t
				All	All	F.3u
			Present Value of Benefits at 3% Discount Rate	All	All	F.3v
			Present Value of Benefits at 7% Discount Rate	All	All	F.3w
			Present Value of Benefits at 3% Discount Rate by Small and Large Size Categroies	Surface	All	F.3x
			Present Value of Benefits at 7% Discount Rate by Small and Large Size Categroies		All	F.3y
			Present Value of Benefits at 3% Discount Rate by Small and Large Size Categroies	Ground	All	F.3z
			Present Value of Benefits at 7% Discount Rate by Small and Large Size Categroies		All	F.3aa
			Present Value of Benefits at 3% by System Size	All	All	F.3ab
			Present Value of Benefits at 7% by System Size	All	All	F.3ac

Matrix of Appendix F Contents (cont.)

Applicable Rule Alternative(s)	Applicable DBP(s)	Non-fatal Case Valuation	Exhibit Description	Applicable Source Water Type(s)	Applicable System Size	Exhibit Number
Preferred Alternative	HAA5	Non-Fatal Lymphoma	Valuation of Cases Avoided	Surface	All	F.4a
				Ground	All	F.4b
				All	All	F.4c
			Present Value of Benefits at 3% Discount Rate	All	All	F.4d
			Present Value of Benefits at 7% Discount Rate	All	All	F.4e
			Present Value of Benefits at 3% by System Size	All	All	F.4f
			Present Value of Benefits at 7% by System Size	All	All	F.4g
		Chronic Bronchitis	Valuation of Cases Avoided	Surface	All	F.5a
				Ground	All	F.5b
				All	All	F.5c
			Present Value of Benefits at 3% Discount Rate	All	All	F.5d
			Present Value of Benefits at 7% Discount Rate	All	All	F.5e
			Present Value of Benefits at 3% by System Size	All	All	F.5f
			Present Value of Benefits at 7% by System Size	All	All	F.5g
Alternative 1	TTHM	Non-Fatal Lymphoma	Valuation of Cases Avoided	Surface, Ground, & All	All	F.6a
			Present Value of Benefits at 3% & 7% Discount Rate	All	All	F.6b
			Present Value of Benefits at 3% by System Size	All	All	F.6c
			Present Value of Benefits at 7% by System Size	All	All	F.6d
		Chronic Bronchitis	Valuation of Cases Avoided	Surface, Ground, & All	All	F.7a
			Present Value of Benefits at 3% & 7% Discount Rate	All	All	F.7b
			Present Value of Benefits at 3% by System Size	All	All	F.7c
			Present Value of Benefits at 7% by System Size	All	All	F.7d
Alternative 2	TTHM	Non-Fatal Lymphoma	Valuation of Cases Avoided	Surface, Ground, & All	All	F.8a
			Present Value of Benefits at 3% & 7% Discount Rate	All	All	F.8b
			Present Value of Benefits at 3% by System Size	All	All	F.8c
			Present Value of Benefits at 7% by System Size	All	All	F.8d
		Chronic Bronchitis	Valuation of Cases Avoided	Surface, Ground, & All	All	F.9a
			Present Value of Benefits at 3% & 7% Discount Rate	All	All	F.9b
			Present Value of Benefits at 3% by System Size	All	All	F.9c
			Present Value of Benefits at 7% by System Size	All	All	F.9d
Alternative 3	TTHM	Non-Fatal Lymphoma	Valuation of Cases Avoided	Surface, Ground, & All	All	F.10a
			Present Value of Benefits at 3% & 7% Discount Rate	All	All	F.10b
			Present Value of Benefits at 3% by System Size	All	All	F.10c
			Present Value of Benefits at 7% by System Size	All	All	F.10d
		Chronic Bronchitis	Valuation of Cases Avoided	Surface, Ground, & All	All	F.11a
			Present Value of Benefits at 3% & 7% Discount Rate	All	All	F.11b
			Present Value of Benefits at 3% by System Size	All	All	F.11c
			Present Value of Benefits at 7% by System Size	All	All	F.11d
Colon Cancer Sensitivity Analysis	TTHM	Non-Fatal Lymphoma	Valuation of Cases Avoided	Surface, Ground, & All	All	F.12a
			Present Value of Benefits at 3% & 7% Discount Rate	All	All	F.12b
			Present Value of Benefits at 3% by System Size	All	All	F.12c
			Present Value of Benefits at 7% by System Size	All	All	F.12d
		Chronic Bronchitis	Valuation of Cases Avoided	Surface, Ground, & All	All	F.13a
			Present Value of Benefits at 3% & 7% Discount Rate	All	All	F.13b
			Present Value of Benefits at 3% by System Size	All	All	F.13c
			Present Value of Benefits at 7% by System Size	All	All	F.13d
Rectal Cancer Sensitivity Analysis	TTHM	Non-Fatal Lymphoma	Valuation of Cases Avoided	Surface, Ground, & All	All	F.14a
			Present Value of Benefits at 3% & 7% Discount Rate	All	All	F.14b
			Present Value of Benefits at 3% by System Size	All	All	F.14c
			Present Value of Benefits at 7% by System Size	All	All	F.14d
		Chronic Bronchitis	Valuation of Cases Avoided	Surface, Ground, & All	All	F.15a
			Present Value of Benefits at 3% & 7% Discount Rate	All	All	F.15b
			Present Value of Benefits at 3% by System Size	All	All	F.15c
			Present Value of Benefits at 7% by System Size	All	All	F.15d

Matrix of Appendix F Contents (cont.)

Preferred Alternative, ICR Matrix Method	TTHM	Non-Fatal Lymphoma	Valuation of Cases Avoided	Surface	<100	F.20a
					101-500	F.20b
					501-1,000	F.20c
					1,001-3,300	F.20d
					3,301-10K	F.20e
					10,001-50K	F.20f
					50,001-100K	F.20g
					100,001-1M	F.20h
					>1 Million	F.20i
					All	F.20j
				Ground	<100	F.20k
					101-500	F.20l
					501-1,000	F.20m
					1,001-3,300	F.20n
					3,301-10K	F.20o
					10,001-50K	F.20p
					50,001-100K	F.20q
					100,001-1M	F.20r
					>1 Million	F.20s
					All	F.20t
				All	All	F.20u
			Present Value of Benefits at 3% Discount Rate	All	All	F.20v
			Present Value of Benefits at 7% Discount Rate	All	All	F.20w
			Present Value of Benefits at 3% Discount Rate by Small and Large Size Categroies	Surface	All	F.20x
			Present Value of Benefits at 7% Discount Rate by Small		All	F.20y
			Present Value of Benefits at 3% Discount Rate by Small and Large Size Categroies	Ground	All	F.20z
			Present Value of Benefits at 7% Discount Rate by Small and Large Size Categroies		All	F.20aa
			Present Value of Benefits at 3% by System Size	All	All	F.20ab
			Present Value of Benefits at 7% by System Size	All	All	F.20ac
Preferred Alternative, SWAT Method	TTHM	Non-Fatal Lymphoma	Valuation of Cases Avoided	Surface	<100	F.21a
					101-500	F.21b
					501-1,000	F.21c
					1,001-3,300	F.21d
					3,301-10K	F.21e
					10,001-50K	F.21f
					50,001-100K	F.21g
					100,001-1M	F.21h
					>1 Million	F.21i
					All	F.21j
				Ground	<100	F.21k
					101-500	F.21l
					501-1,000	F.21m
					1,001-3,300	F.21n
					3,301-10K	F.21o
					10,001-50K	F.21p
					50,001-100K	F.21q
					100,001-1M	F.21r
					>1 Million	F.21s
					All	F.21t
				All	All	F.21u
			Present Value of Benefits at 3% Discount Rate	All	All	F.21v
			Present Value of Benefits at 7% Discount Rate	All	All	F.21w
			Present Value of Benefits at 3% Discount Rate by Small and Large Size Categroies	Surface	All	F.21x
			Present Value of Benefits at 7% Discount Rate by Small		All	F.21y
			Present Value of Benefits at 3% Discount Rate by Small and Large Size Categroies	Ground	All	F.21z
			Present Value of Benefits at 7% Discount Rate by Small and Large Size Categroies		All	F.21aa
			Present Value of Benefits at 3% by System Size	All	All	F.21ab
			Present Value of Benefits at 7% by System Size	All	All	F.21ac

Note: To minimize the size of this appendix, only summary spreadsheets are presented to outline the computational approach used for the Stage 2 DBPR benefits

Section F.1
Input Parameters

Exhibit F.1a Description of Valuation Parameters

VSL

Dist. Type		Weibull	
Parameters		Loc:	0
		Scale:	5.32
		Shape:	1.509588
Simulation Mean	$	4.80	Million (1990$)

Source: Distribution adapted from *The Benefits and Costs of the Clean Air Act, 1970-1990* (USEPA, 1997b), as derived from Viscusi et al. (1991)

WTP: Non-Fatal Cases - Non-Fatal Lymphoma

Percent of VSL		58.3%	
Simulation Mean	$	2.80	Million (1990$)

Note: Value derived as a forecast based on the VSL distribution above.
Source: Percent of VSL derived as ratio of median risk tradeoff values reported in Magat et al. (1996)

WTP: Non-Fatal Cases - Chronic Bronchitis

Dist. Type		Lognormal	
Parameters		Mean:	$ 587,500
		Median:	$ 535,600
		Std Dev:	$ 264,826
		Max:	$ 1,500,000
Simulation Mean	$	0.58	Million (1998$)

Note: Distribution correlated to the VSL distribution in the Monte Carlo analysis.
Source: Stage 1 DBPR RIA (USEPA, 1998a), as derived from Viscusi et al. (1991)

Morbidity Increment

Point Estimate	$	93,927	(1996$)

Source: Cost of Illness Handbook (USEPA, 1999a)

Exhibit F.1b CPI Projections

Year	CPI - All Items				CPI - Medical Care		
	CPI (Annual Average)	Percent Change	Adjustment Factor (1990 base)	Adjustment Factor (1998 base)	CPI (Annual Average)	Percent Change	Adjustment Factor (1996 base)
1990	130.7	-	1.00	0.80	162.8	-	0.71
1991	136.2	4.2%	1.04	0.84	177.0	8.7%	0.78
1992	140.3	3.0%	1.07	0.86	190.1	7.4%	0.83
1993	144.5	3.0%	1.11	0.89	201.4	5.9%	0.88
1994	148.2	2.6%	1.13	0.91	211.0	4.8%	0.92
1995	152.4	2.8%	1.17	0.93	220.5	4.5%	0.97
1996	156.9	3.0%	1.20	0.96	228.2	3.5%	1.00
1997	160.5	2.3%	1.23	0.98	234.6	2.8%	1.03
1998	163.0	1.6%	1.25	1.00	242.1	3.2%	1.06
1999	166.6	2.2%	1.27	1.02	250.6	3.5%	1.10
2000	172.2	3.4%	1.32	1.06	260.8	4.1%	1.14
2001	177.1	2.9%	1.36	1.09	272.8	4.6%	1.20
2002	179.9	1.6%	1.38	1.11	285.6	4.7%	1.25
2003	184.0	2.3%	1.41	1.13	297.1	4.0%	1.30

Notes: 1990 base factors (all items) used to update VSL and non-fatal lymphoma WTP values.
1998 base factors (all items) used to update chronic bronchitis WTP values (used in sensitivity analysis only).
1996 base factors (medical care) used to update morbidity increment values.

Source: 1990-2003 CPI values from Bureau of Labor Statistics.

Exhibit F.1c Description of Elasticity Parameters

Income Elasticity - Fatal Cancer Cases

Central Estimate	0.40
Low End	0.08
High End	1.00
Dist. Type	Triangular
Distribution Mean	0.49

Income Elasticity - Non-Fatal Cancer Cases

Central Estimate	0.45
Low End	0.25
High End	0.60
Dist. Type	Triangular
Distribution Mean	0.43

Note: Distributions are correlated in the Monte Carlo analysis.
Source: Kleckner and Neumann (2000)

Exhibit F.1d Population, GDP, and Per Capita Income Projections

Year	Population		Real GDP		Income (Real GDP per Capita)	
	Estimates/ Projections (Thousands)	Percent Change	Projection (Billions Chained 2000$)	Percent Change	Projection (Thousands 2000$)	Percent Change
1990	249,439	-	7,112.5	-	28,514	-
1991	252,127	1.1%	7,100.5	-0.2%	28,162	-1.2%
1992	254,995	1.1%	7,336.6	3.3%	28,772	2.2%
1993	257,746	1.1%	7,532.7	2.7%	29,225	1.6%
1994	260,289	1.0%	7,835.5	4.0%	30,103	3.0%
1995	262,765	1.0%	8,031.7	2.5%	30,566	1.5%
1996	265,190	0.9%	8,328.9	3.7%	31,407	2.8%
1997	267,744	1.0%	8,703.5	4.5%	32,507	3.5%
1998	270,299	1.0%	9,066.9	4.2%	33,544	3.2%
1999	272,820	0.9%	9,470.3	4.4%	34,713	3.5%
2000	275,306	0.9%	9,817.0	3.7%	35,659	2.7%
2001	277,803	0.9%	9,866.6	0.5%	35,517	-0.4%
2002	280,306	0.9%	10,083.0	2.2%	35,971	1.3%
2003	282,798	0.9%	10,398.0	3.1%	36,768	2.2%
2004	285,266	0.9%	10,730.7	3.2%	37,617	2.3%
2005	287,716	0.9%	11,245.8	4.8%	39,086	3.9%
2006	290,153	0.8%	11,718.1	4.2%	40,386	3.3%
2007	292,583	0.8%	12,093.1	3.2%	41,332	2.3%
2008	295,009	0.8%	12,419.6	2.7%	42,099	1.9%
2009	297,436	0.8%	12,767.4	2.8%	42,925	2.0%
2010	299,862	0.8%	13,124.9	2.8%	43,770	2.0%
2011	302,300	0.8%	13,466.1	2.6%	44,546	1.8%
2012	304,764	0.8%	13,802.8	2.5%	45,290	1.7%
2013	307,250	0.8%	14,147.8	2.5%	46,047	1.7%
2014	309,753	0.8%	14,501.5	2.5%	46,816	1.7%
2015	312,268	0.8%	14,864.1	2.5%	47,600	1.7%
2016	314,793	0.8%	15,235.7	2.5%	48,399	1.7%
2017	317,325	0.8%	15,616.6	2.5%	49,213	1.7%
2018	319,860	0.8%	16,007.0	2.5%	50,044	1.7%
2019	322,395	0.8%	16,407.2	2.5%	50,891	1.7%
2020	324,927	0.8%	16,817.3	2.5%	51,757	1.7%
2021	327,468	0.8%	17,237.8	2.5%	52,640	1.7%
2022	330,028	0.8%	17,668.7	2.5%	53,537	1.7%
2023	332,607	0.8%	18,110.4	2.5%	54,450	1.7%
2024	335,202	0.8%	18,563.2	2.5%	55,379	1.7%
2025	337,815	0.8%	19,027.3	2.5%	56,325	1.7%
2026	340,441	0.8%	19,502.9	2.5%	57,287	1.7%
2027	343,078	0.8%	19,990.5	2.5%	58,268	1.7%
2028	345,735	0.8%	20,490.3	2.5%	59,266	1.7%
2029	348,391	0.8%	21,002.5	2.5%	60,284	1.7%

Source: Population projections from US Census Bureau (NP-T1: Middle Series).

1990-2000 real GDP from Bureau of Economic Analysis, all other years calculated based on percent change projections from Congressional Budget Office (January 23, 2002). Projections for years beyond 2012 based on percent change reported for 2012 due to lack of other data.

Income (Real GDP per Capita)=Real GDP/Population

Exhibit F.1e Factors for Incorporation of Income Elasticity into Yearly Benefits Estimates

Year	Factors for Fatal Cancer Cases			Factors for Non-Fatal Lymphoma Cases			Factors for Chronic Bronchitis Cases		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	1.160	1.062	1.280	1.138	1.096	1.177	1.063	1.045	1.081
2006	1.174	1.067	1.306	1.149	1.104	1.193	1.074	1.052	1.095
2007	1.188	1.072	1.332	1.161	1.112	1.208	1.085	1.060	1.109
2008	1.202	1.076	1.356	1.172	1.120	1.223	1.096	1.067	1.123
2009	1.215	1.081	1.381	1.183	1.127	1.238	1.106	1.075	1.137
2010	1.229	1.086	1.407	1.194	1.135	1.253	1.117	1.082	1.151
2011	1.242	1.090	1.433	1.206	1.142	1.268	1.128	1.090	1.165
2012	1.256	1.095	1.459	1.217	1.150	1.283	1.139	1.097	1.179
2013	1.270	1.100	1.486	1.229	1.158	1.298	1.150	1.104	1.193
2014	1.284	1.104	1.513	1.240	1.165	1.313	1.161	1.112	1.208
2015	1.299	1.109	1.541	1.252	1.173	1.329	1.172	1.119	1.222
2016	1.313	1.114	1.570	1.263	1.180	1.345	1.183	1.127	1.237
2017	1.328	1.119	1.598	1.275	1.188	1.361	1.194	1.135	1.252
2018	1.342	1.123	1.628	1.287	1.196	1.376	1.206	1.142	1.267
2019	1.357	1.128	1.658	1.299	1.204	1.393	1.217	1.150	1.283
2020	1.372	1.133	1.688	1.311	1.211	1.409	1.229	1.158	1.298
2021	1.388	1.137	1.719	1.323	1.219	1.425	1.240	1.165	1.314
2022	1.403	1.142	1.751	1.335	1.227	1.442	1.252	1.173	1.330
2023	1.419	1.147	1.783	1.347	1.235	1.459	1.264	1.181	1.345
2024	1.434	1.151	1.815	1.359	1.242	1.475	1.276	1.189	1.361
2025	1.450	1.156	1.848	1.371	1.250	1.492	1.288	1.196	1.378
2026	1.466	1.161	1.882	1.383	1.258	1.509	1.300	1.204	1.394
2027	1.482	1.165	1.916	1.396	1.266	1.526	1.312	1.212	1.410
2028	1.476	1.164	1.904	1.391	1.263	1.520	1.307	1.209	1.404
2029	1.488	1.167	1.930	1.400	1.269	1.533	1.316	1.215	1.417

Note: Income elasticity factors calculated as $[(el_1 - el_2 - I_2 - I_1) / (el_2 - el_1 - I_2 - I_1)]$; where e=income elasticity of WTP estimate, and I=income.
Source: Derived using elasticity distributions and per capita GDP projections from preceeding Exhibits F.1c and F.1d.

Exhibit F.1f Value of VSL, WTP, and Morbidity Increment by Year

	Fatal Cancer Cases				Non-Fatal Cancer Cases					
	Morbidity Increment	VSL			WTP - Non-Fatal Lymphoma			WTP - Chronic Bronchitis		
			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Point Estimate	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ 0.1	$ 7.8	$ 1.2	$ 17.9	$ 4.4	$ 0.7	$ 10.1	$ 0.8	$ 0.4	$ 1.4
2006	$ 0.1	$ 7.9	$ 1.2	$ 18.1	$ 4.5	$ 0.7	$ 10.2	$ 0.8	$ 0.4	$ 1.5
2007	$ 0.1	$ 7.9	$ 1.2	$ 18.3	$ 4.5	$ 0.7	$ 10.4	$ 0.8	$ 0.4	$ 1.5
2008	$ 0.1	$ 8.0	$ 1.2	$ 18.6	$ 4.6	$ 0.7	$ 10.5	$ 0.8	$ 0.4	$ 1.5
2009	$ 0.1	$ 8.1	$ 1.2	$ 18.8	$ 4.6	$ 0.7	$ 10.6	$ 0.8	$ 0.4	$ 1.5
2010	$ 0.1	$ 8.2	$ 1.3	$ 19.0	$ 4.7	$ 0.7	$ 10.7	$ 0.8	$ 0.4	$ 1.5
2011	$ 0.1	$ 8.3	$ 1.3	$ 19.2	$ 4.7	$ 0.7	$ 10.8	$ 0.8	$ 0.4	$ 1.5
2012	$ 0.1	$ 8.4	$ 1.3	$ 19.4	$ 4.7	$ 0.7	$ 10.8	$ 0.9	$ 0.4	$ 1.6
2013	$ 0.1	$ 8.5	$ 1.3	$ 19.6	$ 4.8	$ 0.7	$ 11.0	$ 0.9	$ 0.4	$ 1.6
2014	$ 0.1	$ 8.6	$ 1.3	$ 19.9	$ 4.8	$ 0.7	$ 11.1	$ 0.9	$ 0.4	$ 1.6
2015	$ 0.1	$ 8.7	$ 1.3	$ 20.1	$ 4.9	$ 0.8	$ 11.2	$ 0.9	$ 0.4	$ 1.6
2016	$ 0.1	$ 8.8	$ 1.3	$ 20.3	$ 4.9	$ 0.8	$ 11.3	$ 0.9	$ 0.4	$ 1.6
2017	$ 0.1	$ 8.9	$ 1.3	$ 20.6	$ 5.0	$ 0.8	$ 11.4	$ 0.9	$ 0.4	$ 1.6
2018	$ 0.1	$ 9.0	$ 1.3	$ 20.9	$ 5.0	$ 0.8	$ 11.5	$ 0.9	$ 0.4	$ 1.6
2019	$ 0.1	$ 9.1	$ 1.4	$ 21.2	$ 5.1	$ 0.8	$ 11.6	$ 0.9	$ 0.4	$ 1.7
2020	$ 0.1	$ 9.2	$ 1.4	$ 21.4	$ 5.1	$ 0.8	$ 11.7	$ 0.9	$ 0.4	$ 1.7
2021	$ 0.1	$ 9.3	$ 1.4	$ 21.7	$ 5.2	$ 0.8	$ 11.8	$ 0.9	$ 0.4	$ 1.7
2022	$ 0.1	$ 9.4	$ 1.4	$ 22.0	$ 5.2	$ 0.8	$ 11.9	$ 0.9	$ 0.4	$ 1.7
2023	$ 0.1	$ 9.5	$ 1.4	$ 22.2	$ 5.2	$ 0.8	$ 12.1	$ 0.9	$ 0.4	$ 1.7
2024	$ 0.1	$ 9.6	$ 1.4	$ 22.4	$ 5.3	$ 0.8	$ 12.2	$ 1.0	$ 0.4	$ 1.7
2025	$ 0.1	$ 9.7	$ 1.4	$ 22.7	$ 5.3	$ 0.8	$ 12.3	$ 1.0	$ 0.4	$ 1.8
2026	$ 0.1	$ 9.8	$ 1.4	$ 23.0	$ 5.4	$ 0.8	$ 12.4	$ 1.0	$ 0.4	$ 1.8
2027	$ 0.1	$ 9.9	$ 1.5	$ 23.3	$ 5.4	$ 0.8	$ 12.5	$ 1.0	$ 0.4	$ 1.8
2028	$ 0.1	$ 9.9	$ 1.5	$ 23.2	$ 5.4	$ 0.8	$ 12.5	$ 1.0	$ 0.4	$ 1.8
2029	$ 0.1	$ 10.0	$ 1.5	$ 23.4	$ 5.5	$ 0.8	$ 12.6	$ 1.0	$ 0.4	$ 1.8

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Values derived based on valuation distributions and inflation (CPI) and income elasticity factors from Exhibits F.1a, F.1b, and F.1e.

Section F.2
Model Outputs - Preferred Alternative
TTHM as Indicator
Lymphoma for Non-Fatal Cases

Exhibit F.2a Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving <100 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
2011	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.1
2012	$ 0.0	$ 0.0	$ 0.1	$ 0.0	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.1
2013	$ 0.1	$ 0.0	$ 0.1	$ 0.0	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.2
2014	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.3
2015	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.4
2016	$ 0.1	$ 0.0	$ 0.3	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.4
2017	$ 0.1	$ 0.0	$ 0.3	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.5
2018	$ 0.2	$ 0.0	$ 0.4	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.5
2019	$ 0.2	$ 0.0	$ 0.4	$ 0.1	$ 0.0	$ 0.3	$ 0.2	$ 0.0	$ 0.5
2020	$ 0.2	$ 0.0	$ 0.4	$ 0.1	$ 0.0	$ 0.3	$ 0.2	$ 0.0	$ 0.5
2021	$ 0.2	$ 0.0	$ 0.5	$ 0.1	$ 0.0	$ 0.3	$ 0.2	$ 0.0	$ 0.6
2022	$ 0.2	$ 0.0	$ 0.5	$ 0.1	$ 0.0	$ 0.3	$ 0.3	$ 0.0	$ 0.6
2023	$ 0.2	$ 0.0	$ 0.5	$ 0.1	$ 0.0	$ 0.3	$ 0.3	$ 0.0	$ 0.6
2024	$ 0.2	$ 0.0	$ 0.5	$ 0.2	$ 0.0	$ 0.3	$ 0.3	$ 0.0	$ 0.6
2025	$ 0.2	$ 0.0	$ 0.6	$ 0.2	$ 0.0	$ 0.4	$ 0.3	$ 0.0	$ 0.6
2026	$ 0.2	$ 0.0	$ 0.6	$ 0.2	$ 0.0	$ 0.4	$ 0.3	$ 0.0	$ 0.6
2027	$ 0.3	$ 0.0	$ 0.6	$ 0.2	$ 0.0	$ 0.4	$ 0.3	$ 0.0	$ 0.7
2028	$ 0.3	$ 0.0	$ 0.6	$ 0.2	$ 0.0	$ 0.4	$ 0.3	$ 0.0	$ 0.7
2029	$ 0.3	$ 0.0	$ 0.6	$ 0.2	$ 0.0	$ 0.4	$ 0.3	$ 0.0	$ 0.7
Total	**$ 3.3**	**$ 0.5**	**$ 7.5**	**$ 2.1**	**$ 0.3**	**$ 4.9**	**$ 3.9**	**$ 0.6**	**$ 9.1**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38b, E.38f, and E.38j.

Exhibit F.2b Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving 100-499 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.3
2011	$ 0.2	$ 0.0	$ 0.4	$ 0.1	$ 0.0	$ 0.3	$ 0.3	$ 0.0	$ 0.7
2012	$ 0.3	$ 0.1	$ 0.8	$ 0.2	$ 0.0	$ 0.6	$ 0.5	$ 0.1	$ 1.3
2013	$ 0.5	$ 0.1	$ 1.2	$ 0.4	$ 0.1	$ 0.9	$ 0.8	$ 0.1	$ 1.9
2014	$ 0.7	$ 0.1	$ 1.7	$ 0.5	$ 0.1	$ 1.2	$ 1.1	$ 0.2	$ 2.6
2015	$ 1.0	$ 0.2	$ 2.3	$ 0.7	$ 0.1	$ 1.5	$ 1.4	$ 0.2	$ 3.3
2016	$ 1.2	$ 0.2	$ 2.7	$ 0.8	$ 0.1	$ 1.8	$ 1.7	$ 0.3	$ 3.8
2017	$ 1.4	$ 0.2	$ 3.1	$ 0.9	$ 0.1	$ 2.0	$ 1.8	$ 0.3	$ 4.2
2018	$ 1.5	$ 0.2	$ 3.5	$ 1.0	$ 0.1	$ 2.2	$ 2.0	$ 0.3	$ 4.5
2019	$ 1.7	$ 0.3	$ 3.9	$ 1.0	$ 0.2	$ 2.4	$ 2.1	$ 0.3	$ 4.8
2020	$ 1.8	$ 0.3	$ 4.2	$ 1.1	$ 0.2	$ 2.6	$ 2.2	$ 0.3	$ 5.0
2021	$ 1.9	$ 0.3	$ 4.4	$ 1.2	$ 0.2	$ 2.8	$ 2.3	$ 0.3	$ 5.2
2022	$ 2.0	$ 0.3	$ 4.6	$ 1.3	$ 0.2	$ 2.9	$ 2.3	$ 0.4	$ 5.4
2023	$ 2.1	$ 0.3	$ 4.8	$ 1.3	$ 0.2	$ 3.1	$ 2.4	$ 0.4	$ 5.6
2024	$ 2.2	$ 0.3	$ 5.0	$ 1.4	$ 0.2	$ 3.3	$ 2.5	$ 0.4	$ 5.7
2025	$ 2.2	$ 0.3	$ 5.2	$ 1.5	$ 0.2	$ 3.4	$ 2.5	$ 0.4	$ 5.8
2026	$ 2.3	$ 0.4	$ 5.4	$ 1.5	$ 0.2	$ 3.6	$ 2.6	$ 0.4	$ 6.0
2027	$ 2.4	$ 0.4	$ 5.5	$ 1.6	$ 0.2	$ 3.7	$ 2.6	$ 0.4	$ 6.1
2028	$ 2.4	$ 0.4	$ 5.6	$ 1.6	$ 0.2	$ 3.8	$ 2.6	$ 0.4	$ 6.1
2029	$ 2.5	$ 0.4	$ 5.7	$ 1.7	$ 0.3	$ 3.9	$ 2.7	$ 0.4	$ 6.2
Total	**$ 30.4**	**$ 4.6**	**$ 70.2**	**$ 19.9**	**$ 3.0**	**$ 46.0**	**$ 36.6**	**$ 5.6**	**$ 84.6**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38b, E.38f, and E.38j.

Exhibit F.2c Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving 500-999 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.1	$ 0.0	$ 0.3	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.5
2011	$ 0.3	$ 0.1	$ 0.8	$ 0.3	$ 0.0	$ 0.6	$ 0.6	$ 0.1	$ 1.3
2012	$ 0.6	$ 0.1	$ 1.4	$ 0.4	$ 0.1	$ 1.0	$ 1.0	$ 0.1	$ 2.2
2013	$ 0.9	$ 0.1	$ 2.1	$ 0.7	$ 0.1	$ 1.5	$ 1.4	$ 0.2	$ 3.3
2014	$ 1.3	$ 0.2	$ 3.0	$ 0.9	$ 0.1	$ 2.1	$ 2.0	$ 0.3	$ 4.5
2015	$ 1.7	$ 0.3	$ 4.0	$ 1.2	$ 0.2	$ 2.7	$ 2.6	$ 0.4	$ 5.9
2016	$ 2.1	$ 0.3	$ 4.8	$ 1.4	$ 0.2	$ 3.1	$ 2.9	$ 0.4	$ 6.7
2017	$ 2.4	$ 0.4	$ 5.5	$ 1.5	$ 0.2	$ 3.5	$ 3.2	$ 0.5	$ 7.4
2018	$ 2.7	$ 0.4	$ 6.2	$ 1.7	$ 0.3	$ 3.9	$ 3.5	$ 0.5	$ 8.0
2019	$ 2.9	$ 0.4	$ 6.8	$ 1.8	$ 0.3	$ 4.2	$ 3.7	$ 0.6	$ 8.5
2020	$ 3.2	$ 0.5	$ 7.3	$ 2.0	$ 0.3	$ 4.6	$ 3.8	$ 0.6	$ 8.9
2021	$ 3.4	$ 0.5	$ 7.8	$ 2.1	$ 0.3	$ 4.9	$ 4.0	$ 0.6	$ 9.2
2022	$ 3.5	$ 0.5	$ 8.2	$ 2.2	$ 0.3	$ 5.2	$ 4.1	$ 0.6	$ 9.5
2023	$ 3.7	$ 0.6	$ 8.5	$ 2.4	$ 0.4	$ 5.5	$ 4.2	$ 0.6	$ 9.8
2024	$ 3.8	$ 0.6	$ 8.9	$ 2.5	$ 0.4	$ 5.7	$ 4.3	$ 0.7	$ 10.1
2025	$ 4.0	$ 0.6	$ 9.2	$ 2.6	$ 0.4	$ 6.0	$ 4.4	$ 0.7	$ 10.3
2026	$ 4.1	$ 0.6	$ 9.4	$ 2.7	$ 0.4	$ 6.3	$ 4.5	$ 0.7	$ 10.5
2027	$ 4.2	$ 0.6	$ 9.7	$ 2.8	$ 0.4	$ 6.5	$ 4.6	$ 0.7	$ 10.7
2028	$ 4.2	$ 0.6	$ 9.8	$ 2.9	$ 0.4	$ 6.7	$ 4.6	$ 0.7	$ 10.7
2029	$ 4.3	$ 0.7	$ 10.0	$ 3.0	$ 0.5	$ 6.9	$ 4.7	$ 0.7	$ 10.9
Total	**$ 53.5**	**$ 8.1**	**$ 123.7**	**$ 35.1**	**$ 5.3**	**$ 81.1**	**$ 64.5**	**$ 9.8**	**$ 149.1**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38b, E.38f, and E.38j.

Exhibit F.2d Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving 1,000-3,299 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.8	$ 0.1	$ 1.9	$ 0.7	$ 0.1	$ 1.6	$ 1.4	$ 0.2	$ 3.3
2011	$ 2.1	$ 0.3	$ 4.8	$ 1.6	$ 0.3	$ 3.8	$ 3.6	$ 0.5	$ 8.2
2012	$ 3.8	$ 0.6	$ 8.8	$ 2.8	$ 0.4	$ 6.5	$ 6.2	$ 1.0	$ 14.3
2013	$ 5.9	$ 0.9	$ 13.6	$ 4.2	$ 0.6	$ 9.7	$ 9.3	$ 1.4	$ 21.4
2014	$ 8.4	$ 1.3	$ 19.3	$ 5.8	$ 0.9	$ 13.3	$ 12.7	$ 1.9	$ 29.3
2015	$ 11.2	$ 1.7	$ 25.8	$ 7.6	$ 1.2	$ 17.4	$ 16.5	$ 2.5	$ 37.9
2016	$ 13.5	$ 2.1	$ 31.1	$ 8.8	$ 1.3	$ 20.2	$ 18.9	$ 2.9	$ 43.5
2017	$ 15.5	$ 2.4	$ 35.8	$ 9.9	$ 1.5	$ 22.7	$ 20.8	$ 3.2	$ 47.9
2018	$ 17.4	$ 2.6	$ 40.0	$ 10.9	$ 1.7	$ 25.0	$ 22.4	$ 3.4	$ 51.6
2019	$ 19.0	$ 2.9	$ 43.9	$ 11.8	$ 1.8	$ 27.3	$ 23.7	$ 3.6	$ 54.7
2020	$ 20.5	$ 3.1	$ 47.3	$ 12.7	$ 1.9	$ 29.4	$ 24.8	$ 3.8	$ 57.3
2021	$ 21.7	$ 3.3	$ 50.1	$ 13.6	$ 2.1	$ 31.4	$ 25.8	$ 3.9	$ 59.5
2022	$ 22.8	$ 3.5	$ 52.8	$ 14.4	$ 2.2	$ 33.3	$ 26.6	$ 4.0	$ 61.6
2023	$ 23.8	$ 3.6	$ 55.1	$ 15.2	$ 2.3	$ 35.2	$ 27.4	$ 4.2	$ 63.3
2024	$ 24.7	$ 3.8	$ 57.2	$ 16.0	$ 2.4	$ 37.0	$ 28.0	$ 4.3	$ 64.9
2025	$ 25.5	$ 3.9	$ 59.1	$ 16.7	$ 2.5	$ 38.7	$ 28.7	$ 4.4	$ 66.3
2026	$ 26.3	$ 4.0	$ 60.9	$ 17.5	$ 2.6	$ 40.5	$ 29.2	$ 4.4	$ 67.7
2027	$ 27.0	$ 4.1	$ 62.6	$ 18.2	$ 2.8	$ 42.2	$ 29.8	$ 4.5	$ 69.1
2028	$ 27.3	$ 4.1	$ 63.3	$ 18.6	$ 2.8	$ 43.2	$ 29.9	$ 4.5	$ 69.3
2029	$ 27.9	$ 4.2	$ 64.7	$ 19.2	$ 2.9	$ 44.7	$ 30.3	$ 4.6	$ 70.3
Total	**$ 345.2**	**$ 52.5**	**$ 797.9**	**$ 226.2**	**$ 34.4**	**$ 523.0**	**$ 416.1**	**$ 63.3**	**$ 961.4**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38b, E.38f, and E.38j.

Exhibit F.2e Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving 3,300-9,999 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 2.3	$ 0.4	$ 5.3	$ 2.0	$ 0.3	$ 4.5	$ 4.1	$ 0.6	$ 9.5
2011	$ 6.0	$ 0.9	$ 13.9	$ 4.7	$ 0.7	$ 10.8	$ 10.2	$ 1.6	$ 23.6
2012	$ 10.9	$ 1.7	$ 25.1	$ 8.1	$ 1.2	$ 18.6	$ 17.9	$ 2.7	$ 41.0
2013	$ 16.9	$ 2.6	$ 38.8	$ 12.1	$ 1.8	$ 27.8	$ 26.7	$ 4.1	$ 61.2
2014	$ 24.0	$ 3.7	$ 55.1	$ 16.6	$ 2.5	$ 38.2	$ 36.5	$ 5.6	$ 83.8
2015	$ 32.1	$ 4.9	$ 73.8	$ 21.7	$ 3.3	$ 49.8	$ 47.1	$ 7.2	$ 108.3
2016	$ 38.6	$ 5.9	$ 88.9	$ 25.1	$ 3.8	$ 57.7	$ 54.1	$ 8.3	$ 124.3
2017	$ 44.5	$ 6.8	$ 102.3	$ 28.2	$ 4.3	$ 64.9	$ 59.5	$ 9.1	$ 137.1
2018	$ 49.7	$ 7.6	$ 114.5	$ 31.1	$ 4.7	$ 71.6	$ 64.0	$ 9.8	$ 147.5
2019	$ 54.4	$ 8.3	$ 125.6	$ 33.8	$ 5.1	$ 78.0	$ 67.8	$ 10.3	$ 156.4
2020	$ 58.5	$ 8.9	$ 135.2	$ 36.4	$ 5.5	$ 84.0	$ 71.0	$ 10.8	$ 163.8
2021	$ 62.1	$ 9.4	$ 143.4	$ 38.8	$ 5.9	$ 89.7	$ 73.7	$ 11.2	$ 170.2
2022	$ 65.3	$ 9.9	$ 150.9	$ 41.2	$ 6.3	$ 95.3	$ 76.1	$ 11.6	$ 176.1
2023	$ 68.1	$ 10.4	$ 157.5	$ 43.5	$ 6.6	$ 100.7	$ 78.3	$ 11.9	$ 181.1
2024	$ 70.7	$ 10.7	$ 163.5	$ 45.7	$ 7.0	$ 105.8	$ 80.2	$ 12.2	$ 185.7
2025	$ 73.0	$ 11.1	$ 169.0	$ 47.9	$ 7.3	$ 110.8	$ 82.0	$ 12.4	$ 189.8
2026	$ 75.2	$ 11.4	$ 174.2	$ 50.0	$ 7.6	$ 115.7	$ 83.6	$ 12.7	$ 193.7
2027	$ 77.2	$ 11.7	$ 179.2	$ 52.0	$ 7.9	$ 120.6	$ 85.2	$ 12.9	$ 197.6
2028	$ 78.1	$ 11.8	$ 181.1	$ 53.3	$ 8.1	$ 123.5	$ 85.5	$ 13.0	$ 198.2
2029	$ 79.7	$ 12.1	$ 185.0	$ 55.1	$ 8.3	$ 127.8	$ 86.6	$ 13.1	$ 201.1
Total	**$ 987.5**	**$ 150.1**	**$ 2,282.5**	**$ 647.2**	**$ 98.4**	**$ 1,496.0**	**$ 1,190.2**	**$ 181.0**	**$ 2,750.2**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38b, E.38f, and E.38j.

Exhibit F.2f Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving 10,000-49,999 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 14.2	$ 2.2	$ 32.5	$ 13.5	$ 2.1	$ 30.9	$ 26.6	$ 4.1	$ 61.1
2011	$ 36.6	$ 5.6	$ 84.2	$ 31.9	$ 4.9	$ 73.3	$ 65.1	$ 10.0	$ 149.7
2012	$ 66.3	$ 10.1	$ 152.2	$ 54.3	$ 8.3	$ 124.7	$ 112.3	$ 17.2	$ 257.9
2013	$ 102.7	$ 15.7	$ 235.8	$ 80.3	$ 12.3	$ 184.5	$ 166.5	$ 25.5	$ 382.3
2014	$ 145.9	$ 22.3	$ 335.4	$ 109.6	$ 16.8	$ 252.0	$ 226.4	$ 34.6	$ 520.4
2015	$ 188.3	$ 28.8	$ 433.1	$ 135.0	$ 20.6	$ 310.5	$ 277.3	$ 42.4	$ 637.6
2016	$ 224.3	$ 34.3	$ 515.8	$ 153.6	$ 23.5	$ 353.2	$ 312.0	$ 47.7	$ 717.6
2017	$ 256.9	$ 39.2	$ 591.3	$ 170.3	$ 26.0	$ 391.9	$ 339.7	$ 51.9	$ 782.1
2018	$ 286.4	$ 43.7	$ 659.7	$ 185.7	$ 28.3	$ 427.9	$ 362.6	$ 55.3	$ 835.4
2019	$ 312.5	$ 47.6	$ 721.2	$ 200.2	$ 30.5	$ 462.1	$ 381.9	$ 58.2	$ 881.3
2020	$ 335.2	$ 51.0	$ 773.9	$ 214.0	$ 32.6	$ 494.1	$ 398.5	$ 60.7	$ 920.1
2021	$ 354.8	$ 54.0	$ 819.2	$ 227.2	$ 34.6	$ 524.6	$ 413.1	$ 62.8	$ 953.8
2022	$ 372.1	$ 56.6	$ 860.7	$ 239.8	$ 36.5	$ 554.7	$ 426.0	$ 64.8	$ 985.3
2023	$ 387.7	$ 59.0	$ 896.9	$ 252.0	$ 38.3	$ 583.1	$ 437.7	$ 66.6	$ 1,012.5
2024	$ 401.8	$ 61.1	$ 929.9	$ 263.8	$ 40.1	$ 610.6	$ 448.3	$ 68.1	$ 1,037.5
2025	$ 414.8	$ 63.0	$ 959.9	$ 275.3	$ 41.8	$ 637.1	$ 458.1	$ 69.5	$ 1,060.2
2026	$ 426.8	$ 64.7	$ 988.6	$ 286.4	$ 43.4	$ 663.4	$ 467.2	$ 70.8	$ 1,082.3
2027	$ 438.0	$ 66.3	$ 1,016.1	$ 297.2	$ 45.0	$ 689.5	$ 475.8	$ 72.0	$ 1,103.9
2028	$ 442.7	$ 67.1	$ 1,026.5	$ 303.8	$ 46.0	$ 704.3	$ 477.7	$ 72.4	$ 1,107.6
2029	$ 451.5	$ 68.3	$ 1,047.8	$ 313.2	$ 47.4	$ 726.9	$ 484.2	$ 73.3	$ 1,123.9
Total	**$ 5,659.3**	**$ 860.5**	**$ 13,080.7**	**$ 3,807.2**	**$ 578.9**	**$ 8,799.3**	**$ 6,757.1**	**$ 1,027.8**	**$ 15,612.6**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38b, E.38f, and E.38j.

Exhibit F.2g Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving 50,000-99,999 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 12.3	$ 1.9	$ 28.4	$ 11.7	$ 1.8	$ 27.0	$ 23.2	$ 3.5	$ 53.3
2011	$ 31.9	$ 4.9	$ 73.4	$ 27.8	$ 4.3	$ 63.9	$ 56.7	$ 8.7	$ 130.4
2012	$ 57.8	$ 8.8	$ 132.7	$ 47.3	$ 7.2	$ 108.7	$ 97.8	$ 15.0	$ 224.8
2013	$ 89.5	$ 13.7	$ 205.5	$ 70.0	$ 10.7	$ 160.8	$ 145.1	$ 22.2	$ 333.2
2014	$ 120.7	$ 18.5	$ 277.5	$ 89.4	$ 13.7	$ 205.6	$ 185.2	$ 28.3	$ 425.8
2015	$ 147.5	$ 22.6	$ 339.2	$ 103.2	$ 15.8	$ 237.3	$ 212.1	$ 32.4	$ 487.8
2016	$ 172.0	$ 26.3	$ 395.4	$ 115.4	$ 17.6	$ 265.5	$ 233.3	$ 35.6	$ 536.5
2017	$ 194.2	$ 29.7	$ 447.1	$ 126.7	$ 19.3	$ 291.6	$ 250.7	$ 38.3	$ 577.0
2018	$ 214.0	$ 32.6	$ 493.1	$ 137.2	$ 20.9	$ 316.2	$ 265.3	$ 40.4	$ 611.1
2019	$ 231.1	$ 35.2	$ 533.3	$ 147.2	$ 22.4	$ 339.8	$ 277.7	$ 42.3	$ 641.0
2020	$ 245.7	$ 37.4	$ 567.4	$ 156.8	$ 23.9	$ 361.9	$ 288.6	$ 43.9	$ 666.4
2021	$ 258.6	$ 39.3	$ 597.2	$ 165.9	$ 25.2	$ 383.0	$ 298.2	$ 45.4	$ 688.6
2022	$ 270.2	$ 41.1	$ 624.8	$ 174.7	$ 26.6	$ 404.0	$ 306.8	$ 46.7	$ 709.7
2023	$ 280.6	$ 42.7	$ 649.1	$ 183.2	$ 27.9	$ 423.7	$ 314.7	$ 47.9	$ 727.9
2024	$ 290.1	$ 44.1	$ 671.4	$ 191.4	$ 29.1	$ 442.9	$ 321.8	$ 48.9	$ 744.8
2025	$ 298.9	$ 45.4	$ 691.8	$ 199.4	$ 30.3	$ 461.5	$ 328.5	$ 49.9	$ 760.3
2026	$ 307.1	$ 46.5	$ 711.3	$ 207.2	$ 31.4	$ 479.9	$ 334.8	$ 50.7	$ 775.4
2027	$ 314.8	$ 47.7	$ 730.2	$ 214.7	$ 32.5	$ 498.2	$ 340.7	$ 51.6	$ 790.3
2028	$ 317.8	$ 48.2	$ 736.9	$ 219.3	$ 33.2	$ 508.4	$ 341.8	$ 51.8	$ 792.6
2029	$ 323.9	$ 49.0	$ 751.6	$ 225.9	$ 34.2	$ 524.2	$ 346.3	$ 52.4	$ 803.8
Total	**$ 4,178.6**	**$ 635.4**	**$ 9,657.2**	**$ 2,814.4**	**$ 428.0**	**$ 6,504.0**	**$ 4,969.4**	**$ 756.0**	**$ 11,480.7**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38b, E.38f, and E.38j.

Exhibit F.2h Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving 100,000-999,999 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 54.6	$ 8.4	$ 125.4	$ 51.9	$ 7.9	$ 119.3	$ 102.5	$ 15.7	$ 235.6
2011	$ 141.2	$ 21.6	$ 324.8	$ 122.8	$ 18.8	$ 282.5	$ 250.8	$ 38.4	$ 576.9
2012	$ 255.5	$ 39.1	$ 586.9	$ 209.3	$ 32.0	$ 480.9	$ 432.8	$ 66.2	$ 994.4
2013	$ 395.8	$ 60.6	$ 909.0	$ 309.6	$ 47.4	$ 711.2	$ 641.7	$ 98.2	$ 1,473.9
2014	$ 505.7	$ 77.3	$ 1,162.4	$ 368.7	$ 56.4	$ 847.5	$ 766.0	$ 117.1	$ 1,760.9
2015	$ 607.6	$ 92.9	$ 1,397.5	$ 419.8	$ 64.2	$ 965.5	$ 861.6	$ 131.8	$ 1,981.6
2016	$ 702.0	$ 107.2	$ 1,614.3	$ 466.3	$ 71.2	$ 1,072.3	$ 938.7	$ 143.4	$ 2,158.7
2017	$ 787.6	$ 120.3	$ 1,813.0	$ 509.4	$ 77.8	$ 1,172.6	$ 1,002.6	$ 153.1	$ 2,307.8
2018	$ 862.2	$ 131.5	$ 1,986.3	$ 550.0	$ 83.9	$ 1,267.0	$ 1,056.6	$ 161.1	$ 2,434.2
2019	$ 925.2	$ 140.9	$ 2,135.1	$ 588.5	$ 89.6	$ 1,358.1	$ 1,103.2	$ 168.1	$ 2,545.9
2020	$ 980.1	$ 149.2	$ 2,262.8	$ 625.3	$ 95.2	$ 1,443.7	$ 1,144.0	$ 174.2	$ 2,641.2
2021	$ 1,028.7	$ 156.5	$ 2,375.2	$ 660.7	$ 100.5	$ 1,525.5	$ 1,180.3	$ 179.5	$ 2,725.1
2022	$ 1,072.4	$ 163.1	$ 2,480.1	$ 694.8	$ 105.7	$ 1,606.9	$ 1,212.9	$ 184.4	$ 2,805.3
2023	$ 1,112.0	$ 169.1	$ 2,572.4	$ 727.8	$ 110.7	$ 1,683.6	$ 1,242.7	$ 189.0	$ 2,874.8
2024	$ 1,148.3	$ 174.6	$ 2,657.5	$ 759.7	$ 115.5	$ 1,758.2	$ 1,270.1	$ 193.1	$ 2,939.4
2025	$ 1,182.0	$ 179.4	$ 2,735.5	$ 790.8	$ 120.0	$ 1,830.2	$ 1,295.7	$ 196.7	$ 2,998.8
2026	$ 1,213.4	$ 183.9	$ 2,810.7	$ 821.1	$ 124.5	$ 1,901.9	$ 1,319.8	$ 200.1	$ 3,057.1
2027	$ 1,242.9	$ 188.2	$ 2,883.5	$ 850.6	$ 128.8	$ 1,973.3	$ 1,342.6	$ 203.3	$ 3,114.8
2028	$ 1,254.4	$ 190.1	$ 2,908.6	$ 868.0	$ 131.5	$ 2,012.6	$ 1,346.8	$ 204.1	$ 3,122.7
2029	$ 1,277.6	$ 193.4	$ 2,965.2	$ 893.7	$ 135.3	$ 2,074.2	$ 1,364.2	$ 206.5	$ 3,166.1
Total	**$ 16,749.1**	**$ 2,547.2**	**$ 38,706.4**	**$ 11,288.8**	**$ 1,716.9**	**$ 26,086.9**	**$ 19,875.7**	**$ 3,023.9**	**$ 45,915.3**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38b, E.38f, and E.38j.

Exhibit F.2i Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving ≥1,000,000 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 46.4	$ 7.1	$ 106.8	$ 44.2	$ 6.8	$ 101.5	$ 87.2	$ 13.4	$ 200.5
2011	$ 120.2	$ 18.4	$ 276.4	$ 104.5	$ 16.0	$ 240.5	$ 213.5	$ 32.7	$ 491.0
2012	$ 217.4	$ 33.3	$ 499.5	$ 178.2	$ 27.3	$ 409.3	$ 368.4	$ 56.4	$ 846.3
2013	$ 336.8	$ 51.6	$ 773.7	$ 263.5	$ 40.3	$ 605.3	$ 546.1	$ 83.6	$ 1,254.4
2014	$ 430.3	$ 65.8	$ 989.3	$ 313.8	$ 48.0	$ 721.3	$ 651.9	$ 99.7	$ 1,498.7
2015	$ 517.1	$ 79.1	$ 1,189.3	$ 357.3	$ 54.6	$ 821.7	$ 733.3	$ 112.1	$ 1,686.5
2016	$ 597.4	$ 91.3	$ 1,373.9	$ 396.8	$ 60.6	$ 912.6	$ 798.9	$ 122.0	$ 1,837.2
2017	$ 670.3	$ 102.4	$ 1,543.0	$ 433.5	$ 66.2	$ 997.9	$ 853.2	$ 130.3	$ 1,964.1
2018	$ 733.8	$ 111.9	$ 1,690.5	$ 468.1	$ 71.4	$ 1,078.3	$ 899.2	$ 137.1	$ 2,071.7
2019	$ 787.4	$ 119.9	$ 1,817.1	$ 500.8	$ 76.3	$ 1,155.8	$ 938.9	$ 143.0	$ 2,166.7
2020	$ 834.1	$ 127.0	$ 1,925.8	$ 532.2	$ 81.0	$ 1,228.7	$ 973.6	$ 148.3	$ 2,247.8
2021	$ 875.5	$ 133.2	$ 2,021.4	$ 562.3	$ 85.5	$ 1,298.3	$ 1,004.5	$ 152.8	$ 2,319.3
2022	$ 912.6	$ 138.8	$ 2,110.7	$ 591.3	$ 89.9	$ 1,367.6	$ 1,032.3	$ 157.0	$ 2,387.4
2023	$ 946.4	$ 143.9	$ 2,189.3	$ 619.4	$ 94.2	$ 1,432.8	$ 1,057.6	$ 160.9	$ 2,446.6
2024	$ 977.3	$ 148.6	$ 2,261.7	$ 646.6	$ 98.3	$ 1,496.3	$ 1,081.0	$ 164.3	$ 2,501.6
2025	$ 1,005.9	$ 152.7	$ 2,328.1	$ 673.0	$ 102.2	$ 1,557.6	$ 1,102.7	$ 167.4	$ 2,552.2
2026	$ 1,032.7	$ 156.5	$ 2,392.0	$ 698.8	$ 105.9	$ 1,618.6	$ 1,123.2	$ 170.3	$ 2,601.8
2027	$ 1,057.8	$ 160.2	$ 2,454.0	$ 723.9	$ 109.6	$ 1,679.4	$ 1,142.6	$ 173.0	$ 2,650.9
2028	$ 1,067.6	$ 161.8	$ 2,475.4	$ 738.7	$ 111.9	$ 1,712.9	$ 1,146.2	$ 173.7	$ 2,657.6
2029	$ 1,087.3	$ 164.6	$ 2,523.6	$ 760.6	$ 115.1	$ 1,765.3	$ 1,161.0	$ 175.7	$ 2,694.5
Total	**$ 14,254.5**	**$ 2,167.8**	**$ 32,941.4**	**$ 9,607.4**	**$ 1,461.1**	**$ 22,201.5**	**$ 16,915.4**	**$ 2,573.5**	**$ 39,076.6**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38b, E.38f, and E.38j.

Exhibit F.2j Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (All Surface Water Systems)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 130.8	$ 20.0	$ 300.8	$ 124.0	$ 19.0	$ 285.1	$ 245.4	$ 37.6	$ 564.2
2011	$ 338.6	$ 51.8	$ 778.8	$ 293.8	$ 45.0	$ 675.7	$ 600.8	$ 92.0	$ 1,381.8
2012	$ 612.6	$ 93.8	$ 1,407.4	$ 500.8	$ 76.6	$ 1,150.4	$ 1,037.0	$ 158.7	$ 2,382.3
2013	$ 949.0	$ 145.3	$ 2,179.9	$ 740.8	$ 113.4	$ 1,701.7	$ 1,537.6	$ 235.4	$ 3,531.9
2014	$ 1,237.1	$ 189.1	$ 2,843.9	$ 905.4	$ 138.4	$ 2,081.3	$ 1,882.0	$ 287.7	$ 4,326.3
2015	$ 1,506.7	$ 230.4	$ 3,465.2	$ 1,046.5	$ 160.0	$ 2,406.7	$ 2,152.0	$ 329.1	$ 4,949.2
2016	$ 1,751.2	$ 267.5	$ 4,027.2	$ 1,168.2	$ 178.5	$ 2,686.6	$ 2,360.7	$ 360.6	$ 5,428.8
2017	$ 1,972.9	$ 301.3	$ 4,541.5	$ 1,280.4	$ 195.5	$ 2,947.4	$ 2,531.8	$ 386.6	$ 5,828.0
2018	$ 2,167.8	$ 330.5	$ 4,994.2	$ 1,385.7	$ 211.3	$ 3,192.4	$ 2,675.8	$ 408.0	$ 6,164.5
2019	$ 2,334.5	$ 355.6	$ 5,387.3	$ 1,485.4	$ 226.3	$ 3,427.9	$ 2,799.2	$ 426.4	$ 6,459.8
2020	$ 2,479.3	$ 377.5	$ 5,724.1	$ 1,580.6	$ 240.7	$ 3,649.2	$ 2,906.8	$ 442.6	$ 6,711.1
2021	$ 2,606.9	$ 396.5	$ 6,019.2	$ 1,671.9	$ 254.3	$ 3,860.3	$ 3,002.1	$ 456.6	$ 6,931.5
2022	$ 2,721.1	$ 413.8	$ 6,293.4	$ 1,759.9	$ 267.6	$ 4,070.3	$ 3,087.6	$ 469.5	$ 7,140.9
2023	$ 2,824.5	$ 429.6	$ 6,534.2	$ 1,844.9	$ 280.6	$ 4,267.9	$ 3,165.2	$ 481.4	$ 7,322.3
2024	$ 2,919.2	$ 443.8	$ 6,755.6	$ 1,927.3	$ 293.0	$ 4,460.2	$ 3,236.6	$ 492.0	$ 7,490.3
2025	$ 3,006.6	$ 456.4	$ 6,958.4	$ 2,007.3	$ 304.7	$ 4,645.7	$ 3,303.0	$ 501.4	$ 7,644.4
2026	$ 3,088.0	$ 468.1	$ 7,153.0	$ 2,085.2	$ 316.1	$ 4,830.1	$ 3,365.3	$ 510.1	$ 7,795.2
2027	$ 3,164.5	$ 479.1	$ 7,341.5	$ 2,161.1	$ 327.2	$ 5,013.8	$ 3,424.2	$ 518.5	$ 7,944.0
2028	$ 3,194.9	$ 484.2	$ 7,407.8	$ 2,206.4	$ 334.4	$ 5,115.9	$ 3,435.4	$ 520.6	$ 7,965.5
2029	$ 3,254.9	$ 492.6	$ 7,554.2	$ 2,272.6	$ 343.9	$ 5,274.3	$ 3,480.4	$ 526.7	$ 8,077.5
Total	**$ 42,261.4**	**$ 6,426.8**	**$ 97,667.6**	**$ 28,448.2**	**$ 4,326.4**	**$ 65,742.7**	**$ 50,228.9**	**$ 7,641.4**	**$ 116,039.6**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38b, E.38f, and E.38j.

Exhibit F.2k Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving <100 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.1
2011	$ 0.0	$ 0.0	$ 0.1	$ 0.0	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.2
2012	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.3
2013	$ 0.1	$ 0.0	$ 0.3	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.4
2014	$ 0.2	$ 0.0	$ 0.4	$ 0.1	$ 0.0	$ 0.3	$ 0.3	$ 0.0	$ 0.6
2015	$ 0.2	$ 0.0	$ 0.5	$ 0.2	$ 0.0	$ 0.4	$ 0.3	$ 0.1	$ 0.8
2016	$ 0.3	$ 0.0	$ 0.6	$ 0.2	$ 0.0	$ 0.4	$ 0.4	$ 0.1	$ 0.9
2017	$ 0.3	$ 0.0	$ 0.7	$ 0.2	$ 0.0	$ 0.5	$ 0.4	$ 0.1	$ 1.0
2018	$ 0.4	$ 0.1	$ 0.8	$ 0.2	$ 0.0	$ 0.5	$ 0.5	$ 0.1	$ 1.1
2019	$ 0.4	$ 0.1	$ 0.9	$ 0.2	$ 0.0	$ 0.6	$ 0.5	$ 0.1	$ 1.1
2020	$ 0.4	$ 0.1	$ 1.0	$ 0.3	$ 0.0	$ 0.6	$ 0.5	$ 0.1	$ 1.2
2021	$ 0.5	$ 0.1	$ 1.0	$ 0.3	$ 0.0	$ 0.7	$ 0.5	$ 0.1	$ 1.2
2022	$ 0.5	$ 0.1	$ 1.1	$ 0.3	$ 0.0	$ 0.7	$ 0.6	$ 0.1	$ 1.3
2023	$ 0.5	$ 0.1	$ 1.1	$ 0.3	$ 0.0	$ 0.7	$ 0.6	$ 0.1	$ 1.3
2024	$ 0.5	$ 0.1	$ 1.2	$ 0.3	$ 0.1	$ 0.8	$ 0.6	$ 0.1	$ 1.4
2025	$ 0.5	$ 0.1	$ 1.2	$ 0.3	$ 0.1	$ 0.8	$ 0.6	$ 0.1	$ 1.4
2026	$ 0.5	$ 0.1	$ 1.3	$ 0.4	$ 0.1	$ 0.8	$ 0.6	$ 0.1	$ 1.4
2027	$ 0.6	$ 0.1	$ 1.3	$ 0.4	$ 0.1	$ 0.9	$ 0.6	$ 0.1	$ 1.4
2028	$ 0.6	$ 0.1	$ 1.3	$ 0.4	$ 0.1	$ 0.9	$ 0.6	$ 0.1	$ 1.4
2029	$ 0.6	$ 0.1	$ 1.3	$ 0.4	$ 0.1	$ 0.9	$ 0.6	$ 0.1	$ 1.5
Total	**$ 7.2**	**$ 1.1**	**$ 16.6**	**$ 4.7**	**$ 0.7**	**$ 10.9**	**$ 8.7**	**$ 1.3**	**$ 20.0**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38c, E.38g, and E.38k.

Exhibit F.2l Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving 100-499 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.1	$ 0.0	$ 0.3	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.5
2011	$ 0.3	$ 0.0	$ 0.7	$ 0.3	$ 0.0	$ 0.6	$ 0.6	$ 0.1	$ 1.3
2012	$ 0.6	$ 0.1	$ 1.3	$ 0.4	$ 0.1	$ 1.0	$ 1.0	$ 0.1	$ 2.2
2013	$ 0.9	$ 0.1	$ 2.1	$ 0.6	$ 0.1	$ 1.5	$ 1.4	$ 0.2	$ 3.3
2014	$ 1.3	$ 0.2	$ 3.0	$ 0.9	$ 0.1	$ 2.1	$ 2.0	$ 0.3	$ 4.5
2015	$ 1.7	$ 0.3	$ 4.0	$ 1.2	$ 0.2	$ 2.7	$ 2.5	$ 0.4	$ 5.8
2016	$ 2.1	$ 0.3	$ 4.8	$ 1.3	$ 0.2	$ 3.1	$ 2.9	$ 0.4	$ 6.7
2017	$ 2.4	$ 0.4	$ 5.5	$ 1.5	$ 0.2	$ 3.5	$ 3.2	$ 0.5	$ 7.4
2018	$ 2.7	$ 0.4	$ 6.2	$ 1.7	$ 0.3	$ 3.8	$ 3.4	$ 0.5	$ 7.9
2019	$ 2.9	$ 0.4	$ 6.7	$ 1.8	$ 0.3	$ 4.2	$ 3.6	$ 0.6	$ 8.4
2020	$ 3.1	$ 0.5	$ 7.3	$ 2.0	$ 0.3	$ 4.5	$ 3.8	$ 0.6	$ 8.8
2021	$ 3.3	$ 0.5	$ 7.7	$ 2.1	$ 0.3	$ 4.8	$ 4.0	$ 0.6	$ 9.1
2022	$ 3.5	$ 0.5	$ 8.1	$ 2.2	$ 0.3	$ 5.1	$ 4.1	$ 0.6	$ 9.5
2023	$ 3.7	$ 0.6	$ 8.5	$ 2.3	$ 0.4	$ 5.4	$ 4.2	$ 0.6	$ 9.7
2024	$ 3.8	$ 0.6	$ 8.8	$ 2.5	$ 0.4	$ 5.7	$ 4.3	$ 0.7	$ 10.0
2025	$ 3.9	$ 0.6	$ 9.1	$ 2.6	$ 0.4	$ 6.0	$ 4.4	$ 0.7	$ 10.2
2026	$ 4.0	$ 0.6	$ 9.4	$ 2.7	$ 0.4	$ 6.2	$ 4.5	$ 0.7	$ 10.4
2027	$ 4.2	$ 0.6	$ 9.6	$ 2.8	$ 0.4	$ 6.5	$ 4.6	$ 0.7	$ 10.6
2028	$ 4.2	$ 0.6	$ 9.7	$ 2.9	$ 0.4	$ 6.6	$ 4.6	$ 0.7	$ 10.7
2029	$ 4.3	$ 0.6	$ 9.9	$ 3.0	$ 0.4	$ 6.9	$ 4.7	$ 0.7	$ 10.8
Total	**$ 53.1**	**$ 8.1**	**$ 122.7**	**$ 34.8**	**$ 5.3**	**$ 80.4**	**$ 64.0**	**$ 9.7**	**$ 147.8**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38c, E.38g, and E.38k.

Exhibit F.2m Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving 500-999 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.1	$ 0.0	$ 0.3	$ 0.1	$ 0.0	$ 0.3	$ 0.2	$ 0.0	$ 0.5
2011	$ 0.3	$ 0.1	$ 0.8	$ 0.3	$ 0.0	$ 0.6	$ 0.6	$ 0.1	$ 1.3
2012	$ 0.6	$ 0.1	$ 1.4	$ 0.5	$ 0.1	$ 1.1	$ 1.0	$ 0.2	$ 2.3
2013	$ 1.0	$ 0.1	$ 2.2	$ 0.7	$ 0.1	$ 1.6	$ 1.5	$ 0.2	$ 3.5
2014	$ 1.4	$ 0.2	$ 3.2	$ 1.0	$ 0.1	$ 2.2	$ 2.1	$ 0.3	$ 4.8
2015	$ 1.8	$ 0.3	$ 4.2	$ 1.2	$ 0.2	$ 2.8	$ 2.7	$ 0.4	$ 6.2
2016	$ 2.2	$ 0.3	$ 5.1	$ 1.4	$ 0.2	$ 3.3	$ 3.1	$ 0.5	$ 7.1
2017	$ 2.5	$ 0.4	$ 5.9	$ 1.6	$ 0.2	$ 3.7	$ 3.4	$ 0.5	$ 7.8
2018	$ 2.8	$ 0.4	$ 6.5	$ 1.8	$ 0.3	$ 4.1	$ 3.7	$ 0.6	$ 8.4
2019	$ 3.1	$ 0.5	$ 7.2	$ 1.9	$ 0.3	$ 4.5	$ 3.9	$ 0.6	$ 8.9
2020	$ 3.3	$ 0.5	$ 7.7	$ 2.1	$ 0.3	$ 4.8	$ 4.1	$ 0.6	$ 9.4
2021	$ 3.6	$ 0.5	$ 8.2	$ 2.2	$ 0.3	$ 5.1	$ 4.2	$ 0.6	$ 9.7
2022	$ 3.7	$ 0.6	$ 8.6	$ 2.4	$ 0.4	$ 5.5	$ 4.4	$ 0.7	$ 10.1
2023	$ 3.9	$ 0.6	$ 9.0	$ 2.5	$ 0.4	$ 5.8	$ 4.5	$ 0.7	$ 10.4
2024	$ 4.0	$ 0.6	$ 9.4	$ 2.6	$ 0.4	$ 6.1	$ 4.6	$ 0.7	$ 10.6
2025	$ 4.2	$ 0.6	$ 9.7	$ 2.7	$ 0.4	$ 6.3	$ 4.7	$ 0.7	$ 10.9
2026	$ 4.3	$ 0.7	$ 10.0	$ 2.9	$ 0.4	$ 6.6	$ 4.8	$ 0.7	$ 11.1
2027	$ 4.4	$ 0.7	$ 10.2	$ 3.0	$ 0.5	$ 6.9	$ 4.9	$ 0.7	$ 11.3
2028	$ 4.5	$ 0.7	$ 10.4	$ 3.0	$ 0.5	$ 7.1	$ 4.9	$ 0.7	$ 11.3
2029	$ 4.6	$ 0.7	$ 10.6	$ 3.1	$ 0.5	$ 7.3	$ 5.0	$ 0.7	$ 11.5
Total	**$ 56.5**	**$ 8.6**	**$ 130.5**	**$ 37.0**	**$ 5.6**	**$ 85.5**	**$ 68.0**	**$ 10.3**	**$ 157.2**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38c, E.38g, and E.38k.

Exhibit F.2n Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving 1,000-3,299 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.4	$ 0.1	$ 0.9	$ 0.3	$ 0.1	$ 0.8	$ 0.7	$ 0.1	$ 1.6
2011	$ 1.0	$ 0.2	$ 2.4	$ 0.8	$ 0.1	$ 1.9	$ 1.8	$ 0.3	$ 4.1
2012	$ 1.9	$ 0.3	$ 4.3	$ 1.4	$ 0.2	$ 3.2	$ 3.1	$ 0.5	$ 7.1
2013	$ 2.9	$ 0.4	$ 6.7	$ 2.1	$ 0.3	$ 4.8	$ 4.6	$ 0.7	$ 10.6
2014	$ 4.1	$ 0.6	$ 9.5	$ 2.9	$ 0.4	$ 6.6	$ 6.3	$ 1.0	$ 14.5
2015	$ 5.5	$ 0.8	$ 12.7	$ 3.7	$ 0.6	$ 8.6	$ 8.1	$ 1.2	$ 18.7
2016	$ 6.7	$ 1.0	$ 15.3	$ 4.3	$ 0.7	$ 10.0	$ 9.3	$ 1.4	$ 21.5
2017	$ 7.7	$ 1.2	$ 17.7	$ 4.9	$ 0.7	$ 11.2	$ 10.3	$ 1.6	$ 23.7
2018	$ 8.6	$ 1.3	$ 19.8	$ 5.4	$ 0.8	$ 12.4	$ 11.1	$ 1.7	$ 25.5
2019	$ 9.4	$ 1.4	$ 21.7	$ 5.8	$ 0.9	$ 13.5	$ 11.7	$ 1.8	$ 27.0
2020	$ 10.1	$ 1.5	$ 23.3	$ 6.3	$ 1.0	$ 14.5	$ 12.2	$ 1.9	$ 28.3
2021	$ 10.7	$ 1.6	$ 24.8	$ 6.7	$ 1.0	$ 15.5	$ 12.7	$ 1.9	$ 29.4
2022	$ 11.3	$ 1.7	$ 26.1	$ 7.1	$ 1.1	$ 16.5	$ 13.1	$ 2.0	$ 30.4
2023	$ 11.8	$ 1.8	$ 27.2	$ 7.5	$ 1.1	$ 17.4	$ 13.5	$ 2.1	$ 31.3
2024	$ 12.2	$ 1.9	$ 28.2	$ 7.9	$ 1.2	$ 18.3	$ 13.8	$ 2.1	$ 32.0
2025	$ 12.6	$ 1.9	$ 29.2	$ 8.3	$ 1.3	$ 19.1	$ 14.2	$ 2.1	$ 32.8
2026	$ 13.0	$ 2.0	$ 30.1	$ 8.6	$ 1.3	$ 20.0	$ 14.4	$ 2.2	$ 33.4
2027	$ 13.3	$ 2.0	$ 30.9	$ 9.0	$ 1.4	$ 20.8	$ 14.7	$ 2.2	$ 34.1
2028	$ 13.5	$ 2.0	$ 31.3	$ 9.2	$ 1.4	$ 21.3	$ 14.8	$ 2.2	$ 34.2
2029	$ 13.8	$ 2.1	$ 31.9	$ 9.5	$ 1.4	$ 22.1	$ 15.0	$ 2.3	$ 34.7
Total	**$ 170.4**	**$ 25.9**	**$ 394.0**	**$ 111.7**	**$ 17.0**	**$ 258.3**	**$ 205.4**	**$ 31.2**	**$ 474.7**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38c, E.38g, and E.38k.

Exhibit F.2o Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving 3,300-9,999 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.6	$ 0.1	$ 1.5	$ 0.5	$ 0.1	$ 1.2	$ 1.1	$ 0.2	$ 2.6
2011	$ 1.6	$ 0.3	$ 3.8	$ 1.3	$ 0.2	$ 3.0	$ 2.8	$ 0.4	$ 6.4
2012	$ 3.0	$ 0.5	$ 6.8	$ 2.2	$ 0.3	$ 5.1	$ 4.9	$ 0.7	$ 11.2
2013	$ 4.6	$ 0.7	$ 10.6	$ 3.3	$ 0.5	$ 7.6	$ 7.3	$ 1.1	$ 16.7
2014	$ 6.5	$ 1.0	$ 15.1	$ 4.5	$ 0.7	$ 10.4	$ 10.0	$ 1.5	$ 22.9
2015	$ 8.8	$ 1.3	$ 20.2	$ 5.9	$ 0.9	$ 13.6	$ 12.9	$ 2.0	$ 29.6
2016	$ 10.5	$ 1.6	$ 24.3	$ 6.9	$ 1.0	$ 15.8	$ 14.8	$ 2.3	$ 33.9
2017	$ 12.1	$ 1.9	$ 27.9	$ 7.7	$ 1.2	$ 17.7	$ 16.3	$ 2.5	$ 37.4
2018	$ 13.6	$ 2.1	$ 31.3	$ 8.5	$ 1.3	$ 19.6	$ 17.5	$ 2.7	$ 40.3
2019	$ 14.9	$ 2.3	$ 34.3	$ 9.2	$ 1.4	$ 21.3	$ 18.5	$ 2.8	$ 42.7
2020	$ 16.0	$ 2.4	$ 36.9	$ 9.9	$ 1.5	$ 22.9	$ 19.4	$ 3.0	$ 44.7
2021	$ 17.0	$ 2.6	$ 39.2	$ 10.6	$ 1.6	$ 24.5	$ 20.1	$ 3.1	$ 46.5
2022	$ 17.8	$ 2.7	$ 41.2	$ 11.3	$ 1.7	$ 26.0	$ 20.8	$ 3.2	$ 48.1
2023	$ 18.6	$ 2.8	$ 43.0	$ 11.9	$ 1.8	$ 27.5	$ 21.4	$ 3.3	$ 49.4
2024	$ 19.3	$ 2.9	$ 44.7	$ 12.5	$ 1.9	$ 28.9	$ 21.9	$ 3.3	$ 50.7
2025	$ 19.9	$ 3.0	$ 46.1	$ 13.1	$ 2.0	$ 30.3	$ 22.4	$ 3.4	$ 51.8
2026	$ 20.5	$ 3.1	$ 47.6	$ 13.6	$ 2.1	$ 31.6	$ 22.8	$ 3.5	$ 52.9
2027	$ 21.1	$ 3.2	$ 48.9	$ 14.2	$ 2.1	$ 32.9	$ 23.3	$ 3.5	$ 53.9
2028	$ 21.3	$ 3.2	$ 49.5	$ 14.5	$ 2.2	$ 33.7	$ 23.3	$ 3.5	$ 54.1
2029	$ 21.8	$ 3.3	$ 50.5	$ 15.0	$ 2.3	$ 34.9	$ 23.7	$ 3.6	$ 54.9
Total	**$ 269.6**	**$ 41.0**	**$ 623.2**	**$ 176.7**	**$ 26.9**	**$ 408.5**	**$ 324.9**	**$ 49.4**	**$ 750.9**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38c, E.38g, and E.38k.

Exhibit F.2p Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving 10,000-49,999 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 1.0	$ 0.1	$ 2.2	$ 0.8	$ 0.1	$ 1.9	$ 1.7	$ 0.3	$ 3.9
2011	$ 2.5	$ 0.4	$ 5.7	$ 2.0	$ 0.3	$ 4.5	$ 4.2	$ 0.7	$ 9.8
2012	$ 4.5	$ 0.7	$ 10.4	$ 3.4	$ 0.5	$ 7.7	$ 7.4	$ 1.1	$ 17.0
2013	$ 7.0	$ 1.1	$ 16.1	$ 5.0	$ 0.8	$ 11.5	$ 11.1	$ 1.7	$ 25.4
2014	$ 9.9	$ 1.5	$ 22.9	$ 6.9	$ 1.1	$ 15.8	$ 15.1	$ 2.3	$ 34.7
2015	$ 12.8	$ 2.0	$ 29.5	$ 8.5	$ 1.3	$ 19.7	$ 18.6	$ 2.8	$ 42.8
2016	$ 15.2	$ 2.3	$ 35.0	$ 9.8	$ 1.5	$ 22.6	$ 21.1	$ 3.2	$ 48.5
2017	$ 17.4	$ 2.7	$ 40.0	$ 11.0	$ 1.7	$ 25.2	$ 23.1	$ 3.5	$ 53.1
2018	$ 19.3	$ 2.9	$ 44.5	$ 12.0	$ 1.8	$ 27.7	$ 24.7	$ 3.8	$ 56.8
2019	$ 21.1	$ 3.2	$ 48.6	$ 13.0	$ 2.0	$ 30.1	$ 26.0	$ 4.0	$ 60.1
2020	$ 22.6	$ 3.4	$ 52.1	$ 14.0	$ 2.1	$ 32.4	$ 27.2	$ 4.1	$ 62.8
2021	$ 23.9	$ 3.6	$ 55.1	$ 14.9	$ 2.3	$ 34.5	$ 28.2	$ 4.3	$ 65.1
2022	$ 25.0	$ 3.8	$ 57.9	$ 15.8	$ 2.4	$ 36.6	$ 29.1	$ 4.4	$ 67.3
2023	$ 26.1	$ 4.0	$ 60.3	$ 16.7	$ 2.5	$ 38.6	$ 29.9	$ 4.5	$ 69.1
2024	$ 27.0	$ 4.1	$ 62.5	$ 17.5	$ 2.7	$ 40.6	$ 30.6	$ 4.7	$ 70.8
2025	$ 27.9	$ 4.2	$ 64.6	$ 18.3	$ 2.8	$ 42.4	$ 31.3	$ 4.7	$ 72.3
2026	$ 28.7	$ 4.4	$ 66.5	$ 19.1	$ 2.9	$ 44.3	$ 31.9	$ 4.8	$ 73.8
2027	$ 29.5	$ 4.5	$ 68.4	$ 19.9	$ 3.0	$ 46.2	$ 32.4	$ 4.9	$ 75.2
2028	$ 29.8	$ 4.5	$ 69.1	$ 20.4	$ 3.1	$ 47.2	$ 32.5	$ 4.9	$ 75.5
2029	$ 30.4	$ 4.6	$ 70.5	$ 21.0	$ 3.2	$ 48.8	$ 33.0	$ 5.0	$ 76.5
Total	**$ 381.5**	**$ 58.0**	**$ 881.7**	**$ 250.2**	**$ 38.0**	**$ 578.4**	**$ 459.0**	**$ 69.8**	**$ 1,060.5**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38c, E.38g, and E.38k.

Exhibit F.2q Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving 50,000-99,999 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.4	$ 0.1	$ 0.9	$ 0.3	$ 0.1	$ 0.8	$ 0.7	$ 0.1	$ 1.6
2011	$ 1.0	$ 0.2	$ 2.4	$ 0.8	$ 0.1	$ 1.9	$ 1.8	$ 0.3	$ 4.1
2012	$ 1.9	$ 0.3	$ 4.4	$ 1.4	$ 0.2	$ 3.2	$ 3.1	$ 0.5	$ 7.1
2013	$ 2.9	$ 0.4	$ 6.7	$ 2.1	$ 0.3	$ 4.8	$ 4.6	$ 0.7	$ 10.6
2014	$ 4.0	$ 0.6	$ 9.1	$ 2.7	$ 0.4	$ 6.2	$ 6.0	$ 0.9	$ 13.7
2015	$ 4.8	$ 0.7	$ 11.1	$ 3.2	$ 0.5	$ 7.3	$ 6.9	$ 1.1	$ 15.8
2016	$ 5.6	$ 0.9	$ 12.9	$ 3.6	$ 0.5	$ 8.2	$ 7.6	$ 1.2	$ 17.5
2017	$ 6.3	$ 1.0	$ 14.5	$ 3.9	$ 0.6	$ 9.1	$ 8.2	$ 1.3	$ 18.8
2018	$ 6.9	$ 1.1	$ 16.0	$ 4.3	$ 0.7	$ 9.9	$ 8.7	$ 1.3	$ 20.0
2019	$ 7.5	$ 1.1	$ 17.2	$ 4.6	$ 0.7	$ 10.7	$ 9.1	$ 1.4	$ 21.0
2020	$ 7.9	$ 1.2	$ 18.3	$ 4.9	$ 0.8	$ 11.4	$ 9.5	$ 1.4	$ 21.9
2021	$ 8.4	$ 1.3	$ 19.3	$ 5.3	$ 0.8	$ 12.1	$ 9.8	$ 1.5	$ 22.6
2022	$ 8.7	$ 1.3	$ 20.2	$ 5.6	$ 0.8	$ 12.8	$ 10.1	$ 1.5	$ 23.3
2023	$ 9.1	$ 1.4	$ 21.0	$ 5.8	$ 0.9	$ 13.5	$ 10.3	$ 1.6	$ 23.9
2024	$ 9.4	$ 1.4	$ 21.7	$ 6.1	$ 0.9	$ 14.2	$ 10.6	$ 1.6	$ 24.4
2025	$ 9.7	$ 1.5	$ 22.4	$ 6.4	$ 1.0	$ 14.8	$ 10.8	$ 1.6	$ 24.9
2026	$ 9.9	$ 1.5	$ 23.0	$ 6.7	$ 1.0	$ 15.4	$ 11.0	$ 1.7	$ 25.4
2027	$ 10.2	$ 1.5	$ 23.6	$ 6.9	$ 1.0	$ 16.0	$ 11.2	$ 1.7	$ 25.9
2028	$ 10.3	$ 1.6	$ 23.8	$ 7.1	$ 1.1	$ 16.4	$ 11.2	$ 1.7	$ 25.9
2029	$ 10.5	$ 1.6	$ 24.3	$ 7.3	$ 1.1	$ 16.9	$ 11.3	$ 1.7	$ 26.3
Total	**$ 135.3**	**$ 20.6**	**$ 312.8**	**$ 89.0**	**$ 13.5**	**$ 205.6**	**$ 162.2**	**$ 24.7**	**$ 374.8**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38c, E.38g, and E.38k.

Exhibit F.2r Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving 100,000-999,999 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 1.1	$ 0.2	$ 2.6	$ 0.9	$ 0.1	$ 2.2	$ 2.0	$ 0.3	$ 4.6
2011	$ 2.9	$ 0.4	$ 6.7	$ 2.3	$ 0.3	$ 5.2	$ 4.9	$ 0.8	$ 11.3
2012	$ 5.3	$ 0.8	$ 12.1	$ 3.9	$ 0.6	$ 9.0	$ 8.6	$ 1.3	$ 19.7
2013	$ 8.1	$ 1.2	$ 18.7	$ 5.8	$ 0.9	$ 13.4	$ 12.8	$ 2.0	$ 29.5
2014	$ 10.4	$ 1.6	$ 23.9	$ 7.0	$ 1.1	$ 16.1	$ 15.5	$ 2.4	$ 35.6
2015	$ 12.4	$ 1.9	$ 28.6	$ 8.1	$ 1.2	$ 18.5	$ 17.5	$ 2.7	$ 40.3
2016	$ 14.3	$ 2.2	$ 32.9	$ 9.0	$ 1.4	$ 20.7	$ 19.2	$ 2.9	$ 44.1
2017	$ 16.0	$ 2.4	$ 36.8	$ 9.9	$ 1.5	$ 22.8	$ 20.5	$ 3.1	$ 47.3
2018	$ 17.5	$ 2.7	$ 40.3	$ 10.8	$ 1.6	$ 24.8	$ 21.7	$ 3.3	$ 50.0
2019	$ 18.7	$ 2.9	$ 43.3	$ 11.6	$ 1.8	$ 26.8	$ 22.7	$ 3.5	$ 52.3
2020	$ 19.8	$ 3.0	$ 45.8	$ 12.4	$ 1.9	$ 28.6	$ 23.5	$ 3.6	$ 54.3
2021	$ 20.8	$ 3.2	$ 48.1	$ 13.1	$ 2.0	$ 30.3	$ 24.3	$ 3.7	$ 56.0
2022	$ 21.7	$ 3.3	$ 50.2	$ 13.8	$ 2.1	$ 32.0	$ 24.9	$ 3.8	$ 57.7
2023	$ 22.5	$ 3.4	$ 52.1	$ 14.6	$ 2.2	$ 33.7	$ 25.5	$ 3.9	$ 59.1
2024	$ 23.3	$ 3.5	$ 53.8	$ 15.2	$ 2.3	$ 35.3	$ 26.1	$ 4.0	$ 60.4
2025	$ 23.9	$ 3.6	$ 55.4	$ 15.9	$ 2.4	$ 36.8	$ 26.6	$ 4.0	$ 61.6
2026	$ 24.6	$ 3.7	$ 56.9	$ 16.5	$ 2.5	$ 38.3	$ 27.1	$ 4.1	$ 62.8
2027	$ 25.2	$ 3.8	$ 58.4	$ 17.2	$ 2.6	$ 39.8	$ 27.5	$ 4.2	$ 63.9
2028	$ 25.4	$ 3.9	$ 58.9	$ 17.6	$ 2.7	$ 40.7	$ 27.6	$ 4.2	$ 64.0
2029	$ 25.9	$ 3.9	$ 60.1	$ 18.1	$ 2.7	$ 42.0	$ 28.0	$ 4.2	$ 64.9
Total	**$ 339.9**	**$ 51.7**	**$ 785.5**	**$ 223.7**	**$ 34.0**	**$ 517.0**	**$ 406.6**	**$ 61.9**	**$ 939.2**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38c, E.38g, and E.38k.

Exhibit F.2s Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving ≥1,000,000 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.2	$ 0.0	$ 0.4	$ 0.2	$ 0.0	$ 0.4	$ 0.3	$ 0.1	$ 0.8
2011	$ 0.5	$ 0.1	$ 1.1	$ 0.4	$ 0.1	$ 0.9	$ 0.8	$ 0.1	$ 1.9
2012	$ 0.9	$ 0.1	$ 2.0	$ 0.6	$ 0.1	$ 1.5	$ 1.4	$ 0.2	$ 3.3
2013	$ 1.4	$ 0.2	$ 3.1	$ 1.0	$ 0.1	$ 2.2	$ 2.1	$ 0.3	$ 4.9
2014	$ 1.7	$ 0.3	$ 4.0	$ 1.2	$ 0.2	$ 2.7	$ 2.6	$ 0.4	$ 5.9
2015	$ 2.1	$ 0.3	$ 4.8	$ 1.3	$ 0.2	$ 3.1	$ 2.9	$ 0.4	$ 6.7
2016	$ 2.4	$ 0.4	$ 5.5	$ 1.5	$ 0.2	$ 3.5	$ 3.2	$ 0.5	$ 7.3
2017	$ 2.7	$ 0.4	$ 6.1	$ 1.7	$ 0.3	$ 3.8	$ 3.4	$ 0.5	$ 7.9
2018	$ 2.9	$ 0.4	$ 6.7	$ 1.8	$ 0.3	$ 4.1	$ 3.6	$ 0.6	$ 8.3
2019	$ 3.1	$ 0.5	$ 7.2	$ 1.9	$ 0.3	$ 4.5	$ 3.8	$ 0.6	$ 8.7
2020	$ 3.3	$ 0.5	$ 7.6	$ 2.1	$ 0.3	$ 4.8	$ 3.9	$ 0.6	$ 9.0
2021	$ 3.5	$ 0.5	$ 8.0	$ 2.2	$ 0.3	$ 5.0	$ 4.0	$ 0.6	$ 9.3
2022	$ 3.6	$ 0.5	$ 8.4	$ 2.3	$ 0.4	$ 5.3	$ 4.2	$ 0.6	$ 9.6
2023	$ 3.7	$ 0.6	$ 8.7	$ 2.4	$ 0.4	$ 5.6	$ 4.3	$ 0.6	$ 9.8
2024	$ 3.9	$ 0.6	$ 9.0	$ 2.5	$ 0.4	$ 5.9	$ 4.3	$ 0.7	$ 10.1
2025	$ 4.0	$ 0.6	$ 9.2	$ 2.6	$ 0.4	$ 6.1	$ 4.4	$ 0.7	$ 10.3
2026	$ 4.1	$ 0.6	$ 9.5	$ 2.8	$ 0.4	$ 6.4	$ 4.5	$ 0.7	$ 10.4
2027	$ 4.2	$ 0.6	$ 9.7	$ 2.9	$ 0.4	$ 6.6	$ 4.6	$ 0.7	$ 10.6
2028	$ 4.2	$ 0.6	$ 9.8	$ 2.9	$ 0.4	$ 6.8	$ 4.6	$ 0.7	$ 10.7
2029	$ 4.3	$ 0.7	$ 10.0	$ 3.0	$ 0.5	$ 7.0	$ 4.7	$ 0.7	$ 10.8
Total	**$ 56.6**	**$ 8.6**	**$ 130.8**	**$ 37.3**	**$ 5.7**	**$ 86.1**	**$ 67.7**	**$ 10.3**	**$ 156.4**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38c, E.38g, and E.38k.

Exhibit F.2t Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (All Ground Water Systems)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 4.0	$ 0.6	$ 9.1	$ 3.4	$ 0.5	$ 7.7	$ 7.1	$ 1.1	$ 16.2
2011	$ 10.3	$ 1.6	$ 23.8	$ 8.1	$ 1.2	$ 18.6	$ 17.6	$ 2.7	$ 40.4
2012	$ 18.7	$ 2.9	$ 43.0	$ 13.9	$ 2.1	$ 31.9	$ 30.6	$ 4.7	$ 70.3
2013	$ 29.0	$ 4.4	$ 66.6	$ 20.7	$ 3.2	$ 47.6	$ 45.7	$ 7.0	$ 104.9
2014	$ 39.5	$ 6.0	$ 90.9	$ 27.1	$ 4.1	$ 62.4	$ 59.7	$ 9.1	$ 137.2
2015	$ 50.2	$ 7.7	$ 115.5	$ 33.3	$ 5.1	$ 76.6	$ 72.5	$ 11.1	$ 166.7
2016	$ 59.3	$ 9.1	$ 136.4	$ 38.1	$ 5.8	$ 87.5	$ 81.5	$ 12.5	$ 187.5
2017	$ 67.4	$ 10.3	$ 155.2	$ 42.4	$ 6.5	$ 97.6	$ 88.8	$ 13.6	$ 204.3
2018	$ 74.7	$ 11.4	$ 172.0	$ 46.4	$ 7.1	$ 107.0	$ 94.7	$ 14.4	$ 218.3
2019	$ 81.1	$ 12.3	$ 187.1	$ 50.3	$ 7.7	$ 116.0	$ 99.8	$ 15.2	$ 230.3
2020	$ 86.7	$ 13.2	$ 200.1	$ 53.9	$ 8.2	$ 124.5	$ 104.1	$ 15.8	$ 240.3
2021	$ 91.5	$ 13.9	$ 211.3	$ 57.4	$ 8.7	$ 132.6	$ 107.8	$ 16.4	$ 249.0
2022	$ 95.9	$ 14.6	$ 221.7	$ 60.8	$ 9.2	$ 140.6	$ 111.2	$ 16.9	$ 257.1
2023	$ 99.8	$ 15.2	$ 230.9	$ 64.0	$ 9.7	$ 148.2	$ 114.1	$ 17.4	$ 264.0
2024	$ 103.4	$ 15.7	$ 239.2	$ 67.2	$ 10.2	$ 155.5	$ 116.8	$ 17.8	$ 270.3
2025	$ 106.6	$ 16.2	$ 246.8	$ 70.3	$ 10.7	$ 162.6	$ 119.3	$ 18.1	$ 276.1
2026	$ 109.7	$ 16.6	$ 254.1	$ 73.3	$ 11.1	$ 169.7	$ 121.6	$ 18.4	$ 281.6
2027	$ 112.6	$ 17.0	$ 261.1	$ 76.2	$ 11.5	$ 176.7	$ 123.7	$ 18.7	$ 287.1
2028	$ 113.8	$ 17.2	$ 263.8	$ 78.0	$ 11.8	$ 180.8	$ 124.2	$ 18.8	$ 287.9
2029	$ 116.0	$ 17.6	$ 269.2	$ 80.5	$ 12.2	$ 186.9	$ 125.8	$ 19.0	$ 291.9
Total	**$ 1,470.1**	**$ 223.5**	**$ 3,397.8**	**$ 965.1**	**$ 146.7**	**$ 2,230.6**	**$ 1,766.5**	**$ 268.7**	**$ 4,081.5**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38c, E.38g, and E.38k.

Exhibit F.2u Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases
(All Water Systems)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 134.8	$ 20.6	$ 309.9	$ 127.4	$ 19.5	$ 292.9	$ 252.5	$ 38.6	$ 580.4
2011	$ 348.9	$ 53.4	$ 802.5	$ 301.9	$ 46.2	$ 694.3	$ 618.3	$ 94.7	$ 1,422.2
2012	$ 631.3	$ 96.6	$ 1,450.4	$ 514.7	$ 78.8	$ 1,182.3	$ 1,067.6	$ 163.4	$ 2,452.6
2013	$ 978.0	$ 149.7	$ 2,246.4	$ 761.6	$ 116.6	$ 1,749.2	$ 1,583.3	$ 242.4	$ 3,636.8
2014	$ 1,276.7	$ 195.2	$ 2,934.8	$ 932.5	$ 142.6	$ 2,143.7	$ 1,941.7	$ 296.8	$ 4,463.5
2015	$ 1,557.0	$ 238.1	$ 3,580.7	$ 1,079.8	$ 165.1	$ 2,483.3	$ 2,224.5	$ 340.1	$ 5,115.9
2016	$ 1,810.5	$ 276.6	$ 4,163.6	$ 1,206.3	$ 184.3	$ 2,774.1	$ 2,442.2	$ 373.1	$ 5,616.3
2017	$ 2,040.4	$ 311.6	$ 4,696.7	$ 1,322.8	$ 202.0	$ 3,045.0	$ 2,620.6	$ 400.2	$ 6,032.4
2018	$ 2,242.5	$ 341.9	$ 5,166.3	$ 1,432.1	$ 218.4	$ 3,299.3	$ 2,770.5	$ 422.4	$ 6,382.8
2019	$ 2,415.6	$ 368.0	$ 5,574.4	$ 1,535.7	$ 233.9	$ 3,543.8	$ 2,899.0	$ 441.6	$ 6,690.0
2020	$ 2,566.0	$ 390.7	$ 5,924.2	$ 1,634.5	$ 248.9	$ 3,773.6	$ 3,010.9	$ 458.5	$ 6,951.5
2021	$ 2,698.5	$ 410.4	$ 6,230.5	$ 1,729.3	$ 263.0	$ 3,992.9	$ 3,109.9	$ 473.0	$ 7,180.5
2022	$ 2,817.0	$ 428.4	$ 6,515.1	$ 1,820.7	$ 276.9	$ 4,210.9	$ 3,198.7	$ 486.4	$ 7,398.0
2023	$ 2,924.3	$ 444.8	$ 6,765.0	$ 1,909.0	$ 290.3	$ 4,416.1	$ 3,279.3	$ 498.8	$ 7,586.3
2024	$ 3,022.5	$ 459.5	$ 6,994.8	$ 1,994.5	$ 303.2	$ 4,615.7	$ 3,353.4	$ 509.8	$ 7,760.7
2025	$ 3,113.2	$ 472.6	$ 7,205.2	$ 2,077.6	$ 315.4	$ 4,808.3	$ 3,422.3	$ 519.5	$ 7,920.4
2026	$ 3,197.7	$ 484.7	$ 7,407.1	$ 2,158.4	$ 327.2	$ 4,999.8	$ 3,486.8	$ 528.5	$ 8,076.9
2027	$ 3,277.1	$ 496.2	$ 7,602.6	$ 2,237.3	$ 338.7	$ 5,190.4	$ 3,548.0	$ 537.2	$ 8,231.1
2028	$ 3,308.6	$ 501.4	$ 7,671.6	$ 2,284.4	$ 346.2	$ 5,296.6	$ 3,559.6	$ 539.4	$ 8,253.4
2029	$ 3,370.9	$ 510.1	$ 7,823.4	$ 2,353.1	$ 356.1	$ 5,461.2	$ 3,606.2	$ 545.7	$ 8,369.4
Total	**$ 43,731.5**	**$ 6,650.4**	**$ 101,065.4**	**$ 29,413.3**	**$ 4,473.1**	**$ 67,973.3**	**$ 51,995.4**	**$ 7,910.1**	**$ 120,121.1**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.2j and F.2t.

Exhibit F.2v Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 3% Discount Rate
(All Water Systems)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 116.3	$ 17.8	$ 267.3	$ 109.9	$ 16.8	$ 252.6	$ 217.8	$ 33.3	$ 500.7
2011	$ 292.2	$ 44.7	$ 672.1	$ 252.8	$ 38.7	$ 581.5	$ 517.8	$ 79.3	$ 1,191.1
2012	$ 513.3	$ 78.6	$ 1,179.3	$ 418.5	$ 64.0	$ 961.3	$ 868.1	$ 132.8	$ 1,994.2
2013	$ 772.0	$ 118.2	$ 1,773.3	$ 601.2	$ 92.0	$ 1,380.9	$ 1,249.9	$ 191.3	$ 2,870.9
2014	$ 978.5	$ 149.6	$ 2,249.3	$ 714.7	$ 109.3	$ 1,642.9	$ 1,488.1	$ 227.5	$ 3,420.9
2015	$ 1,158.5	$ 177.2	$ 2,664.4	$ 803.4	$ 122.9	$ 1,847.8	$ 1,655.2	$ 253.1	$ 3,806.7
2016	$ 1,307.9	$ 199.8	$ 3,007.9	$ 871.4	$ 133.1	$ 2,004.0	$ 1,764.3	$ 269.5	$ 4,057.4
2017	$ 1,431.1	$ 218.5	$ 3,294.2	$ 927.8	$ 141.7	$ 2,135.7	$ 1,838.0	$ 280.7	$ 4,231.0
2018	$ 1,527.0	$ 232.8	$ 3,518.0	$ 975.2	$ 148.7	$ 2,246.7	$ 1,886.6	$ 287.7	$ 4,346.4
2019	$ 1,597.0	$ 243.3	$ 3,685.3	$ 1,015.2	$ 154.7	$ 2,342.9	$ 1,916.6	$ 292.0	$ 4,422.9
2020	$ 1,647.0	$ 250.8	$ 3,802.5	$ 1,049.1	$ 159.7	$ 2,422.2	$ 1,932.6	$ 294.3	$ 4,461.9
2021	$ 1,681.6	$ 255.8	$ 3,882.6	$ 1,077.7	$ 163.9	$ 2,488.2	$ 1,938.0	$ 294.8	$ 4,474.7
2022	$ 1,704.3	$ 259.2	$ 3,941.8	$ 1,101.5	$ 167.5	$ 2,547.6	$ 1,935.3	$ 294.3	$ 4,475.9
2023	$ 1,717.7	$ 261.3	$ 3,973.7	$ 1,121.3	$ 170.5	$ 2,594.0	$ 1,926.3	$ 293.0	$ 4,456.2
2024	$ 1,723.7	$ 262.0	$ 3,989.1	$ 1,137.4	$ 172.9	$ 2,632.3	$ 1,912.4	$ 290.7	$ 4,425.8
2025	$ 1,723.7	$ 261.6	$ 3,989.3	$ 1,150.3	$ 174.6	$ 2,662.2	$ 1,894.8	$ 287.6	$ 4,385.4
2026	$ 1,718.9	$ 260.6	$ 3,981.7	$ 1,160.3	$ 175.9	$ 2,687.6	$ 1,874.3	$ 284.1	$ 4,341.7
2027	$ 1,710.3	$ 259.0	$ 3,967.8	$ 1,167.6	$ 176.8	$ 2,708.8	$ 1,851.7	$ 280.4	$ 4,295.7
2028	$ 1,676.5	$ 254.1	$ 3,887.1	$ 1,157.5	$ 175.4	$ 2,683.8	$ 1,803.6	$ 273.3	$ 4,181.9
2029	$ 1,658.3	$ 251.0	$ 3,848.6	$ 1,157.6	$ 175.2	$ 2,686.5	$ 1,774.0	$ 268.5	$ 4,117.2
Total	**$ 26,655.9**	**$ 4,055.6**	**$ 61,575.3**	**$ 17,970.5**	**$ 2,734.3**	**$ 41,509.6**	**$ 32,245.5**	**$ 4,908.1**	**$ 74,458.4**
Ann.	**$ 1,530.8**	**$ 232.9**	**$ 3,536.1**	**$ 1,032.0**	**$ 157.0**	**$ 2,383.8**	**$ 1,851.8**	**$ 281.9**	**$ 4,276.0**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibit F.2u.

Exhibit F.2w Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 7% Discount Rate
(All Water Systems)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 96.1	$ 14.7	$ 221.0	$ 90.8	$ 13.9	$ 208.8	$ 180.0	$ 27.6	$ 413.8
2011	$ 232.5	$ 35.6	$ 534.8	$ 201.1	$ 30.8	$ 462.6	$ 412.0	$ 63.1	$ 947.7
2012	$ 393.2	$ 60.2	$ 903.2	$ 320.5	$ 49.0	$ 736.3	$ 664.9	$ 101.7	$ 1,527.4
2013	$ 569.2	$ 87.1	$ 1,307.4	$ 443.2	$ 67.8	$ 1,018.1	$ 921.5	$ 141.1	$ 2,116.7
2014	$ 694.4	$ 106.2	$ 1,596.3	$ 507.2	$ 77.5	$ 1,166.0	$ 1,056.1	$ 161.5	$ 2,427.9
2015	$ 791.5	$ 121.0	$ 1,820.3	$ 548.9	$ 83.9	$ 1,262.4	$ 1,130.8	$ 172.9	$ 2,600.7
2016	$ 860.1	$ 131.4	$ 1,978.1	$ 573.1	$ 87.5	$ 1,317.9	$ 1,160.3	$ 177.2	$ 2,668.3
2017	$ 905.9	$ 138.3	$ 2,085.4	$ 587.3	$ 89.7	$ 1,352.0	$ 1,163.6	$ 177.7	$ 2,678.4
2018	$ 930.6	$ 141.9	$ 2,143.8	$ 594.3	$ 90.6	$ 1,369.1	$ 1,149.7	$ 175.3	$ 2,648.6
2019	$ 936.8	$ 142.7	$ 2,161.9	$ 595.6	$ 90.7	$ 1,374.4	$ 1,124.3	$ 171.3	$ 2,594.5
2020	$ 930.0	$ 141.6	$ 2,147.2	$ 592.4	$ 90.2	$ 1,367.7	$ 1,091.3	$ 166.2	$ 2,519.5
2021	$ 914.1	$ 139.0	$ 2,110.5	$ 585.8	$ 89.1	$ 1,352.5	$ 1,053.4	$ 160.2	$ 2,432.3
2022	$ 891.8	$ 135.6	$ 2,062.5	$ 576.4	$ 87.6	$ 1,333.1	$ 1,012.6	$ 154.0	$ 2,342.0
2023	$ 865.2	$ 131.6	$ 2,001.5	$ 564.8	$ 85.9	$ 1,306.6	$ 970.2	$ 147.6	$ 2,244.5
2024	$ 835.8	$ 127.0	$ 1,934.1	$ 551.5	$ 83.8	$ 1,276.3	$ 927.3	$ 141.0	$ 2,145.9
2025	$ 804.5	$ 122.1	$ 1,862.0	$ 536.9	$ 81.5	$ 1,242.6	$ 884.4	$ 134.2	$ 2,046.8
2026	$ 772.3	$ 117.1	$ 1,788.9	$ 521.3	$ 79.0	$ 1,207.5	$ 842.1	$ 127.7	$ 1,950.7
2027	$ 739.7	$ 112.0	$ 1,716.0	$ 505.0	$ 76.5	$ 1,171.5	$ 800.8	$ 121.3	$ 1,857.9
2028	$ 697.9	$ 105.8	$ 1,618.3	$ 481.9	$ 73.0	$ 1,117.3	$ 750.9	$ 113.8	$ 1,741.0
2029	$ 664.6	$ 100.6	$ 1,542.4	$ 463.9	$ 70.2	$ 1,076.7	$ 710.9	$ 107.6	$ 1,650.0
Total	**$ 14,526.2**	**$ 2,211.5**	**$ 33,535.5**	**$ 9,841.9**	**$ 1,498.5**	**$ 22,719.3**	**$ 18,007.2**	**$ 2,742.7**	**$ 41,554.5**
Ann.	**$ 1,246.5**	**$ 189.8**	**$ 2,877.7**	**$ 844.5**	**$ 128.6**	**$ 1,949.6**	**$ 1,545.2**	**$ 235.4**	**$ 3,565.8**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibit F.2u.

Exhibit F.2x Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 3% Discount Rate, by Small & Large Size Categories (Surface Water Systems)

TTHM - Preferred Alternative

	Small Systems									Large Systems								
	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model			Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 2.9	$ 0.4	$ 6.6	$ 2.4	$ 0.4	$ 5.6	$ 5.1	$ 0.8	$ 11.8	$ 110.0	$ 16.8	$ 252.8	$ 104.6	$ 16.0	$ 240.4	$ 206.6	$ 31.6	$ 474.9
2011	$ 7.3	$ 1.1	$ 16.7	$ 5.7	$ 0.9	$ 13.0	$ 12.3	$ 1.9	$ 28.4	$ 276.3	$ 42.3	$ 635.5	$ 240.4	$ 36.8	$ 552.9	$ 490.8	$ 75.2	$ 1,128.9
2012	$ 12.8	$ 2.0	$ 29.3	$ 9.5	$ 1.5	$ 21.8	$ 20.9	$ 3.2	$ 48.0	$ 485.4	$ 74.3	$ 1,115.0	$ 397.7	$ 60.9	$ 913.6	$ 822.3	$ 125.8	$ 1,889.1
2013	$ 19.2	$ 2.9	$ 44.1	$ 13.7	$ 2.1	$ 31.5	$ 30.3	$ 4.6	$ 69.5	$ 730.0	$ 111.7	$ 1,676.7	$ 571.1	$ 87.4	$ 1,311.8	$ 1,183.6	$ 181.2	$ 2,718.6
2014	$ 26.4	$ 4.0	$ 60.8	$ 18.3	$ 2.8	$ 42.1	$ 40.2	$ 6.1	$ 92.4	$ 921.7	$ 140.9	$ 2,118.8	$ 675.6	$ 103.3	$ 1,553.1	$ 1,402.2	$ 214.4	$ 3,223.4
2015	$ 34.4	$ 5.3	$ 79.0	$ 23.2	$ 3.5	$ 53.3	$ 50.4	$ 7.7	$ 115.9	$ 1,086.8	$ 166.2	$ 2,499.4	$ 755.5	$ 115.5	$ 1,737.5	$ 1,550.9	$ 237.2	$ 3,566.8
2016	$ 40.1	$ 6.1	$ 92.3	$ 26.1	$ 4.0	$ 60.0	$ 56.2	$ 8.6	$ 129.1	$ 1,225.0	$ 187.1	$ 2,817.1	$ 817.9	$ 124.9	$ 1,880.9	$ 1,649.2	$ 251.9	$ 3,792.8
2017	$ 44.8	$ 6.8	$ 103.2	$ 28.4	$ 4.3	$ 65.5	$ 60.1	$ 9.2	$ 138.2	$ 1,339.0	$ 204.5	$ 3,082.1	$ 869.6	$ 132.8	$ 2,001.8	$ 1,715.7	$ 262.0	$ 3,949.4
2018	$ 48.7	$ 7.4	$ 112.1	$ 30.4	$ 4.6	$ 70.1	$ 62.7	$ 9.6	$ 144.4	$ 1,427.5	$ 217.7	$ 3,288.7	$ 913.1	$ 139.2	$ 2,103.7	$ 1,759.4	$ 268.3	$ 4,053.3
2019	$ 51.7	$ 7.9	$ 119.4	$ 32.1	$ 4.9	$ 74.1	$ 64.4	$ 9.8	$ 148.7	$ 1,491.7	$ 227.2	$ 3,442.3	$ 949.9	$ 144.7	$ 2,192.1	$ 1,786.2	$ 272.1	$ 4,122.0
2020	$ 54.0	$ 8.2	$ 124.7	$ 33.6	$ 5.1	$ 77.5	$ 65.5	$ 10.0	$ 151.2	$ 1,537.4	$ 234.1	$ 3,549.3	$ 981.0	$ 149.4	$ 2,264.8	$ 1,800.3	$ 274.1	$ 4,156.4
2021	$ 55.7	$ 8.5	$ 128.5	$ 34.8	$ 5.3	$ 80.4	$ 66.1	$ 10.0	$ 152.5	$ 1,568.9	$ 238.6	$ 3,622.4	$ 1,007.1	$ 153.2	$ 2,325.2	$ 1,804.8	$ 274.5	$ 4,167.0
2022	$ 56.8	$ 8.6	$ 131.3	$ 35.9	$ 5.5	$ 82.9	$ 66.2	$ 10.1	$ 153.2	$ 1,589.6	$ 241.7	$ 3,676.3	$ 1,028.9	$ 156.5	$ 2,379.7	$ 1,801.8	$ 274.0	$ 4,167.2
2023	$ 57.5	$ 8.7	$ 133.1	$ 36.7	$ 5.6	$ 85.0	$ 66.1	$ 10.1	$ 153.0	$ 1,601.6	$ 243.6	$ 3,705.1	$ 1,046.9	$ 159.2	$ 2,422.0	$ 1,793.1	$ 272.7	$ 4,148.1
2024	$ 57.9	$ 8.8	$ 134.1	$ 37.5	$ 5.7	$ 86.8	$ 65.8	$ 10.0	$ 152.3	$ 1,606.8	$ 244.3	$ 3,718.5	$ 1,061.6	$ 161.4	$ 2,456.8	$ 1,780.0	$ 270.6	$ 4,119.4
2025	$ 58.1	$ 8.8	$ 134.5	$ 38.1	$ 5.8	$ 88.2	$ 65.3	$ 9.9	$ 151.1	$ 1,606.5	$ 243.9	$ 3,718.1	$ 1,073.3	$ 162.9	$ 2,484.0	$ 1,763.5	$ 267.7	$ 4,081.4
2026	$ 58.1	$ 8.8	$ 134.6	$ 38.6	$ 5.9	$ 89.5	$ 64.7	$ 9.8	$ 149.8	$ 1,601.8	$ 242.8	$ 3,710.5	$ 1,082.3	$ 164.1	$ 2,507.0	$ 1,744.3	$ 264.4	$ 4,040.6
2027	$ 58.0	$ 8.8	$ 134.5	$ 39.0	$ 5.9	$ 90.5	$ 63.9	$ 9.7	$ 148.3	$ 1,593.6	$ 241.3	$ 3,697.0	$ 1,088.9	$ 164.9	$ 2,526.1	$ 1,723.2	$ 260.9	$ 3,997.6
2028	$ 56.9	$ 8.6	$ 132.0	$ 38.8	$ 5.9	$ 90.0	$ 62.3	$ 9.4	$ 144.4	$ 1,561.9	$ 236.7	$ 3,621.5	$ 1,079.1	$ 163.5	$ 2,502.2	$ 1,678.4	$ 254.3	$ 3,891.6
2029	$ 56.4	$ 8.5	$ 130.9	$ 38.9	$ 5.9	$ 90.4	$ 61.3	$ 9.3	$ 142.2	$ 1,544.8	$ 233.8	$ 3,585.3	$ 1,079.0	$ 163.3	$ 2,504.2	$ 1,650.8	$ 249.8	$ 3,831.3
Total	**$ 857.7**	**$ 130.5**	**$ 1,981.7**	**$ 561.9**	**$ 85.5**	**$ 1,298.2**	**$ 1,049.6**	**$ 159.7**	**$ 2,424.3**	**$ 24,906.1**	**$ 3,789.4**	**$ 57,532.7**	**$ 16,823.4**	**$ 2,559.8**	**$ 38,859.5**	**$ 30,107.1**	**$ 4,582.7**	**$ 69,519.7**
Ann.	**$ 49.3**	**$ 7.5**	**$ 113.8**	**$ 32.3**	**$ 4.9**	**$ 74.6**	**$ 60.3**	**$ 9.2**	**$ 139.2**	**$ 1,430.3**	**$ 217.6**	**$ 3,304.0**	**$ 966.1**	**$ 147.0**	**$ 2,231.6**	**$ 1,729.0**	**$ 263.2**	**$ 3,992.4**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.2a through F.2i.

Exhibit F.2y Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 7% Discount Rate, by Small & Large Size Categories (Surface Water Systems)

TTHM - Preferred Alternative

	Small Systems									Large Systems								
	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model			Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 2.4	$ 0.4	$ 5.5	$ 2.0	$ 0.3	$ 4.6	$ 4.2	$ 0.6	$ 9.7	$ 90.9	$ 13.9	$ 209.0	$ 86.4	$ 13.2	$ 198.7	$ 170.7	$ 26.1	$ 392.5
2011	$ 5.8	$ 0.9	$ 13.3	$ 4.5	$ 0.7	$ 10.4	$ 9.8	$ 1.5	$ 22.6	$ 219.8	$ 33.7	$ 505.6	$ 191.2	$ 29.3	$ 439.9	$ 390.5	$ 59.8	$ 898.2
2012	$ 9.8	$ 1.5	$ 22.5	$ 7.3	$ 1.1	$ 16.7	$ 16.0	$ 2.4	$ 36.7	$ 371.7	$ 56.9	$ 854.0	$ 304.6	$ 46.6	$ 699.7	$ 629.8	$ 96.4	$ 1,446.9
2013	$ 14.2	$ 2.2	$ 32.5	$ 10.1	$ 1.5	$ 23.2	$ 22.3	$ 3.4	$ 51.3	$ 538.2	$ 82.4	$ 1,236.2	$ 421.1	$ 64.5	$ 967.2	$ 872.6	$ 133.6	$ 2,004.3
2014	$ 18.8	$ 2.9	$ 43.1	$ 13.0	$ 2.0	$ 29.9	$ 28.5	$ 4.4	$ 65.5	$ 654.2	$ 100.0	$ 1,503.8	$ 479.5	$ 73.3	$ 1,102.2	$ 995.2	$ 152.1	$ 2,287.7
2015	$ 23.5	$ 3.6	$ 54.0	$ 15.8	$ 2.4	$ 36.4	$ 34.4	$ 5.3	$ 79.2	$ 742.5	$ 113.5	$ 1,707.6	$ 516.1	$ 78.9	$ 1,187.0	$ 1,059.5	$ 162.0	$ 2,436.8
2016	$ 26.4	$ 4.0	$ 60.7	$ 17.1	$ 2.6	$ 39.4	$ 36.9	$ 5.6	$ 84.9	$ 805.6	$ 123.1	$ 1,852.6	$ 537.9	$ 82.2	$ 1,236.9	$ 1,084.6	$ 165.7	$ 2,494.3
2017	$ 28.4	$ 4.3	$ 65.3	$ 18.0	$ 2.7	$ 41.5	$ 38.0	$ 5.8	$ 87.5	$ 847.6	$ 129.4	$ 1,951.2	$ 550.5	$ 84.1	$ 1,267.2	$ 1,086.1	$ 165.8	$ 2,500.2
2018	$ 29.7	$ 4.5	$ 68.3	$ 18.5	$ 2.8	$ 42.7	$ 38.2	$ 5.8	$ 88.0	$ 869.9	$ 132.6	$ 2,004.1	$ 556.5	$ 84.8	$ 1,282.0	$ 1,072.2	$ 163.5	$ 2,470.0
2019	$ 30.3	$ 4.6	$ 70.0	$ 18.8	$ 2.9	$ 43.5	$ 37.8	$ 5.8	$ 87.2	$ 875.0	$ 133.3	$ 2,019.3	$ 557.2	$ 84.9	$ 1,285.9	$ 1,047.8	$ 159.6	$ 2,418.0
2020	$ 30.5	$ 4.6	$ 70.4	$ 19.0	$ 2.9	$ 43.8	$ 37.0	$ 5.6	$ 85.4	$ 868.1	$ 132.2	$ 2,004.2	$ 553.9	$ 84.3	$ 1,278.9	$ 1,016.6	$ 154.8	$ 2,347.0
2021	$ 30.3	$ 4.6	$ 69.9	$ 18.9	$ 2.9	$ 43.7	$ 35.9	$ 5.5	$ 82.9	$ 852.8	$ 129.7	$ 1,969.0	$ 547.4	$ 83.3	$ 1,263.9	$ 981.0	$ 149.2	$ 2,265.0
2022	$ 29.7	$ 4.5	$ 68.7	$ 18.8	$ 2.9	$ 43.4	$ 34.7	$ 5.3	$ 80.2	$ 831.7	$ 126.5	$ 1,923.6	$ 538.4	$ 81.9	$ 1,245.2	$ 942.8	$ 143.4	$ 2,180.5
2023	$ 29.0	$ 4.4	$ 67.0	$ 18.5	$ 2.8	$ 42.8	$ 33.3	$ 5.1	$ 77.0	$ 806.7	$ 122.7	$ 1,866.2	$ 527.3	$ 80.2	$ 1,219.9	$ 903.2	$ 137.4	$ 2,089.4
2024	$ 28.1	$ 4.3	$ 65.0	$ 18.2	$ 2.8	$ 42.1	$ 31.9	$ 4.8	$ 73.8	$ 779.1	$ 118.4	$ 1,803.0	$ 514.7	$ 78.2	$ 1,191.2	$ 863.1	$ 131.2	$ 1,997.3
2025	$ 27.1	$ 4.1	$ 62.8	$ 17.8	$ 2.7	$ 41.2	$ 30.5	$ 4.6	$ 70.5	$ 749.8	$ 113.8	$ 1,735.4	$ 500.9	$ 76.0	$ 1,159.4	$ 823.1	$ 124.9	$ 1,904.9
2026	$ 26.1	$ 4.0	$ 60.5	$ 17.4	$ 2.6	$ 40.2	$ 29.0	$ 4.4	$ 67.3	$ 719.7	$ 109.1	$ 1,667.1	$ 486.3	$ 73.7	$ 1,126.3	$ 783.7	$ 118.8	$ 1,815.4
2027	$ 25.1	$ 3.8	$ 58.2	$ 16.9	$ 2.6	$ 39.2	$ 27.6	$ 4.2	$ 64.1	$ 689.2	$ 104.4	$ 1,598.9	$ 470.9	$ 71.3	$ 1,092.5	$ 745.2	$ 112.8	$ 1,728.9
2028	$ 23.7	$ 3.6	$ 54.9	$ 16.2	$ 2.4	$ 37.5	$ 25.9	$ 3.9	$ 60.1	$ 650.3	$ 98.5	$ 1,507.7	$ 449.3	$ 68.1	$ 1,041.7	$ 698.8	$ 105.9	$ 1,620.2
2029	$ 22.6	$ 3.4	$ 52.4	$ 15.6	$ 2.4	$ 36.2	$ 24.6	$ 3.7	$ 57.0	$ 619.1	$ 93.7	$ 1,436.8	$ 432.4	$ 65.4	$ 1,003.6	$ 661.6	$ 100.1	$ 1,535.4
Total	**$ 461.2**	**$ 70.2**	**$ 1,065.1**	**$ 302.4**	**$ 46.0**	**$ 698.2**	**$ 576.6**	**$ 87.8**	**$ 1,331.1**	**$ 13,581.9**	**$ 2,067.8**	**$ 31,355.3**	**$ 9,222.6**	**$ 1,404.3**	**$ 21,289.3**	**$ 16,828.1**	**$ 2,563.2**	**$ 38,832.9**
Ann.	**$ 39.6**	**$ 6.0**	**$ 91.4**	**$ 25.9**	**$ 3.9**	**$ 59.9**	**$ 49.5**	**$ 7.5**	**$ 114.2**	**$ 1,165.5**	**$ 177.4**	**$ 2,690.6**	**$ 791.4**	**$ 120.5**	**$ 1,826.8**	**$ 1,444.0**	**$ 219.9**	**$ 3,332.3**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.2a through F.2i.

Exhibit F.2z Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 3% Discount Rate, by Small & Large Size Categories (Ground Water Systems)

TTHM - Preferred Alternative

	Small Systems									Large Systems								
	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model			Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 1.1	$ 0.2	$ 2.6	$ 1.0	$ 0.1	$ 2.2	$ 2.0	$ 0.3	$ 4.6	$ 2.3	$ 0.4	$ 5.3	$ 1.9	$ 0.3	$ 4.5	$ 4.1	$ 0.6	$ 9.4
2011	$ 2.8	$ 0.4	$ 6.5	$ 2.2	$ 0.3	$ 5.1	$ 4.8	$ 0.7	$ 11.1	$ 5.8	$ 0.9	$ 13.3	$ 4.5	$ 0.7	$ 10.4	$ 9.9	$ 1.5	$ 22.7
2012	$ 5.0	$ 0.8	$ 11.5	$ 3.7	$ 0.6	$ 8.5	$ 8.2	$ 1.3	$ 18.8	$ 10.2	$ 1.6	$ 23.5	$ 7.6	$ 1.2	$ 17.4	$ 16.7	$ 2.6	$ 38.3
2013	$ 7.5	$ 1.2	$ 17.3	$ 5.4	$ 0.8	$ 12.4	$ 11.9	$ 1.8	$ 27.3	$ 15.3	$ 2.3	$ 35.3	$ 11.0	$ 1.7	$ 25.2	$ 24.2	$ 3.7	$ 55.6
2014	$ 10.4	$ 1.6	$ 23.8	$ 7.2	$ 1.1	$ 16.5	$ 15.8	$ 2.4	$ 36.2	$ 19.9	$ 3.0	$ 45.8	$ 13.6	$ 2.1	$ 31.3	$ 30.0	$ 4.6	$ 68.9
2015	$ 13.5	$ 2.1	$ 31.0	$ 9.1	$ 1.4	$ 20.9	$ 19.8	$ 3.0	$ 45.4	$ 23.9	$ 3.7	$ 55.0	$ 15.7	$ 2.4	$ 36.1	$ 34.2	$ 5.2	$ 78.6
2016	$ 15.7	$ 2.4	$ 36.2	$ 10.2	$ 1.6	$ 23.5	$ 22.0	$ 3.4	$ 50.6	$ 27.1	$ 4.1	$ 62.3	$ 17.3	$ 2.6	$ 39.7	$ 36.9	$ 5.6	$ 84.8
2017	$ 17.6	$ 2.7	$ 40.5	$ 11.2	$ 1.7	$ 25.7	$ 23.5	$ 3.6	$ 54.2	$ 29.7	$ 4.5	$ 68.4	$ 18.6	$ 2.8	$ 42.7	$ 38.7	$ 5.9	$ 89.1
2018	$ 19.1	$ 2.9	$ 44.0	$ 11.9	$ 1.8	$ 27.5	$ 24.6	$ 3.7	$ 56.6	$ 31.8	$ 4.8	$ 73.2	$ 19.7	$ 3.0	$ 45.3	$ 39.9	$ 6.1	$ 92.0
2019	$ 20.3	$ 3.1	$ 46.8	$ 12.6	$ 1.9	$ 29.1	$ 25.3	$ 3.8	$ 58.3	$ 33.3	$ 5.1	$ 76.9	$ 20.6	$ 3.1	$ 47.6	$ 40.7	$ 6.2	$ 93.9
2020	$ 21.2	$ 3.2	$ 48.9	$ 13.2	$ 2.0	$ 30.4	$ 25.7	$ 3.9	$ 59.3	$ 34.4	$ 5.2	$ 79.5	$ 21.4	$ 3.3	$ 49.5	$ 41.1	$ 6.3	$ 95.0
2021	$ 21.8	$ 3.3	$ 50.4	$ 13.7	$ 2.1	$ 31.5	$ 25.9	$ 3.9	$ 59.8	$ 35.2	$ 5.4	$ 81.3	$ 22.1	$ 3.4	$ 51.1	$ 41.3	$ 6.3	$ 95.4
2022	$ 22.3	$ 3.4	$ 51.5	$ 14.1	$ 2.1	$ 32.5	$ 26.0	$ 3.9	$ 60.1	$ 35.7	$ 5.4	$ 82.7	$ 22.7	$ 3.5	$ 52.5	$ 41.3	$ 6.3	$ 95.5
2023	$ 22.6	$ 3.4	$ 52.2	$ 14.4	$ 2.2	$ 33.3	$ 25.9	$ 3.9	$ 60.0	$ 36.1	$ 5.5	$ 83.4	$ 23.2	$ 3.5	$ 53.7	$ 41.1	$ 6.3	$ 95.1
2024	$ 22.7	$ 3.5	$ 52.6	$ 14.7	$ 2.2	$ 34.0	$ 25.8	$ 3.9	$ 59.7	$ 36.2	$ 5.5	$ 83.8	$ 23.6	$ 3.6	$ 54.7	$ 40.8	$ 6.2	$ 94.5
2025	$ 22.8	$ 3.5	$ 52.8	$ 14.9	$ 2.3	$ 34.6	$ 25.6	$ 3.9	$ 59.2	$ 36.3	$ 5.5	$ 83.9	$ 24.0	$ 3.6	$ 55.5	$ 40.5	$ 6.1	$ 93.6
2026	$ 22.8	$ 3.5	$ 52.8	$ 15.1	$ 2.3	$ 35.1	$ 25.3	$ 3.8	$ 58.7	$ 36.2	$ 5.5	$ 83.8	$ 24.2	$ 3.7	$ 56.1	$ 40.0	$ 6.1	$ 92.7
2027	$ 22.7	$ 3.4	$ 52.7	$ 15.3	$ 2.3	$ 35.5	$ 25.1	$ 3.8	$ 58.1	$ 36.0	$ 5.5	$ 83.6	$ 24.4	$ 3.7	$ 56.7	$ 39.5	$ 6.0	$ 91.7
2028	$ 22.3	$ 3.4	$ 51.7	$ 15.2	$ 2.3	$ 35.3	$ 24.4	$ 3.7	$ 56.6	$ 35.3	$ 5.4	$ 81.9	$ 24.3	$ 3.7	$ 56.3	$ 38.5	$ 5.8	$ 89.2
2029	$ 22.1	$ 3.3	$ 51.3	$ 15.3	$ 2.3	$ 35.4	$ 24.0	$ 3.6	$ 55.8	$ 35.0	$ 5.3	$ 81.1	$ 24.3	$ 3.7	$ 56.5	$ 37.8	$ 5.7	$ 87.8
Total	**$ 336.3**	**$ 51.2**	**$ 777.1**	**$ 220.4**	**$ 33.5**	**$ 509.1**	**$ 411.6**	**$ 62.6**	**$ 950.6**	**$ 555.8**	**$ 84.6**	**$ 1,283.9**	**$ 364.8**	**$ 55.5**	**$ 842.8**	**$ 677.2**	**$ 103.1**	**$ 1,563.8**
Ann.	**$ 19.3**	**$ 2.9**	**$ 44.6**	**$ 12.7**	**$ 1.9**	**$ 29.2**	**$ 23.6**	**$ 3.6**	**$ 54.6**	**$ 31.9**	**$ 4.9**	**$ 73.7**	**$ 20.9**	**$ 3.2**	**$ 48.4**	**$ 38.9**	**$ 5.9**	**$ 89.8**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.2k through F.2s.

Exhibit F.2aa Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 7% Discount Rate, by Small & Large Size Categories (Ground Water Systems)

TTHM - Preferred Alternative

	Small Systems									Large Systems								
	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model			Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.9	$ 0.1	$ 2.1	$ 0.8	$ 0.1	$ 1.8	$ 1.7	$ 0.3	$ 3.8	$ 1.9	$ 0.3	$ 4.4	$ 1.6	$ 0.2	$ 3.7	$ 3.4	$ 0.5	$ 7.8
2011	$ 2.3	$ 0.3	$ 5.2	$ 1.8	$ 0.3	$ 4.1	$ 3.9	$ 0.6	$ 8.9	$ 4.6	$ 0.7	$ 10.6	$ 3.6	$ 0.6	$ 8.3	$ 7.8	$ 1.2	$ 18.0
2012	$ 3.8	$ 0.6	$ 8.8	$ 2.8	$ 0.4	$ 6.5	$ 6.3	$ 1.0	$ 14.4	$ 7.8	$ 1.2	$ 18.0	$ 5.8	$ 0.9	$ 13.3	$ 12.8	$ 2.0	$ 29.4
2013	$ 5.5	$ 0.8	$ 12.7	$ 4.0	$ 0.6	$ 9.1	$ 8.8	$ 1.3	$ 20.1	$ 11.3	$ 1.7	$ 26.0	$ 8.1	$ 1.2	$ 18.6	$ 17.8	$ 2.7	$ 41.0
2014	$ 7.4	$ 1.1	$ 16.9	$ 5.1	$ 0.8	$ 11.7	$ 11.2	$ 1.7	$ 25.7	$ 14.1	$ 2.2	$ 32.5	$ 9.7	$ 1.5	$ 22.2	$ 21.3	$ 3.3	$ 48.9
2015	$ 9.2	$ 1.4	$ 21.2	$ 6.2	$ 0.9	$ 14.3	$ 13.5	$ 2.1	$ 31.0	$ 16.3	$ 2.5	$ 37.6	$ 10.7	$ 1.6	$ 24.7	$ 23.4	$ 3.6	$ 53.7
2016	$ 10.3	$ 1.6	$ 23.8	$ 6.7	$ 1.0	$ 15.5	$ 14.5	$ 2.2	$ 33.3	$ 17.8	$ 2.7	$ 41.0	$ 11.4	$ 1.7	$ 26.1	$ 24.3	$ 3.7	$ 55.8
2017	$ 11.1	$ 1.7	$ 25.6	$ 7.1	$ 1.1	$ 16.3	$ 14.9	$ 2.3	$ 34.3	$ 18.8	$ 2.9	$ 43.3	$ 11.8	$ 1.8	$ 27.1	$ 24.5	$ 3.7	$ 56.4
2018	$ 11.6	$ 1.8	$ 26.8	$ 7.3	$ 1.1	$ 16.8	$ 15.0	$ 2.3	$ 34.5	$ 19.4	$ 3.0	$ 44.6	$ 12.0	$ 1.8	$ 27.6	$ 24.3	$ 3.7	$ 56.1
2019	$ 11.9	$ 1.8	$ 27.5	$ 7.4	$ 1.1	$ 17.1	$ 14.8	$ 2.3	$ 34.2	$ 19.5	$ 3.0	$ 45.1	$ 12.1	$ 1.8	$ 27.9	$ 23.9	$ 3.6	$ 55.1
2020	$ 12.0	$ 1.8	$ 27.6	$ 7.4	$ 1.1	$ 17.2	$ 14.5	$ 2.2	$ 33.5	$ 19.4	$ 3.0	$ 44.9	$ 12.1	$ 1.8	$ 27.9	$ 23.2	$ 3.5	$ 53.6
2021	$ 11.9	$ 1.8	$ 27.4	$ 7.4	$ 1.1	$ 17.1	$ 14.1	$ 2.1	$ 32.5	$ 19.1	$ 2.9	$ 44.2	$ 12.0	$ 1.8	$ 27.8	$ 22.5	$ 3.4	$ 51.8
2022	$ 11.6	$ 1.8	$ 26.9	$ 7.4	$ 1.1	$ 17.0	$ 13.6	$ 2.1	$ 31.4	$ 18.7	$ 2.8	$ 43.3	$ 11.9	$ 1.8	$ 27.5	$ 21.6	$ 3.3	$ 50.0
2023	$ 11.4	$ 1.7	$ 26.3	$ 7.3	$ 1.1	$ 16.8	$ 13.1	$ 2.0	$ 30.2	$ 18.2	$ 2.8	$ 42.0	$ 11.7	$ 1.8	$ 27.0	$ 20.7	$ 3.1	$ 47.9
2024	$ 11.0	$ 1.7	$ 25.5	$ 7.1	$ 1.1	$ 16.5	$ 12.5	$ 1.9	$ 28.9	$ 17.6	$ 2.7	$ 40.6	$ 11.5	$ 1.7	$ 26.5	$ 19.8	$ 3.0	$ 45.8
2025	$ 10.6	$ 1.6	$ 24.6	$ 7.0	$ 1.1	$ 16.1	$ 11.9	$ 1.8	$ 27.7	$ 16.9	$ 2.6	$ 39.2	$ 11.2	$ 1.7	$ 25.9	$ 18.9	$ 2.9	$ 43.7
2026	$ 10.2	$ 1.6	$ 23.7	$ 6.8	$ 1.0	$ 15.8	$ 11.4	$ 1.7	$ 26.4	$ 16.3	$ 2.5	$ 37.7	$ 10.9	$ 1.7	$ 25.2	$ 18.0	$ 2.7	$ 41.6
2027	$ 9.8	$ 1.5	$ 22.8	$ 6.6	$ 1.0	$ 15.4	$ 10.8	$ 1.6	$ 25.1	$ 15.6	$ 2.4	$ 36.1	$ 10.6	$ 1.6	$ 24.5	$ 17.1	$ 2.6	$ 39.7
2028	$ 9.3	$ 1.4	$ 21.5	$ 6.3	$ 1.0	$ 14.7	$ 10.2	$ 1.5	$ 23.6	$ 14.7	$ 2.2	$ 34.1	$ 10.1	$ 1.5	$ 23.4	$ 16.0	$ 2.4	$ 37.1
2029	$ 8.9	$ 1.3	$ 20.6	$ 6.1	$ 0.9	$ 14.2	$ 9.6	$ 1.5	$ 22.4	$ 14.0	$ 2.1	$ 32.5	$ 9.8	$ 1.5	$ 22.6	$ 15.2	$ 2.3	$ 35.2
Total	**$ 180.9**	**$ 27.5**	**$ 417.6**	**$ 118.6**	**$ 18.1**	**$ 273.9**	**$ 226.1**	**$ 34.4**	**$ 521.9**	**$ 302.1**	**$ 46.0**	**$ 697.6**	**$ 198.3**	**$ 30.2**	**$ 457.9**	**$ 376.4**	**$ 57.3**	**$ 868.6**
Ann.	**$ 15.5**	**$ 2.4**	**$ 35.8**	**$ 10.2**	**$ 1.5**	**$ 23.5**	**$ 19.4**	**$ 3.0**	**$ 44.8**	**$ 25.9**	**$ 3.9**	**$ 59.9**	**$ 17.0**	**$ 2.6**	**$ 39.3**	**$ 32.3**	**$ 4.9**	**$ 74.5**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.2k through F.2s.

Exhibit F.2ab Mean Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 3% Discount Rate, by System Size
(All Systems)

TTHM - Preferred Alternative

	Smoking/Lung Cancer Cessation Lag Model										
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	>1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.2	$ 0.2	$ 1.0	$ 2.5	$ 13.0	$ 11.0	$ 48.0	$ 40.2	$ 116.3
2011	$ 0.1	$ 0.4	$ 0.6	$ 2.6	$ 6.4	$ 32.8	$ 27.6	$ 120.7	$ 101.0	$ 292.2
2012	$ 0.1	$ 0.8	$ 1.0	$ 4.6	$ 11.3	$ 57.6	$ 48.5	$ 212.0	$ 177.5	$ 513.3
2013	$ 0.1	$ 1.1	$ 1.5	$ 7.0	$ 17.0	$ 86.6	$ 72.9	$ 318.8	$ 267.0	$ 772.0
2014	$ 0.2	$ 1.6	$ 2.0	$ 9.6	$ 23.4	$ 119.4	$ 95.6	$ 395.5	$ 331.1	$ 978.5
2015	$ 0.3	$ 2.0	$ 2.7	$ 12.5	$ 30.4	$ 149.6	$ 113.3	$ 461.4	$ 386.3	$ 1,158.5
2016	$ 0.3	$ 2.4	$ 3.1	$ 14.6	$ 35.5	$ 173.0	$ 128.3	$ 517.5	$ 433.3	$ 1,307.9
2017	$ 0.3	$ 2.6	$ 3.5	$ 16.3	$ 39.7	$ 192.4	$ 140.7	$ 563.6	$ 472.0	$ 1,431.1
2018	$ 0.4	$ 2.9	$ 3.8	$ 17.7	$ 43.1	$ 208.2	$ 150.5	$ 599.0	$ 501.6	$ 1,527.0
2019	$ 0.4	$ 3.0	$ 4.0	$ 18.8	$ 45.8	$ 220.5	$ 157.7	$ 624.1	$ 522.6	$ 1,597.0
2020	$ 0.4	$ 3.2	$ 4.2	$ 19.6	$ 47.8	$ 229.6	$ 162.8	$ 641.8	$ 537.5	$ 1,647.0
2021	$ 0.4	$ 3.3	$ 4.3	$ 20.2	$ 49.3	$ 236.0	$ 166.4	$ 654.0	$ 547.7	$ 1,681.6
2022	$ 0.4	$ 3.3	$ 4.4	$ 20.6	$ 50.3	$ 240.3	$ 168.7	$ 661.9	$ 554.3	$ 1,704.3
2023	$ 0.4	$ 3.4	$ 4.5	$ 20.9	$ 50.9	$ 243.0	$ 170.1	$ 666.4	$ 558.1	$ 1,717.7
2024	$ 0.4	$ 3.4	$ 4.5	$ 21.0	$ 51.3	$ 244.6	$ 170.8	$ 668.1	$ 559.5	$ 1,723.7
2025	$ 0.4	$ 3.4	$ 4.5	$ 21.1	$ 51.5	$ 245.1	$ 170.8	$ 667.7	$ 559.2	$ 1,723.7
2026	$ 0.4	$ 3.4	$ 4.5	$ 21.1	$ 51.5	$ 244.8	$ 170.4	$ 665.5	$ 557.3	$ 1,718.9
2027	$ 0.4	$ 3.4	$ 4.5	$ 21.0	$ 51.3	$ 243.9	$ 169.6	$ 661.8	$ 554.2	$ 1,710.3
2028	$ 0.4	$ 3.3	$ 4.4	$ 20.7	$ 50.4	$ 239.4	$ 166.3	$ 648.5	$ 543.1	$ 1,676.5
2029	$ 0.4	$ 3.3	$ 4.4	$ 20.5	$ 49.9	$ 237.0	$ 164.5	$ 641.3	$ 537.0	$ 1,658.3
Total	**$ 6.3**	**$ 50.4**	**$ 66.4**	**$ 311.5**	**$ 759.4**	**$ 3,656.9**	**$ 2,626.4**	**$ 10,437.7**	**$ 8,740.9**	**$ 26,655.9**
Ann.	**$ 0.4**	**$ 2.9**	**$ 3.8**	**$ 17.9**	**$ 43.6**	**$ 210.0**	**$ 150.8**	**$ 599.4**	**$ 502.0**	**$ 1,530.8**

	Smoking/Bladder Cancer Cessation Lag Model									
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	>1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.1	$ 0.2	$ 0.9	$ 2.2	$ 12.3	$ 10.4	$ 45.6	$ 38.2	$ 109.9
2011	$ 0.0	$ 0.3	$ 0.4	$ 2.1	$ 5.0	$ 28.3	$ 23.9	$ 104.8	$ 87.9	$ 252.8
2012	$ 0.1	$ 0.6	$ 0.7	$ 3.4	$ 8.4	$ 46.9	$ 39.6	$ 173.4	$ 145.4	$ 418.5
2013	$ 0.1	$ 0.8	$ 1.1	$ 5.0	$ 12.1	$ 67.4	$ 56.9	$ 249.0	$ 208.8	$ 601.2
2014	$ 0.1	$ 1.1	$ 1.4	$ 6.6	$ 16.2	$ 89.3	$ 70.6	$ 287.9	$ 241.4	$ 714.7
2015	$ 0.2	$ 1.4	$ 1.8	$ 8.4	$ 20.5	$ 106.8	$ 79.1	$ 318.4	$ 266.9	$ 803.4
2016	$ 0.2	$ 1.5	$ 2.0	$ 9.5	$ 23.1	$ 118.0	$ 86.0	$ 343.4	$ 287.8	$ 871.4
2017	$ 0.2	$ 1.7	$ 2.2	$ 10.3	$ 25.2	$ 127.1	$ 91.6	$ 364.2	$ 305.2	$ 927.8
2018	$ 0.2	$ 1.8	$ 2.4	$ 11.1	$ 26.9	$ 134.7	$ 96.4	$ 381.8	$ 319.9	$ 975.2
2019	$ 0.2	$ 1.9	$ 2.5	$ 11.7	$ 28.4	$ 141.0	$ 100.4	$ 396.7	$ 332.4	$ 1,015.2
2020	$ 0.2	$ 2.0	$ 2.6	$ 12.2	$ 29.7	$ 146.4	$ 103.8	$ 409.3	$ 342.9	$ 1,049.1
2021	$ 0.3	$ 2.0	$ 2.7	$ 12.6	$ 30.8	$ 150.9	$ 106.6	$ 419.9	$ 351.8	$ 1,077.7
2022	$ 0.3	$ 2.1	$ 2.8	$ 13.0	$ 31.7	$ 154.7	$ 109.0	$ 428.7	$ 359.1	$ 1,101.5
2023	$ 0.3	$ 2.2	$ 2.8	$ 13.3	$ 32.5	$ 157.9	$ 111.0	$ 436.0	$ 365.2	$ 1,121.3
2024	$ 0.3	$ 2.2	$ 2.9	$ 13.6	$ 33.2	$ 160.5	$ 112.6	$ 442.0	$ 370.2	$ 1,137.4
2025	$ 0.3	$ 2.2	$ 3.0	$ 13.8	$ 33.7	$ 162.6	$ 113.9	$ 446.6	$ 374.1	$ 1,150.3
2026	$ 0.3	$ 2.3	$ 3.0	$ 14.0	$ 34.2	$ 164.2	$ 114.9	$ 450.2	$ 377.1	$ 1,160.3
2027	$ 0.3	$ 2.3	$ 3.0	$ 14.2	$ 34.5	$ 165.5	$ 115.7	$ 452.9	$ 379.3	$ 1,167.6
2028	$ 0.3	$ 2.3	$ 3.0	$ 14.1	$ 34.4	$ 164.2	$ 114.7	$ 448.7	$ 375.8	$ 1,157.5
2029	$ 0.3	$ 2.3	$ 3.0	$ 14.1	$ 34.5	$ 164.4	$ 114.7	$ 448.6	$ 375.7	$ 1,157.6
Total	**$ 4.1**	**$ 33.0**	**$ 43.5**	**$ 204.1**	**$ 497.5**	**$ 2,463.0**	**$ 1,772.1**	**$ 7,048.2**	**$ 5,905.0**	**$ 17,970.5**
Ann.	**$ 0.2**	**$ 1.9**	**$ 2.5**	**$ 11.7**	**$ 28.6**	**$ 141.4**	**$ 101.8**	**$ 404.8**	**$ 339.1**	**$ 1,032.0**

	Arsenic/Bladder Cancer Cessation Lag Model									
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	>1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.3	$ 0.4	$ 1.9	$ 4.5	$ 24.4	$ 20.6	$ 90.1	$ 75.5	$ 217.8
2011	$ 0.1	$ 0.7	$ 1.0	$ 4.5	$ 10.9	$ 58.0	$ 49.0	$ 214.2	$ 179.5	$ 517.8
2012	$ 0.2	$ 1.2	$ 1.6	$ 7.6	$ 18.5	$ 97.3	$ 82.1	$ 358.9	$ 300.7	$ 868.1
2013	$ 0.2	$ 1.8	$ 2.3	$ 11.0	$ 26.8	$ 140.1	$ 118.2	$ 516.7	$ 432.8	$ 1,249.9
2014	$ 0.3	$ 2.4	$ 3.1	$ 14.6	$ 35.6	$ 185.1	$ 146.5	$ 599.0	$ 501.6	$ 1,488.1
2015	$ 0.4	$ 3.0	$ 3.9	$ 18.3	$ 44.6	$ 220.2	$ 162.9	$ 654.2	$ 547.8	$ 1,655.2
2016	$ 0.4	$ 3.3	$ 4.4	$ 20.4	$ 49.7	$ 240.7	$ 174.0	$ 692.0	$ 579.4	$ 1,764.3
2017	$ 0.4	$ 3.5	$ 4.7	$ 21.8	$ 53.2	$ 254.5	$ 181.6	$ 717.6	$ 600.8	$ 1,838.0
2018	$ 0.5	$ 3.7	$ 4.9	$ 22.8	$ 55.5	$ 263.7	$ 186.5	$ 734.3	$ 614.8	$ 1,886.6
2019	$ 0.5	$ 3.8	$ 5.0	$ 23.4	$ 57.0	$ 269.7	$ 189.6	$ 744.3	$ 623.2	$ 1,916.6
2020	$ 0.5	$ 3.8	$ 5.1	$ 23.8	$ 58.0	$ 273.3	$ 191.3	$ 749.4	$ 627.4	$ 1,932.6
2021	$ 0.5	$ 3.9	$ 5.1	$ 24.0	$ 58.5	$ 275.0	$ 191.9	$ 750.6	$ 628.5	$ 1,938.0
2022	$ 0.5	$ 3.9	$ 5.1	$ 24.1	$ 58.6	$ 275.4	$ 191.7	$ 748.9	$ 627.1	$ 1,935.3
2023	$ 0.5	$ 3.9	$ 5.1	$ 24.0	$ 58.5	$ 274.6	$ 190.9	$ 745.0	$ 623.7	$ 1,926.3
2024	$ 0.5	$ 3.9	$ 5.1	$ 23.9	$ 58.2	$ 273.1	$ 189.6	$ 739.2	$ 618.9	$ 1,912.4
2025	$ 0.5	$ 3.8	$ 5.1	$ 23.7	$ 57.8	$ 270.9	$ 187.8	$ 732.1	$ 613.0	$ 1,894.8
2026	$ 0.5	$ 3.8	$ 5.0	$ 23.5	$ 57.2	$ 268.3	$ 185.8	$ 724.0	$ 606.2	$ 1,874.3
2027	$ 0.5	$ 3.8	$ 5.0	$ 23.2	$ 56.6	$ 265.3	$ 183.6	$ 715.1	$ 598.7	$ 1,851.7
2028	$ 0.5	$ 3.7	$ 4.8	$ 22.6	$ 55.1	$ 258.5	$ 178.9	$ 696.4	$ 583.1	$ 1,803.6
2029	$ 0.5	$ 3.6	$ 4.7	$ 22.3	$ 54.3	$ 254.4	$ 176.0	$ 684.9	$ 573.4	$ 1,774.0
Total	**$ 7.7**	**$ 61.7**	**$ 81.3**	**$ 381.2**	**$ 929.3**	**$ 4,442.5**	**$ 3,178.7**	**$ 12,606.8**	**$ 10,556.3**	**$ 32,245.5**
Ann.	**$ 0.4**	**$ 3.5**	**$ 4.7**	**$ 21.9**	**$ 53.4**	**$ 255.1**	**$ 182.5**	**$ 724.0**	**$ 606.2**	**$ 1,851.8**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.2a through F.2i and F.2k through F.2s.

Exhibit F.2ac Mean Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 7% Discount Rate, by System Size
(All Systems)

TTHM - Preferred Alternative

	Smoking/Lung Cancer Cessation Lag Model											Smoking/Bladder Cancer Cessation Lag Model											Arsenic/Bladder Cancer Cessation Lag Model										
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.1	$ 0.2	$ 0.9	$ 2.1	$ 10.8	$ 9.1	$ 39.7	$ 33.2	$ 96.1	$ 0.0	$ 0.1	$ 0.2	$ 0.7	$ 1.8	$ 10.2	$ 8.6	$ 37.7	$ 31.6	$ 90.8	$ 0.0	$ 0.2	$ 0.3	$ 1.5	$ 3.7	$ 20.2	$ 17.0	$ 74.5	$ 62.4	$ 180.0
2011	$ 0.0	$ 0.3	$ 0.4	$ 2.1	$ 5.1	$ 26.1	$ 22.0	$ 96.0	$ 80.4	$ 232.5	$ 0.0	$ 0.3	$ 0.3	$ 1.6	$ 4.0	$ 22.5	$ 19.0	$ 83.4	$ 69.9	$ 201.1	$ 0.1	$ 0.6	$ 0.8	$ 3.6	$ 8.7	$ 46.2	$ 39.0	$ 170.4	$ 142.8	$ 412.0
2012	$ 0.1	$ 0.6	$ 0.8	$ 3.6	$ 8.7	$ 44.1	$ 37.1	$ 162.4	$ 135.9	$ 393.2	$ 0.1	$ 0.4	$ 0.6	$ 2.6	$ 6.4	$ 35.9	$ 30.3	$ 132.8	$ 111.4	$ 320.5	$ 0.1	$ 0.9	$ 1.2	$ 5.8	$ 14.2	$ 74.5	$ 62.9	$ 274.9	$ 230.3	$ 664.9
2013	$ 0.1	$ 0.8	$ 1.1	$ 5.1	$ 12.5	$ 63.8	$ 53.8	$ 235.1	$ 196.8	$ 569.2	$ 0.1	$ 0.6	$ 0.8	$ 3.7	$ 9.0	$ 49.7	$ 42.0	$ 183.6	$ 153.9	$ 443.2	$ 0.2	$ 1.3	$ 1.7	$ 8.1	$ 19.8	$ 103.3	$ 87.1	$ 380.9	$ 319.1	$ 921.5
2014	$ 0.1	$ 1.1	$ 1.5	$ 6.8	$ 16.6	$ 84.8	$ 67.8	$ 280.7	$ 235.0	$ 694.4	$ 0.1	$ 0.8	$ 1.0	$ 4.7	$ 11.5	$ 63.4	$ 50.1	$ 204.3	$ 171.3	$ 507.2	$ 0.2	$ 1.7	$ 2.2	$ 10.4	$ 25.2	$ 131.4	$ 104.0	$ 425.1	$ 356.0	$ 1,056.1
2015	$ 0.2	$ 1.4	$ 1.8	$ 8.5	$ 20.8	$ 102.2	$ 77.4	$ 315.2	$ 263.9	$ 791.5	$ 0.1	$ 0.9	$ 1.2	$ 5.7	$ 14.0	$ 73.0	$ 54.1	$ 217.5	$ 182.3	$ 548.9	$ 0.3	$ 2.0	$ 2.7	$ 12.5	$ 30.5	$ 150.4	$ 111.3	$ 446.9	$ 374.3	$ 1,130.8
2016	$ 0.2	$ 1.6	$ 2.0	$ 9.6	$ 23.4	$ 113.8	$ 84.4	$ 340.3	$ 285.0	$ 860.1	$ 0.1	$ 1.0	$ 1.3	$ 6.2	$ 15.2	$ 77.6	$ 56.5	$ 225.8	$ 189.2	$ 573.1	$ 0.3	$ 2.2	$ 2.9	$ 13.4	$ 32.7	$ 158.3	$ 114.5	$ 455.1	$ 381.1	$ 1,160.3
2017	$ 0.2	$ 1.7	$ 2.2	$ 10.3	$ 25.1	$ 121.8	$ 89.0	$ 356.8	$ 298.8	$ 905.9	$ 0.1	$ 1.1	$ 1.4	$ 6.5	$ 15.9	$ 80.5	$ 58.0	$ 230.6	$ 193.2	$ 587.3	$ 0.3	$ 2.2	$ 2.9	$ 13.8	$ 33.7	$ 161.1	$ 114.9	$ 454.3	$ 380.4	$ 1,163.6
2018	$ 0.2	$ 1.7	$ 2.3	$ 10.8	$ 26.3	$ 126.8	$ 91.7	$ 365.0	$ 305.7	$ 930.6	$ 0.1	$ 1.1	$ 1.4	$ 6.7	$ 16.4	$ 82.1	$ 58.7	$ 232.7	$ 195.0	$ 594.3	$ 0.3	$ 2.2	$ 3.0	$ 13.9	$ 33.8	$ 160.7	$ 113.7	$ 447.5	$ 374.7	$ 1,149.7
2019	$ 0.2	$ 1.8	$ 2.4	$ 11.0	$ 26.9	$ 129.4	$ 92.5	$ 366.1	$ 306.6	$ 936.8	$ 0.1	$ 1.1	$ 1.5	$ 6.8	$ 16.7	$ 82.7	$ 58.9	$ 232.7	$ 195.0	$ 595.6	$ 0.3	$ 2.2	$ 2.9	$ 13.7	$ 33.5	$ 158.2	$ 111.2	$ 436.6	$ 365.6	$ 1,124.3
2020	$ 0.2	$ 1.8	$ 2.4	$ 11.1	$ 27.0	$ 129.7	$ 91.9	$ 362.4	$ 303.5	$ 930.0	$ 0.1	$ 1.1	$ 1.5	$ 6.9	$ 16.8	$ 82.7	$ 58.6	$ 231.1	$ 193.6	$ 592.4	$ 0.3	$ 2.2	$ 2.9	$ 13.4	$ 32.7	$ 154.3	$ 108.0	$ 423.2	$ 354.3	$ 1,091.3
2021	$ 0.2	$ 1.8	$ 2.3	$ 11.0	$ 26.8	$ 128.3	$ 90.4	$ 355.5	$ 297.7	$ 914.1	$ 0.1	$ 1.1	$ 1.5	$ 6.9	$ 16.8	$ 82.0	$ 58.0	$ 228.2	$ 191.2	$ 585.8	$ 0.3	$ 2.1	$ 2.8	$ 13.0	$ 31.8	$ 149.5	$ 104.3	$ 408.0	$ 341.6	$ 1,053.4
2022	$ 0.2	$ 1.7	$ 2.3	$ 10.8	$ 26.3	$ 125.7	$ 88.3	$ 346.4	$ 290.1	$ 891.8	$ 0.1	$ 1.1	$ 1.5	$ 6.8	$ 16.6	$ 80.9	$ 57.1	$ 224.3	$ 187.9	$ 576.4	$ 0.3	$ 2.0	$ 2.7	$ 12.6	$ 30.7	$ 144.1	$ 100.3	$ 391.9	$ 328.1	$ 1,012.6
2023	$ 0.2	$ 1.7	$ 2.2	$ 10.5	$ 25.6	$ 122.4	$ 85.7	$ 335.7	$ 281.1	$ 865.2	$ 0.1	$ 1.1	$ 1.4	$ 6.7	$ 16.4	$ 79.5	$ 55.9	$ 219.6	$ 184.0	$ 564.8	$ 0.2	$ 2.0	$ 2.6	$ 12.1	$ 29.5	$ 138.3	$ 96.2	$ 375.2	$ 314.2	$ 970.2
2024	$ 0.2	$ 1.7	$ 2.2	$ 10.2	$ 24.9	$ 118.6	$ 82.8	$ 324.0	$ 271.3	$ 835.8	$ 0.1	$ 1.1	$ 1.4	$ 6.6	$ 16.1	$ 77.8	$ 54.6	$ 214.3	$ 179.5	$ 551.5	$ 0.2	$ 1.9	$ 2.5	$ 11.6	$ 28.2	$ 132.4	$ 91.9	$ 358.4	$ 300.1	$ 927.3
2025	$ 0.2	$ 1.6	$ 2.1	$ 9.9	$ 24.0	$ 114.4	$ 79.7	$ 311.6	$ 261.0	$ 804.5	$ 0.1	$ 1.0	$ 1.4	$ 6.5	$ 15.7	$ 75.9	$ 53.2	$ 208.5	$ 174.6	$ 536.9	$ 0.2	$ 1.8	$ 2.4	$ 11.1	$ 27.0	$ 126.5	$ 87.7	$ 341.7	$ 286.1	$ 884.4
2026	$ 0.2	$ 1.5	$ 2.0	$ 9.5	$ 23.1	$ 110.0	$ 76.6	$ 299.0	$ 250.4	$ 772.3	$ 0.1	$ 1.0	$ 1.3	$ 6.3	$ 15.4	$ 73.8	$ 51.6	$ 202.3	$ 169.4	$ 521.3	$ 0.2	$ 1.7	$ 2.3	$ 10.5	$ 25.7	$ 120.5	$ 83.5	$ 325.3	$ 272.4	$ 842.1
2027	$ 0.2	$ 1.5	$ 1.9	$ 9.1	$ 22.2	$ 105.5	$ 73.3	$ 286.2	$ 239.7	$ 739.7	$ 0.1	$ 1.0	$ 1.3	$ 6.1	$ 14.9	$ 71.6	$ 50.0	$ 195.9	$ 164.0	$ 505.0	$ 0.2	$ 1.6	$ 2.1	$ 10.0	$ 24.5	$ 114.7	$ 79.4	$ 309.3	$ 258.9	$ 800.8
2028	$ 0.2	$ 1.4	$ 1.8	$ 8.6	$ 21.0	$ 99.7	$ 69.2	$ 270.0	$ 226.1	$ 697.9	$ 0.1	$ 0.9	$ 1.3	$ 5.9	$ 14.3	$ 68.4	$ 47.7	$ 186.8	$ 156.5	$ 481.9	$ 0.2	$ 1.5	$ 2.0	$ 9.4	$ 23.0	$ 107.6	$ 74.5	$ 289.9	$ 242.8	$ 750.9
2029	$ 0.2	$ 1.3	$ 1.8	$ 8.2	$ 20.0	$ 95.0	$ 65.9	$ 257.0	$ 215.2	$ 664.6	$ 0.1	$ 0.9	$ 1.2	$ 5.7	$ 13.8	$ 65.9	$ 46.0	$ 179.8	$ 150.5	$ 463.9	$ 0.2	$ 1.4	$ 1.9	$ 8.9	$ 21.7	$ 102.0	$ 70.5	$ 274.5	$ 229.8	$ 710.9
Total	**$ 3.4**	**$ 27.1**	**$ 35.7**	**$ 167.5**	**$ 408.4**	**$ 1,972.8**	**$ 1,428.8**	**$ 5,705.0**	**$ 4,777.5**	**$ 14,526.2**	**$ 2.2**	**$ 17.8**	**$ 23.4**	**$ 109.8**	**$ 267.7**	**$ 1,335.9**	**$ 969.0**	**$ 3,871.9**	**$ 3,244.1**	**$ 9,841.9**	**$ 4.2**	**$ 33.9**	**$ 44.7**	**$ 209.4**	**$ 510.5**	**$ 2,454.2**	**$ 1,771.9**	**$ 7,063.5**	**$ 5,914.8**	**$ 18,007.2**
Ann.	**$ 0.3**	**$ 2.3**	**$ 3.1**	**$ 14.4**	**$ 35.0**	**$ 169.3**	**$ 122.6**	**$ 489.6**	**$ 410.0**	**$ 1,246.5**	**$ 0.2**	**$ 1.5**	**$ 2.0**	**$ 9.4**	**$ 23.0**	**$ 114.6**	**$ 83.2**	**$ 332.2**	**$ 278.4**	**$ 844.5**	**$ 0.4**	**$ 2.9**	**$ 3.8**	**$ 18.0**	**$ 43.8**	**$ 210.6**	**$ 152.0**	**$ 606.1**	**$ 507.6**	**$ 1,545.2**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.2a through F.2i and F.2k through F.2s.

Section F.3
Model Outputs - Preferred Alternative
TTHM as Indicator
Bronchitis for Non-Fatal Cases

Exhibit F.3a Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases (Surface Water Systems Serving <100 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
2011	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
2012	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.1
2013	$ 0.0	$ 0.0	$ 0.1	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.1
2014	$ 0.0	$ 0.0	$ 0.1	$ 0.0	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.1
2015	$ 0.1	$ 0.0	$ 0.1	$ 0.0	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.2
2016	$ 0.1	$ 0.0	$ 0.1	$ 0.0	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.2
2017	$ 0.1	$ 0.0	$ 0.2	$ 0.0	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.2
2018	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.2
2019	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.2
2020	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.3
2021	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.3
2022	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.3
2023	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.3
2024	$ 0.1	$ 0.0	$ 0.3	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.3
2025	$ 0.1	$ 0.0	$ 0.3	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.3
2026	$ 0.1	$ 0.0	$ 0.3	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.3
2027	$ 0.1	$ 0.0	$ 0.3	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.3
2028	$ 0.1	$ 0.0	$ 0.3	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.3
2029	$ 0.1	$ 0.0	$ 0.3	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.3
Total	**$ 1.6**	**$ 0.4**	**$ 3.6**	**$ 1.1**	**$ 0.2**	**$ 2.4**	**$ 2.0**	**$ 0.4**	**$ 4.4**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38b, E.38f, and E.38j.

Exhibit F.3b Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases (Surface Water Systems Serving 100-499 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.0	$ 0.1	$ 0.0	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.1
2011	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.3
2012	$ 0.2	$ 0.0	$ 0.4	$ 0.1	$ 0.0	$ 0.3	$ 0.3	$ 0.1	$ 0.6
2013	$ 0.3	$ 0.1	$ 0.6	$ 0.2	$ 0.0	$ 0.4	$ 0.4	$ 0.1	$ 0.9
2014	$ 0.4	$ 0.1	$ 0.8	$ 0.3	$ 0.1	$ 0.6	$ 0.6	$ 0.1	$ 1.2
2015	$ 0.5	$ 0.1	$ 1.1	$ 0.3	$ 0.1	$ 0.7	$ 0.7	$ 0.2	$ 1.6
2016	$ 0.6	$ 0.1	$ 1.3	$ 0.4	$ 0.1	$ 0.8	$ 0.8	$ 0.2	$ 1.8
2017	$ 0.7	$ 0.1	$ 1.5	$ 0.4	$ 0.1	$ 1.0	$ 0.9	$ 0.2	$ 2.0
2018	$ 0.8	$ 0.2	$ 1.7	$ 0.5	$ 0.1	$ 1.1	$ 1.0	$ 0.2	$ 2.2
2019	$ 0.8	$ 0.2	$ 1.8	$ 0.5	$ 0.1	$ 1.1	$ 1.0	$ 0.2	$ 2.3
2020	$ 0.9	$ 0.2	$ 2.0	$ 0.6	$ 0.1	$ 1.2	$ 1.1	$ 0.2	$ 2.4
2021	$ 1.0	$ 0.2	$ 2.1	$ 0.6	$ 0.1	$ 1.3	$ 1.1	$ 0.2	$ 2.5
2022	$ 1.0	$ 0.2	$ 2.2	$ 0.6	$ 0.1	$ 1.4	$ 1.2	$ 0.3	$ 2.6
2023	$ 1.0	$ 0.2	$ 2.3	$ 0.7	$ 0.1	$ 1.5	$ 1.2	$ 0.3	$ 2.7
2024	$ 1.1	$ 0.2	$ 2.4	$ 0.7	$ 0.2	$ 1.6	$ 1.2	$ 0.3	$ 2.7
2025	$ 1.1	$ 0.2	$ 2.5	$ 0.7	$ 0.2	$ 1.6	$ 1.3	$ 0.3	$ 2.8
2026	$ 1.2	$ 0.2	$ 2.6	$ 0.8	$ 0.2	$ 1.7	$ 1.3	$ 0.3	$ 2.9
2027	$ 1.2	$ 0.3	$ 2.7	$ 0.8	$ 0.2	$ 1.8	$ 1.3	$ 0.3	$ 2.9
2028	$ 1.2	$ 0.3	$ 2.7	$ 0.8	$ 0.2	$ 1.8	$ 1.3	$ 0.3	$ 2.9
2029	$ 1.2	$ 0.3	$ 2.7	$ 0.8	$ 0.2	$ 1.9	$ 1.3	$ 0.3	$ 3.0
Total	**$ 15.2**	**$ 3.3**	**$ 33.7**	**$ 9.9**	**$ 2.1**	**$ 22.1**	**$ 18.3**	**$ 4.0**	**$ 40.5**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38b, E.38f, and E.38j.

Exhibit F.3c Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases (Surface Water Systems Serving 500-999 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.1	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.2
2011	$ 0.2	$ 0.0	$ 0.4	$ 0.1	$ 0.0	$ 0.3	$ 0.3	$ 0.1	$ 0.6
2012	$ 0.3	$ 0.1	$ 0.6	$ 0.2	$ 0.0	$ 0.5	$ 0.5	$ 0.1	$ 1.1
2013	$ 0.5	$ 0.1	$ 1.0	$ 0.3	$ 0.1	$ 0.7	$ 0.7	$ 0.2	$ 1.6
2014	$ 0.6	$ 0.1	$ 1.4	$ 0.4	$ 0.1	$ 1.0	$ 1.0	$ 0.2	$ 2.2
2015	$ 0.9	$ 0.2	$ 1.9	$ 0.6	$ 0.1	$ 1.3	$ 1.3	$ 0.3	$ 2.8
2016	$ 1.0	$ 0.2	$ 2.3	$ 0.7	$ 0.1	$ 1.5	$ 1.5	$ 0.3	$ 3.2
2017	$ 1.2	$ 0.3	$ 2.6	$ 0.8	$ 0.2	$ 1.7	$ 1.6	$ 0.3	$ 3.5
2018	$ 1.3	$ 0.3	$ 3.0	$ 0.8	$ 0.2	$ 1.9	$ 1.7	$ 0.4	$ 3.8
2019	$ 1.5	$ 0.3	$ 3.2	$ 0.9	$ 0.2	$ 2.0	$ 1.8	$ 0.4	$ 4.0
2020	$ 1.6	$ 0.3	$ 3.5	$ 1.0	$ 0.2	$ 2.2	$ 1.9	$ 0.4	$ 4.2
2021	$ 1.7	$ 0.4	$ 3.7	$ 1.0	$ 0.2	$ 2.3	$ 2.0	$ 0.4	$ 4.4
2022	$ 1.8	$ 0.4	$ 3.9	$ 1.1	$ 0.2	$ 2.5	$ 2.1	$ 0.4	$ 4.6
2023	$ 1.8	$ 0.4	$ 4.1	$ 1.2	$ 0.3	$ 2.6	$ 2.1	$ 0.5	$ 4.7
2024	$ 1.9	$ 0.4	$ 4.3	$ 1.2	$ 0.3	$ 2.8	$ 2.2	$ 0.5	$ 4.8
2025	$ 2.0	$ 0.4	$ 4.4	$ 1.3	$ 0.3	$ 2.9	$ 2.2	$ 0.5	$ 4.9
2026	$ 2.0	$ 0.4	$ 4.5	$ 1.4	$ 0.3	$ 3.0	$ 2.3	$ 0.5	$ 5.1
2027	$ 2.1	$ 0.4	$ 4.7	$ 1.4	$ 0.3	$ 3.2	$ 2.3	$ 0.5	$ 5.2
2028	$ 2.1	$ 0.5	$ 4.7	$ 1.4	$ 0.3	$ 3.2	$ 2.3	$ 0.5	$ 5.2
2029	$ 2.2	$ 0.5	$ 4.8	$ 1.5	$ 0.3	$ 3.3	$ 2.4	$ 0.5	$ 5.3
Total	**$ 26.7**	**$ 5.8**	**$ 59.3**	**$ 17.5**	**$ 3.8**	**$ 38.9**	**$ 32.2**	**$ 7.0**	**$ 71.4**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38b, E.38f, and E.38j.

Exhibit F.3d Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases (Surface Water Systems Serving 1,000-3,299 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.4	$ 0.1	$ 0.9	$ 0.3	$ 0.1	$ 0.7	$ 0.7	$ 0.2	$ 1.6
2011	$ 1.0	$ 0.2	$ 2.3	$ 0.8	$ 0.2	$ 1.8	$ 1.8	$ 0.4	$ 3.9
2012	$ 1.9	$ 0.4	$ 4.2	$ 1.4	$ 0.3	$ 3.1	$ 3.1	$ 0.7	$ 6.8
2013	$ 2.9	$ 0.6	$ 6.4	$ 2.1	$ 0.5	$ 4.6	$ 4.6	$ 1.0	$ 10.2
2014	$ 4.2	$ 0.9	$ 9.1	$ 2.9	$ 0.6	$ 6.3	$ 6.3	$ 1.4	$ 13.9
2015	$ 5.6	$ 1.2	$ 12.3	$ 3.8	$ 0.8	$ 8.3	$ 8.2	$ 1.8	$ 18.0
2016	$ 6.7	$ 1.5	$ 14.8	$ 4.4	$ 1.0	$ 9.6	$ 9.4	$ 2.0	$ 20.7
2017	$ 7.7	$ 1.7	$ 17.0	$ 4.9	$ 1.1	$ 10.8	$ 10.3	$ 2.3	$ 22.8
2018	$ 8.6	$ 1.9	$ 19.1	$ 5.4	$ 1.2	$ 11.9	$ 11.1	$ 2.4	$ 24.6
2019	$ 9.5	$ 2.1	$ 20.9	$ 5.9	$ 1.3	$ 13.0	$ 11.8	$ 2.6	$ 26.1
2020	$ 10.2	$ 2.2	$ 22.6	$ 6.3	$ 1.4	$ 14.0	$ 12.3	$ 2.7	$ 27.4
2021	$ 10.8	$ 2.3	$ 24.0	$ 6.8	$ 1.5	$ 15.0	$ 12.8	$ 2.8	$ 28.5
2022	$ 11.4	$ 2.5	$ 25.3	$ 7.2	$ 1.6	$ 16.0	$ 13.3	$ 2.9	$ 29.5
2023	$ 11.9	$ 2.6	$ 26.4	$ 7.6	$ 1.6	$ 16.9	$ 13.7	$ 2.9	$ 30.4
2024	$ 12.3	$ 2.7	$ 27.4	$ 8.0	$ 1.7	$ 17.8	$ 14.0	$ 3.0	$ 31.2
2025	$ 12.8	$ 2.7	$ 28.4	$ 8.4	$ 1.8	$ 18.6	$ 14.3	$ 3.1	$ 31.9
2026	$ 13.2	$ 2.8	$ 29.3	$ 8.7	$ 1.9	$ 19.5	$ 14.6	$ 3.1	$ 32.6
2027	$ 13.5	$ 2.9	$ 30.2	$ 9.1	$ 2.0	$ 20.3	$ 14.9	$ 3.2	$ 33.3
2028	$ 13.7	$ 2.9	$ 30.5	$ 9.3	$ 2.0	$ 20.8	$ 15.0	$ 3.2	$ 33.4
2029	$ 14.0	$ 3.0	$ 31.2	$ 9.6	$ 2.1	$ 21.5	$ 15.2	$ 3.3	$ 33.9
Total	**$ 172.1**	**$ 37.2**	**$ 382.3**	**$ 112.8**	**$ 24.4**	**$ 250.6**	**$ 207.4**	**$ 44.9**	**$ 460.4**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38b, E.38f, and E.38j.

Exhibit F.3e Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases (Surface Water Systems Serving 3,300-9,999 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 1.1	$ 0.3	$ 2.5	$ 1.0	$ 0.2	$ 2.1	$ 2.0	$ 0.4	$ 4.5
2011	$ 3.0	$ 0.7	$ 6.6	$ 2.3	$ 0.5	$ 5.1	$ 5.1	$ 1.1	$ 11.2
2012	$ 5.4	$ 1.2	$ 11.9	$ 4.0	$ 0.9	$ 8.8	$ 8.8	$ 1.9	$ 19.4
2013	$ 8.4	$ 1.8	$ 18.4	$ 6.0	$ 1.3	$ 13.2	$ 13.2	$ 2.9	$ 29.0
2014	$ 11.9	$ 2.6	$ 26.2	$ 8.2	$ 1.8	$ 18.1	$ 18.1	$ 4.0	$ 39.8
2015	$ 15.9	$ 3.5	$ 35.1	$ 10.7	$ 2.3	$ 23.7	$ 23.3	$ 5.1	$ 51.5
2016	$ 19.2	$ 4.2	$ 42.3	$ 12.5	$ 2.7	$ 27.5	$ 26.8	$ 5.9	$ 59.1
2017	$ 22.1	$ 4.8	$ 48.8	$ 14.0	$ 3.1	$ 30.9	$ 29.6	$ 6.5	$ 65.3
2018	$ 24.7	$ 5.4	$ 54.6	$ 15.4	$ 3.4	$ 34.1	$ 31.8	$ 6.9	$ 70.3
2019	$ 27.1	$ 5.9	$ 59.9	$ 16.8	$ 3.7	$ 37.2	$ 33.7	$ 7.3	$ 74.6
2020	$ 29.1	$ 6.3	$ 64.6	$ 18.1	$ 3.9	$ 40.1	$ 35.3	$ 7.7	$ 78.3
2021	$ 30.9	$ 6.7	$ 68.7	$ 19.4	$ 4.2	$ 42.9	$ 36.7	$ 8.0	$ 81.5
2022	$ 32.5	$ 7.0	$ 72.3	$ 20.5	$ 4.4	$ 45.7	$ 38.0	$ 8.2	$ 84.4
2023	$ 34.0	$ 7.3	$ 75.5	$ 21.7	$ 4.7	$ 48.3	$ 39.1	$ 8.4	$ 86.9
2024	$ 35.3	$ 7.6	$ 78.5	$ 22.8	$ 4.9	$ 50.8	$ 40.1	$ 8.6	$ 89.1
2025	$ 36.5	$ 7.9	$ 81.2	$ 23.9	$ 5.1	$ 53.3	$ 41.0	$ 8.8	$ 91.2
2026	$ 37.6	$ 8.1	$ 83.8	$ 25.0	$ 5.4	$ 55.7	$ 41.8	$ 9.0	$ 93.2
2027	$ 38.7	$ 8.3	$ 86.3	$ 26.0	$ 5.6	$ 58.1	$ 42.6	$ 9.1	$ 95.2
2028	$ 39.1	$ 8.4	$ 87.2	$ 26.7	$ 5.7	$ 59.5	$ 42.8	$ 9.2	$ 95.4
2029	$ 39.9	$ 8.6	$ 89.2	$ 27.6	$ 5.9	$ 61.6	$ 43.4	$ 9.3	$ 97.0
Total	**$ 492.4**	**$ 106.5**	**$ 1,093.5**	**$ 322.7**	**$ 69.8**	**$ 716.7**	**$ 593.3**	**$ 128.4**	**$ 1,316.9**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38b, E.38f, and E.38j.

Exhibit F.3f Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases (Surface Water Systems Serving 10,000-49,999 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 7.0	$ 1.5	$ 15.4	$ 6.6	$ 1.5	$ 14.6	$ 13.1	$ 2.9	$ 28.9
2011	$ 18.1	$ 4.0	$ 39.9	$ 15.8	$ 3.5	$ 34.7	$ 32.2	$ 7.1	$ 70.8
2012	$ 32.8	$ 7.2	$ 72.2	$ 26.9	$ 5.9	$ 59.1	$ 55.5	$ 12.2	$ 122.3
2013	$ 50.8	$ 11.2	$ 111.8	$ 39.8	$ 8.7	$ 87.5	$ 82.4	$ 18.1	$ 181.3
2014	$ 72.3	$ 15.8	$ 159.1	$ 54.3	$ 11.9	$ 119.6	$ 112.2	$ 24.6	$ 246.9
2015	$ 93.4	$ 20.4	$ 205.9	$ 66.9	$ 14.6	$ 147.6	$ 137.5	$ 30.1	$ 303.1
2016	$ 111.3	$ 24.3	$ 245.3	$ 76.2	$ 16.7	$ 168.0	$ 154.8	$ 33.8	$ 341.3
2017	$ 127.5	$ 27.8	$ 281.7	$ 84.5	$ 18.5	$ 186.7	$ 168.7	$ 36.8	$ 372.6
2018	$ 142.3	$ 31.0	$ 314.4	$ 92.3	$ 20.1	$ 203.9	$ 180.2	$ 39.2	$ 398.1
2019	$ 155.4	$ 33.8	$ 344.2	$ 99.6	$ 21.7	$ 220.5	$ 189.9	$ 41.3	$ 420.6
2020	$ 166.8	$ 36.2	$ 369.7	$ 106.5	$ 23.1	$ 236.1	$ 198.4	$ 43.1	$ 439.6
2021	$ 176.7	$ 38.3	$ 392.1	$ 113.2	$ 24.5	$ 251.1	$ 205.8	$ 44.6	$ 456.6
2022	$ 185.5	$ 40.1	$ 412.5	$ 119.6	$ 25.9	$ 265.8	$ 212.4	$ 46.0	$ 472.2
2023	$ 193.4	$ 41.7	$ 430.1	$ 125.8	$ 27.1	$ 279.6	$ 218.4	$ 47.1	$ 485.6
2024	$ 200.7	$ 43.3	$ 446.4	$ 131.8	$ 28.4	$ 293.1	$ 223.9	$ 48.3	$ 498.0
2025	$ 207.3	$ 44.6	$ 461.5	$ 137.6	$ 29.6	$ 306.3	$ 229.0	$ 49.3	$ 509.7
2026	$ 213.5	$ 45.9	$ 475.4	$ 143.3	$ 30.8	$ 319.0	$ 233.7	$ 50.2	$ 520.4
2027	$ 219.3	$ 47.0	$ 489.5	$ 148.8	$ 31.9	$ 332.2	$ 238.2	$ 51.1	$ 531.8
2028	$ 221.6	$ 47.6	$ 494.2	$ 152.0	$ 32.6	$ 339.1	$ 239.1	$ 51.3	$ 533.3
2029	$ 226.1	$ 48.5	$ 505.2	$ 156.9	$ 33.6	$ 350.5	$ 242.5	$ 52.0	$ 541.9
Total	**$ 2,821.9**	**$ 610.2**	**$ 6,266.3**	**$ 1,898.2**	**$ 410.6**	**$ 4,214.9**	**$ 3,367.9**	**$ 728.9**	**$ 7,474.9**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38b, E.38f, and E.38j.

Exhibit F.3g Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases (Surface Water Systems Serving 50,000-99,999 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 6.1	$ 1.3	$ 13.4	$ 5.8	$ 1.3	$ 12.7	$ 11.4	$ 2.5	$ 25.2
2011	$ 15.8	$ 3.5	$ 34.8	$ 13.7	$ 3.0	$ 30.2	$ 28.0	$ 6.2	$ 61.7
2012	$ 28.6	$ 6.3	$ 62.9	$ 23.4	$ 5.1	$ 51.5	$ 48.4	$ 10.6	$ 106.5
2013	$ 44.3	$ 9.7	$ 97.4	$ 34.6	$ 7.6	$ 76.2	$ 71.8	$ 15.8	$ 158.0
2014	$ 59.8	$ 13.1	$ 131.7	$ 44.3	$ 9.7	$ 97.5	$ 91.8	$ 20.1	$ 202.0
2015	$ 73.1	$ 16.0	$ 161.2	$ 51.2	$ 11.2	$ 112.8	$ 105.2	$ 23.0	$ 231.9
2016	$ 85.3	$ 18.6	$ 188.1	$ 57.3	$ 12.5	$ 126.3	$ 115.8	$ 25.3	$ 255.2
2017	$ 96.4	$ 21.1	$ 213.0	$ 62.9	$ 13.7	$ 138.9	$ 124.5	$ 27.2	$ 274.9
2018	$ 106.4	$ 23.2	$ 235.0	$ 68.2	$ 14.9	$ 150.7	$ 131.8	$ 28.7	$ 291.2
2019	$ 114.9	$ 25.0	$ 254.5	$ 73.2	$ 15.9	$ 162.1	$ 138.1	$ 30.0	$ 305.9
2020	$ 122.3	$ 26.5	$ 271.1	$ 78.0	$ 16.9	$ 172.9	$ 143.7	$ 31.2	$ 318.4
2021	$ 128.8	$ 27.9	$ 285.9	$ 82.6	$ 17.9	$ 183.4	$ 148.6	$ 32.2	$ 329.6
2022	$ 134.7	$ 29.1	$ 299.4	$ 87.1	$ 18.8	$ 193.6	$ 153.0	$ 33.1	$ 340.1
2023	$ 140.0	$ 30.2	$ 311.3	$ 91.4	$ 19.7	$ 203.2	$ 157.0	$ 33.9	$ 349.1
2024	$ 144.9	$ 31.2	$ 322.3	$ 95.6	$ 20.6	$ 212.6	$ 160.7	$ 34.6	$ 357.5
2025	$ 149.4	$ 32.1	$ 332.5	$ 99.7	$ 21.4	$ 221.8	$ 164.2	$ 35.3	$ 365.5
2026	$ 153.6	$ 33.0	$ 342.0	$ 103.6	$ 22.3	$ 230.7	$ 167.5	$ 36.0	$ 372.9
2027	$ 157.6	$ 33.8	$ 351.8	$ 107.5	$ 23.1	$ 240.0	$ 170.6	$ 36.6	$ 380.8
2028	$ 159.1	$ 34.1	$ 354.8	$ 109.7	$ 23.6	$ 244.8	$ 171.1	$ 36.7	$ 381.6
2029	$ 162.2	$ 34.8	$ 362.4	$ 113.1	$ 24.2	$ 252.7	$ 173.5	$ 37.2	$ 387.6
Total	**$ 2,083.3**	**$ 450.7**	**$ 4,625.4**	**$ 1,403.1**	**$ 303.5**	**$ 3,114.9**	**$ 2,476.5**	**$ 536.2**	**$ 5,495.5**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38b, E.38f, and E.38j.

Exhibit F.3h Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases
(Surface Water Systems Serving 100,000-999,999 People)

TTHM - Preferred Alternative

	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 27.0	$ 5.9	$ 59.3	$ 25.6	$ 5.6	$ 56.4	$ 50.6	$ 11.1	$ 111.3
2011	$ 69.8	$ 15.4	$ 153.7	$ 60.7	$ 13.4	$ 133.7	$ 124.0	$ 27.3	$ 273.1
2012	$ 126.4	$ 27.8	$ 278.2	$ 103.6	$ 22.7	$ 227.9	$ 214.1	$ 47.0	$ 471.3
2013	$ 195.9	$ 43.0	$ 431.1	$ 153.3	$ 33.7	$ 337.3	$ 317.7	$ 69.7	$ 698.9
2014	$ 250.5	$ 54.9	$ 551.4	$ 182.6	$ 40.0	$ 402.1	$ 379.5	$ 83.2	$ 835.4
2015	$ 301.3	$ 65.9	$ 664.3	$ 208.1	$ 45.5	$ 459.0	$ 427.2	$ 93.4	$ 942.0
2016	$ 348.3	$ 76.1	$ 767.8	$ 231.3	$ 50.6	$ 510.0	$ 465.7	$ 101.8	$ 1,026.7
2017	$ 391.1	$ 85.4	$ 863.7	$ 252.9	$ 55.2	$ 558.6	$ 497.8	$ 108.7	$ 1,099.4
2018	$ 428.4	$ 93.3	$ 946.6	$ 273.3	$ 59.5	$ 603.8	$ 525.1	$ 114.3	$ 1,160.0
2019	$ 460.1	$ 100.0	$ 1,018.9	$ 292.7	$ 63.6	$ 648.1	$ 548.7	$ 119.3	$ 1,214.9
2020	$ 487.8	$ 105.9	$ 1,081.1	$ 311.2	$ 67.6	$ 689.7	$ 569.4	$ 123.6	$ 1,261.9
2021	$ 512.4	$ 111.1	$ 1,137.0	$ 329.1	$ 71.3	$ 730.2	$ 587.9	$ 127.4	$ 1,304.5
2022	$ 534.6	$ 115.7	$ 1,188.6	$ 346.4	$ 74.9	$ 770.1	$ 604.7	$ 130.8	$ 1,344.4
2023	$ 554.8	$ 119.7	$ 1,233.7	$ 363.1	$ 78.3	$ 807.4	$ 620.1	$ 133.8	$ 1,378.7
2024	$ 573.5	$ 123.6	$ 1,275.7	$ 379.4	$ 81.8	$ 844.0	$ 634.3	$ 136.7	$ 1,411.0
2025	$ 590.8	$ 127.1	$ 1,315.0	$ 395.3	$ 85.0	$ 879.8	$ 647.6	$ 139.3	$ 1,441.6
2026	$ 607.0	$ 130.4	$ 1,351.6	$ 410.7	$ 88.2	$ 914.5	$ 660.2	$ 141.8	$ 1,470.1
2027	$ 622.3	$ 133.5	$ 1,389.1	$ 425.9	$ 91.3	$ 950.6	$ 672.2	$ 144.2	$ 1,500.6
2028	$ 627.9	$ 134.7	$ 1,400.3	$ 434.5	$ 93.2	$ 969.0	$ 674.1	$ 144.7	$ 1,503.4
2029	$ 639.9	$ 137.2	$ 1,429.7	$ 447.6	$ 95.9	$ 1,000.1	$ 683.3	$ 146.4	$ 1,526.5
Total	**$ 8,349.8**	**$ 1,806.5**	**$ 18,536.8**	**$ 5,627.4**	**$ 1,217.6**	**$ 12,492.3**	**$ 9,904.2**	**$ 2,144.7**	**$ 21,975.8**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38b, E.38f, and E.38j.

Exhibit F.3i Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases
(Surface Water Systems Serving ≥1,000,000 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 22.9	$ 5.1	$ 50.4	$ 21.8	$ 4.8	$ 48.0	$ 43.1	$ 9.5	$ 94.8
2011	$ 59.4	$ 13.1	$ 130.8	$ 51.7	$ 11.4	$ 113.8	$ 105.5	$ 23.2	$ 232.4
2012	$ 107.6	$ 23.6	$ 236.7	$ 88.1	$ 19.4	$ 194.0	$ 182.2	$ 40.0	$ 401.1
2013	$ 166.7	$ 36.6	$ 366.9	$ 130.5	$ 28.6	$ 287.0	$ 270.3	$ 59.4	$ 594.8
2014	$ 213.2	$ 46.7	$ 469.3	$ 155.4	$ 34.1	$ 342.2	$ 323.0	$ 70.8	$ 711.0
2015	$ 256.4	$ 56.1	$ 565.3	$ 177.1	$ 38.7	$ 390.6	$ 363.6	$ 79.5	$ 801.7
2016	$ 296.4	$ 64.8	$ 653.4	$ 196.9	$ 43.0	$ 434.0	$ 396.4	$ 86.6	$ 873.8
2017	$ 332.8	$ 72.7	$ 735.1	$ 215.3	$ 47.0	$ 475.4	$ 423.7	$ 92.5	$ 935.7
2018	$ 364.6	$ 79.4	$ 805.6	$ 232.6	$ 50.6	$ 513.9	$ 446.9	$ 97.3	$ 987.2
2019	$ 391.6	$ 85.1	$ 867.2	$ 249.1	$ 54.2	$ 551.6	$ 466.9	$ 101.5	$ 1,034.0
2020	$ 415.2	$ 90.1	$ 920.1	$ 264.9	$ 57.5	$ 587.0	$ 484.6	$ 105.2	$ 1,073.9
2021	$ 436.1	$ 94.5	$ 967.6	$ 280.1	$ 60.7	$ 621.5	$ 500.4	$ 108.5	$ 1,110.2
2022	$ 455.0	$ 98.4	$ 1,011.5	$ 294.8	$ 63.8	$ 655.4	$ 514.6	$ 111.3	$ 1,144.1
2023	$ 472.2	$ 101.9	$ 1,049.9	$ 309.0	$ 66.7	$ 687.2	$ 527.7	$ 113.9	$ 1,173.4
2024	$ 488.1	$ 105.2	$ 1,085.7	$ 322.9	$ 69.6	$ 718.3	$ 539.8	$ 116.4	$ 1,200.9
2025	$ 502.8	$ 108.2	$ 1,119.2	$ 336.4	$ 72.4	$ 748.8	$ 551.2	$ 118.6	$ 1,226.9
2026	$ 516.6	$ 111.0	$ 1,150.3	$ 349.6	$ 75.1	$ 778.3	$ 561.9	$ 120.7	$ 1,251.1
2027	$ 529.6	$ 113.6	$ 1,182.2	$ 362.4	$ 77.7	$ 809.0	$ 572.1	$ 122.7	$ 1,277.1
2028	$ 534.4	$ 114.7	$ 1,191.7	$ 369.8	$ 79.3	$ 824.6	$ 573.7	$ 123.1	$ 1,279.5
2029	$ 544.6	$ 116.7	$ 1,216.7	$ 381.0	$ 81.7	$ 851.1	$ 581.5	$ 124.6	$ 1,299.2
Total	**$ 7,106.2**	**$ 1,537.4**	**$ 15,775.9**	**$ 4,789.3**	**$ 1,036.3**	**$ 10,631.7**	**$ 8,429.0**	**$ 1,825.3**	**$ 18,702.7**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38b, E.38f, and E.38j.

Exhibit F.3j Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases (All Surface Water Systems)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 64.6	$ 14.2	$ 142.1	$ 61.3	$ 13.5	$ 134.7	$ 121.2	$ 26.7	$ 266.6
2011	$ 167.4	$ 36.8	$ 368.7	$ 145.2	$ 31.9	$ 319.9	$ 297.0	$ 65.3	$ 654.1
2012	$ 303.1	$ 66.6	$ 667.1	$ 247.7	$ 54.4	$ 545.3	$ 513.0	$ 112.7	$ 1,129.2
2013	$ 469.8	$ 103.1	$ 1,033.7	$ 366.8	$ 80.5	$ 806.9	$ 761.2	$ 167.1	$ 1,674.8
2014	$ 612.9	$ 134.3	$ 1,349.2	$ 448.5	$ 98.3	$ 987.4	$ 932.4	$ 204.3	$ 2,052.4
2015	$ 747.0	$ 163.4	$ 1,647.2	$ 518.8	$ 113.5	$ 1,144.0	$ 1,066.9	$ 233.4	$ 2,352.6
2016	$ 868.9	$ 189.9	$ 1,915.4	$ 579.6	$ 126.7	$ 1,277.8	$ 1,171.3	$ 256.0	$ 2,582.0
2017	$ 979.6	$ 213.8	$ 2,163.6	$ 635.8	$ 138.8	$ 1,404.2	$ 1,257.2	$ 274.4	$ 2,776.5
2018	$ 1,077.3	$ 234.6	$ 2,379.9	$ 688.6	$ 149.9	$ 1,521.3	$ 1,329.7	$ 289.6	$ 2,937.6
2019	$ 1,161.0	$ 252.4	$ 2,570.9	$ 738.7	$ 160.6	$ 1,635.8	$ 1,392.1	$ 302.7	$ 3,082.7
2020	$ 1,234.0	$ 267.8	$ 2,734.8	$ 786.7	$ 170.8	$ 1,743.5	$ 1,446.8	$ 314.0	$ 3,206.3
2021	$ 1,298.6	$ 281.5	$ 2,881.4	$ 832.8	$ 180.5	$ 1,847.9	$ 1,495.4	$ 324.2	$ 3,318.1
2022	$ 1,356.6	$ 293.5	$ 3,016.0	$ 877.4	$ 189.8	$ 1,950.6	$ 1,539.3	$ 333.0	$ 3,422.2
2023	$ 1,409.3	$ 304.1	$ 3,133.7	$ 920.5	$ 198.6	$ 2,046.8	$ 1,579.3	$ 340.8	$ 3,511.6
2024	$ 1,457.8	$ 314.3	$ 3,243.0	$ 962.5	$ 207.5	$ 2,141.1	$ 1,616.3	$ 348.4	$ 3,595.6
2025	$ 1,502.7	$ 323.3	$ 3,345.0	$ 1,003.3	$ 215.8	$ 2,233.3	$ 1,650.9	$ 355.1	$ 3,674.8
2026	$ 1,544.8	$ 331.9	$ 3,439.7	$ 1,043.1	$ 224.1	$ 2,322.6	$ 1,683.5	$ 361.7	$ 3,748.5
2027	$ 1,584.4	$ 339.8	$ 3,536.8	$ 1,082.1	$ 232.1	$ 2,415.4	$ 1,714.5	$ 367.7	$ 3,827.0
2028	$ 1,599.1	$ 343.2	$ 3,566.4	$ 1,104.4	$ 237.0	$ 2,463.0	$ 1,719.5	$ 369.0	$ 3,834.9
2029	$ 1,630.3	$ 349.4	$ 3,642.2	$ 1,138.2	$ 244.0	$ 2,543.0	$ 1,743.2	$ 373.6	$ 3,894.5
Total	**$ 21,069.2**	**$ 4,557.9**	**$ 46,776.7**	**$ 14,182.1**	**$ 3,068.3**	**$ 31,484.4**	**$ 25,030.6**	**$ 5,419.7**	**$ 55,542.2**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38b, E.38f, and E.38j.

Exhibit F.3k Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases (Ground Water Systems Serving <100 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
2011	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.1
2012	$ 0.0	$ 0.0	$ 0.1	$ 0.0	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.1
2013	$ 0.1	$ 0.0	$ 0.1	$ 0.0	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.2
2014	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.3
2015	$ 0.1	$ 0.0	$ 0.3	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.4
2016	$ 0.1	$ 0.0	$ 0.3	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.4
2017	$ 0.2	$ 0.0	$ 0.4	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.5
2018	$ 0.2	$ 0.0	$ 0.4	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.1	$ 0.5
2019	$ 0.2	$ 0.0	$ 0.4	$ 0.1	$ 0.0	$ 0.3	$ 0.2	$ 0.1	$ 0.5
2020	$ 0.2	$ 0.0	$ 0.5	$ 0.1	$ 0.0	$ 0.3	$ 0.3	$ 0.1	$ 0.6
2021	$ 0.2	$ 0.0	$ 0.5	$ 0.1	$ 0.0	$ 0.3	$ 0.3	$ 0.1	$ 0.6
2022	$ 0.2	$ 0.1	$ 0.5	$ 0.1	$ 0.0	$ 0.3	$ 0.3	$ 0.1	$ 0.6
2023	$ 0.2	$ 0.1	$ 0.5	$ 0.2	$ 0.0	$ 0.4	$ 0.3	$ 0.1	$ 0.6
2024	$ 0.3	$ 0.1	$ 0.6	$ 0.2	$ 0.0	$ 0.4	$ 0.3	$ 0.1	$ 0.6
2025	$ 0.3	$ 0.1	$ 0.6	$ 0.2	$ 0.0	$ 0.4	$ 0.3	$ 0.1	$ 0.7
2026	$ 0.3	$ 0.1	$ 0.6	$ 0.2	$ 0.0	$ 0.4	$ 0.3	$ 0.1	$ 0.7
2027	$ 0.3	$ 0.1	$ 0.6	$ 0.2	$ 0.0	$ 0.4	$ 0.3	$ 0.1	$ 0.7
2028	$ 0.3	$ 0.1	$ 0.6	$ 0.2	$ 0.0	$ 0.4	$ 0.3	$ 0.1	$ 0.7
2029	$ 0.3	$ 0.1	$ 0.6	$ 0.2	$ 0.0	$ 0.4	$ 0.3	$ 0.1	$ 0.7
Total	**$ 3.6**	**$ 0.8**	**$ 8.0**	**$ 2.3**	**$ 0.5**	**$ 5.2**	**$ 4.3**	**$ 0.9**	**$ 9.6**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38c, E.38g, and E.38k.

Exhibit F.3l Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases (Ground Water Systems Serving 100-499 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.1	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.2
2011	$ 0.2	$ 0.0	$ 0.4	$ 0.1	$ 0.0	$ 0.3	$ 0.3	$ 0.1	$ 0.6
2012	$ 0.3	$ 0.1	$ 0.6	$ 0.2	$ 0.0	$ 0.5	$ 0.5	$ 0.1	$ 1.0
2013	$ 0.4	$ 0.1	$ 1.0	$ 0.3	$ 0.1	$ 0.7	$ 0.7	$ 0.2	$ 1.6
2014	$ 0.6	$ 0.1	$ 1.4	$ 0.4	$ 0.1	$ 1.0	$ 1.0	$ 0.2	$ 2.1
2015	$ 0.9	$ 0.2	$ 1.9	$ 0.6	$ 0.1	$ 1.3	$ 1.3	$ 0.3	$ 2.8
2016	$ 1.0	$ 0.2	$ 2.3	$ 0.7	$ 0.1	$ 1.5	$ 1.4	$ 0.3	$ 3.2
2017	$ 1.2	$ 0.3	$ 2.6	$ 0.8	$ 0.2	$ 1.7	$ 1.6	$ 0.3	$ 3.5
2018	$ 1.3	$ 0.3	$ 2.9	$ 0.8	$ 0.2	$ 1.8	$ 1.7	$ 0.4	$ 3.8
2019	$ 1.5	$ 0.3	$ 3.2	$ 0.9	$ 0.2	$ 2.0	$ 1.8	$ 0.4	$ 4.0
2020	$ 1.6	$ 0.3	$ 3.5	$ 1.0	$ 0.2	$ 2.2	$ 1.9	$ 0.4	$ 4.2
2021	$ 1.7	$ 0.4	$ 3.7	$ 1.0	$ 0.2	$ 2.3	$ 2.0	$ 0.4	$ 4.4
2022	$ 1.7	$ 0.4	$ 3.9	$ 1.1	$ 0.2	$ 2.5	$ 2.0	$ 0.4	$ 4.5
2023	$ 1.8	$ 0.4	$ 4.1	$ 1.2	$ 0.3	$ 2.6	$ 2.1	$ 0.5	$ 4.7
2024	$ 1.9	$ 0.4	$ 4.2	$ 1.2	$ 0.3	$ 2.7	$ 2.2	$ 0.5	$ 4.8
2025	$ 2.0	$ 0.4	$ 4.4	$ 1.3	$ 0.3	$ 2.9	$ 2.2	$ 0.5	$ 4.9
2026	$ 2.0	$ 0.4	$ 4.5	$ 1.3	$ 0.3	$ 3.0	$ 2.2	$ 0.5	$ 5.0
2027	$ 2.1	$ 0.4	$ 4.6	$ 1.4	$ 0.3	$ 3.1	$ 2.3	$ 0.5	$ 5.1
2028	$ 2.1	$ 0.5	$ 4.7	$ 1.4	$ 0.3	$ 3.2	$ 2.3	$ 0.5	$ 5.1
2029	$ 2.1	$ 0.5	$ 4.8	$ 1.5	$ 0.3	$ 3.3	$ 2.3	$ 0.5	$ 5.2
Total	**$ 26.5**	**$ 5.7**	**$ 58.8**	**$ 17.3**	**$ 3.8**	**$ 38.5**	**$ 31.9**	**$ 6.9**	**$ 70.8**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38c, E.38g, and E.38k.

Exhibit F.3m Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases (Ground Water Systems Serving 500-999 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.1	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.3
2011	$ 0.2	$ 0.0	$ 0.4	$ 0.1	$ 0.0	$ 0.3	$ 0.3	$ 0.1	$ 0.6
2012	$ 0.3	$ 0.1	$ 0.7	$ 0.2	$ 0.1	$ 0.5	$ 0.5	$ 0.1	$ 1.1
2013	$ 0.5	$ 0.1	$ 1.1	$ 0.3	$ 0.1	$ 0.8	$ 0.8	$ 0.2	$ 1.7
2014	$ 0.7	$ 0.1	$ 1.5	$ 0.5	$ 0.1	$ 1.0	$ 1.0	$ 0.2	$ 2.3
2015	$ 0.9	$ 0.2	$ 2.0	$ 0.6	$ 0.1	$ 1.4	$ 1.3	$ 0.3	$ 2.9
2016	$ 1.1	$ 0.2	$ 2.4	$ 0.7	$ 0.2	$ 1.6	$ 1.5	$ 0.3	$ 3.4
2017	$ 1.3	$ 0.3	$ 2.8	$ 0.8	$ 0.2	$ 1.8	$ 1.7	$ 0.4	$ 3.7
2018	$ 1.4	$ 0.3	$ 3.1	$ 0.9	$ 0.2	$ 2.0	$ 1.8	$ 0.4	$ 4.0
2019	$ 1.5	$ 0.3	$ 3.4	$ 1.0	$ 0.2	$ 2.1	$ 1.9	$ 0.4	$ 4.3
2020	$ 1.7	$ 0.4	$ 3.7	$ 1.0	$ 0.2	$ 2.3	$ 2.0	$ 0.4	$ 4.5
2021	$ 1.8	$ 0.4	$ 3.9	$ 1.1	$ 0.2	$ 2.5	$ 2.1	$ 0.5	$ 4.7
2022	$ 1.9	$ 0.4	$ 4.1	$ 1.2	$ 0.3	$ 2.6	$ 2.2	$ 0.5	$ 4.8
2023	$ 1.9	$ 0.4	$ 4.3	$ 1.2	$ 0.3	$ 2.8	$ 2.2	$ 0.5	$ 5.0
2024	$ 2.0	$ 0.4	$ 4.5	$ 1.3	$ 0.3	$ 2.9	$ 2.3	$ 0.5	$ 5.1
2025	$ 2.1	$ 0.4	$ 4.6	$ 1.4	$ 0.3	$ 3.0	$ 2.3	$ 0.5	$ 5.2
2026	$ 2.2	$ 0.5	$ 4.8	$ 1.4	$ 0.3	$ 3.2	$ 2.4	$ 0.5	$ 5.3
2027	$ 2.2	$ 0.5	$ 4.9	$ 1.5	$ 0.3	$ 3.3	$ 2.4	$ 0.5	$ 5.4
2028	$ 2.2	$ 0.5	$ 5.0	$ 1.5	$ 0.3	$ 3.4	$ 2.4	$ 0.5	$ 5.5
2029	$ 2.3	$ 0.5	$ 5.1	$ 1.6	$ 0.3	$ 3.5	$ 2.5	$ 0.5	$ 5.5
Total	**$ 28.2**	**$ 6.1**	**$ 62.5**	**$ 18.5**	**$ 4.0**	**$ 41.0**	**$ 33.9**	**$ 7.3**	**$ 75.3**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38c, E.38g, and E.38k.

Exhibit F.3n Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases (Ground Water Systems Serving 1,000-3,299 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.2	$ 0.0	$ 0.4	$ 0.2	$ 0.0	$ 0.4	$ 0.4	$ 0.1	$ 0.8
2011	$ 0.5	$ 0.1	$ 1.1	$ 0.4	$ 0.1	$ 0.9	$ 0.9	$ 0.2	$ 1.9
2012	$ 0.9	$ 0.2	$ 2.1	$ 0.7	$ 0.2	$ 1.5	$ 1.5	$ 0.3	$ 3.4
2013	$ 1.4	$ 0.3	$ 3.2	$ 1.0	$ 0.2	$ 2.3	$ 2.3	$ 0.5	$ 5.0
2014	$ 2.1	$ 0.4	$ 4.5	$ 1.4	$ 0.3	$ 3.1	$ 3.1	$ 0.7	$ 6.9
2015	$ 2.7	$ 0.6	$ 6.1	$ 1.9	$ 0.4	$ 4.1	$ 4.0	$ 0.9	$ 8.9
2016	$ 3.3	$ 0.7	$ 7.3	$ 2.2	$ 0.5	$ 4.7	$ 4.6	$ 1.0	$ 10.2
2017	$ 3.8	$ 0.8	$ 8.4	$ 2.4	$ 0.5	$ 5.3	$ 5.1	$ 1.1	$ 11.3
2018	$ 4.3	$ 0.9	$ 9.4	$ 2.7	$ 0.6	$ 5.9	$ 5.5	$ 1.2	$ 12.1
2019	$ 4.7	$ 1.0	$ 10.3	$ 2.9	$ 0.6	$ 6.4	$ 5.8	$ 1.3	$ 12.9
2020	$ 5.0	$ 1.1	$ 11.1	$ 3.1	$ 0.7	$ 6.9	$ 6.1	$ 1.3	$ 13.5
2021	$ 5.3	$ 1.2	$ 11.8	$ 3.3	$ 0.7	$ 7.4	$ 6.3	$ 1.4	$ 14.1
2022	$ 5.6	$ 1.2	$ 12.5	$ 3.5	$ 0.8	$ 7.9	$ 6.6	$ 1.4	$ 14.6
2023	$ 5.9	$ 1.3	$ 13.0	$ 3.7	$ 0.8	$ 8.3	$ 6.7	$ 1.5	$ 15.0
2024	$ 6.1	$ 1.3	$ 13.6	$ 3.9	$ 0.8	$ 8.8	$ 6.9	$ 1.5	$ 15.4
2025	$ 6.3	$ 1.4	$ 14.0	$ 4.1	$ 0.9	$ 9.2	$ 7.1	$ 1.5	$ 15.7
2026	$ 6.5	$ 1.4	$ 14.5	$ 4.3	$ 0.9	$ 9.6	$ 7.2	$ 1.6	$ 16.1
2027	$ 6.7	$ 1.4	$ 14.9	$ 4.5	$ 1.0	$ 10.0	$ 7.4	$ 1.6	$ 16.4
2028	$ 6.7	$ 1.4	$ 15.1	$ 4.6	$ 1.0	$ 10.3	$ 7.4	$ 1.6	$ 16.5
2029	$ 6.9	$ 1.5	$ 15.4	$ 4.8	$ 1.0	$ 10.6	$ 7.5	$ 1.6	$ 16.7
Total	**$ 85.0**	**$ 18.4**	**$ 188.7**	**$ 55.7**	**$ 12.0**	**$ 123.7**	**$ 102.4**	**$ 22.2**	**$ 227.3**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38c, E.38g, and E.38k.

Exhibit F.3o Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases (Ground Water Systems Serving 3,300-9,999 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.3	$ 0.1	$ 0.7	$ 0.3	$ 0.1	$ 0.6	$ 0.6	$ 0.1	$ 1.2
2011	$ 0.8	$ 0.2	$ 1.8	$ 0.6	$ 0.1	$ 1.4	$ 1.4	$ 0.3	$ 3.0
2012	$ 1.5	$ 0.3	$ 3.2	$ 1.1	$ 0.2	$ 2.4	$ 2.4	$ 0.5	$ 5.3
2013	$ 2.3	$ 0.5	$ 5.0	$ 1.6	$ 0.4	$ 3.6	$ 3.6	$ 0.8	$ 7.9
2014	$ 3.2	$ 0.7	$ 7.1	$ 2.2	$ 0.5	$ 4.9	$ 4.9	$ 1.1	$ 10.9
2015	$ 4.3	$ 1.0	$ 9.6	$ 2.9	$ 0.6	$ 6.5	$ 6.4	$ 1.4	$ 14.1
2016	$ 5.2	$ 1.1	$ 11.5	$ 3.4	$ 0.7	$ 7.5	$ 7.3	$ 1.6	$ 16.1
2017	$ 6.0	$ 1.3	$ 13.3	$ 3.8	$ 0.8	$ 8.4	$ 8.1	$ 1.8	$ 17.8
2018	$ 6.7	$ 1.5	$ 14.9	$ 4.2	$ 0.9	$ 9.3	$ 8.7	$ 1.9	$ 19.2
2019	$ 7.4	$ 1.6	$ 16.4	$ 4.6	$ 1.0	$ 10.2	$ 9.2	$ 2.0	$ 20.4
2020	$ 8.0	$ 1.7	$ 17.6	$ 4.9	$ 1.1	$ 11.0	$ 9.6	$ 2.1	$ 21.4
2021	$ 8.4	$ 1.8	$ 18.7	$ 5.3	$ 1.1	$ 11.7	$ 10.0	$ 2.2	$ 22.2
2022	$ 8.9	$ 1.9	$ 19.8	$ 5.6	$ 1.2	$ 12.5	$ 10.4	$ 2.2	$ 23.0
2023	$ 9.3	$ 2.0	$ 20.6	$ 5.9	$ 1.3	$ 13.2	$ 10.7	$ 2.3	$ 23.7
2024	$ 9.6	$ 2.1	$ 21.4	$ 6.2	$ 1.3	$ 13.9	$ 10.9	$ 2.4	$ 24.3
2025	$ 10.0	$ 2.1	$ 22.2	$ 6.5	$ 1.4	$ 14.5	$ 11.2	$ 2.4	$ 24.9
2026	$ 10.3	$ 2.2	$ 22.9	$ 6.8	$ 1.5	$ 15.2	$ 11.4	$ 2.5	$ 25.4
2027	$ 10.6	$ 2.3	$ 23.6	$ 7.1	$ 1.5	$ 15.9	$ 11.6	$ 2.5	$ 26.0
2028	$ 10.7	$ 2.3	$ 23.8	$ 7.3	$ 1.6	$ 16.2	$ 11.7	$ 2.5	$ 26.1
2029	$ 10.9	$ 2.3	$ 24.4	$ 7.5	$ 1.6	$ 16.8	$ 11.8	$ 2.5	$ 26.5
Total	**$ 134.4**	**$ 29.1**	**$ 298.6**	**$ 88.1**	**$ 19.1**	**$ 195.7**	**$ 162.0**	**$ 35.1**	**$ 359.5**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38c, E.38g, and E.38k.

Exhibit F.3p Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases (Ground Water Systems Serving 10,000-49,999 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.5	$ 0.1	$ 1.0	$ 0.4	$ 0.1	$ 0.9	$ 0.8	$ 0.2	$ 1.9
2011	$ 1.2	$ 0.3	$ 2.7	$ 1.0	$ 0.2	$ 2.1	$ 2.1	$ 0.5	$ 4.6
2012	$ 2.2	$ 0.5	$ 4.9	$ 1.7	$ 0.4	$ 3.7	$ 3.7	$ 0.8	$ 8.1
2013	$ 3.5	$ 0.8	$ 7.6	$ 2.5	$ 0.5	$ 5.5	$ 5.5	$ 1.2	$ 12.0
2014	$ 4.9	$ 1.1	$ 10.8	$ 3.4	$ 0.7	$ 7.5	$ 7.5	$ 1.6	$ 16.5
2015	$ 6.3	$ 1.4	$ 14.0	$ 4.2	$ 0.9	$ 9.3	$ 9.2	$ 2.0	$ 20.4
2016	$ 7.5	$ 1.6	$ 16.6	$ 4.9	$ 1.1	$ 10.7	$ 10.5	$ 2.3	$ 23.1
2017	$ 8.6	$ 1.9	$ 19.1	$ 5.4	$ 1.2	$ 12.0	$ 11.4	$ 2.5	$ 25.3
2018	$ 9.6	$ 2.1	$ 21.2	$ 6.0	$ 1.3	$ 13.2	$ 12.3	$ 2.7	$ 27.1
2019	$ 10.5	$ 2.3	$ 23.2	$ 6.5	$ 1.4	$ 14.4	$ 12.9	$ 2.8	$ 28.7
2020	$ 11.2	$ 2.4	$ 24.9	$ 7.0	$ 1.5	$ 15.5	$ 13.5	$ 2.9	$ 30.0
2021	$ 11.9	$ 2.6	$ 26.4	$ 7.4	$ 1.6	$ 16.5	$ 14.0	$ 3.0	$ 31.2
2022	$ 12.5	$ 2.7	$ 27.7	$ 7.9	$ 1.7	$ 17.6	$ 14.5	$ 3.1	$ 32.2
2023	$ 13.0	$ 2.8	$ 28.9	$ 8.3	$ 1.8	$ 18.5	$ 14.9	$ 3.2	$ 33.1
2024	$ 13.5	$ 2.9	$ 30.0	$ 8.8	$ 1.9	$ 19.5	$ 15.3	$ 3.3	$ 34.0
2025	$ 13.9	$ 3.0	$ 31.0	$ 9.2	$ 2.0	$ 20.4	$ 15.6	$ 3.4	$ 34.8
2026	$ 14.4	$ 3.1	$ 32.0	$ 9.6	$ 2.1	$ 21.3	$ 15.9	$ 3.4	$ 35.5
2027	$ 14.8	$ 3.2	$ 32.9	$ 10.0	$ 2.1	$ 22.2	$ 16.2	$ 3.5	$ 36.2
2028	$ 14.9	$ 3.2	$ 33.3	$ 10.2	$ 2.2	$ 22.7	$ 16.3	$ 3.5	$ 36.3
2029	$ 15.2	$ 3.3	$ 34.0	$ 10.5	$ 2.3	$ 23.5	$ 16.5	$ 3.5	$ 36.9
Total	**$ 190.2**	**$ 41.1**	**$ 422.4**	**$ 124.8**	**$ 27.0**	**$ 277.1**	**$ 228.8**	**$ 49.5**	**$ 507.8**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38c, E.38g, and E.38k.

Exhibit F.3q Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases (Ground Water Systems Serving 50,000-99,999 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.2	$ 0.0	$ 0.4	$ 0.2	$ 0.0	$ 0.4	$ 0.4	$ 0.1	$ 0.8
2011	$ 0.5	$ 0.1	$ 1.1	$ 0.4	$ 0.1	$ 0.9	$ 0.9	$ 0.2	$ 1.9
2012	$ 0.9	$ 0.2	$ 2.1	$ 0.7	$ 0.2	$ 1.5	$ 1.5	$ 0.3	$ 3.4
2013	$ 1.5	$ 0.3	$ 3.2	$ 1.0	$ 0.2	$ 2.3	$ 2.3	$ 0.5	$ 5.0
2014	$ 2.0	$ 0.4	$ 4.3	$ 1.3	$ 0.3	$ 2.9	$ 3.0	$ 0.6	$ 6.5
2015	$ 2.4	$ 0.5	$ 5.3	$ 1.6	$ 0.3	$ 3.4	$ 3.4	$ 0.7	$ 7.5
2016	$ 2.8	$ 0.6	$ 6.1	$ 1.8	$ 0.4	$ 3.9	$ 3.8	$ 0.8	$ 8.3
2017	$ 3.1	$ 0.7	$ 6.9	$ 2.0	$ 0.4	$ 4.3	$ 4.1	$ 0.9	$ 9.0
2018	$ 3.4	$ 0.8	$ 7.6	$ 2.1	$ 0.5	$ 4.7	$ 4.3	$ 0.9	$ 9.5
2019	$ 3.7	$ 0.8	$ 8.2	$ 2.3	$ 0.5	$ 5.1	$ 4.5	$ 1.0	$ 10.0
2020	$ 4.0	$ 0.9	$ 8.8	$ 2.5	$ 0.5	$ 5.5	$ 4.7	$ 1.0	$ 10.4
2021	$ 4.2	$ 0.9	$ 9.2	$ 2.6	$ 0.6	$ 5.8	$ 4.9	$ 1.1	$ 10.8
2022	$ 4.4	$ 0.9	$ 9.7	$ 2.8	$ 0.6	$ 6.2	$ 5.0	$ 1.1	$ 11.2
2023	$ 4.5	$ 1.0	$ 10.1	$ 2.9	$ 0.6	$ 6.5	$ 5.1	$ 1.1	$ 11.4
2024	$ 4.7	$ 1.0	$ 10.4	$ 3.1	$ 0.7	$ 6.8	$ 5.3	$ 1.1	$ 11.7
2025	$ 4.8	$ 1.0	$ 10.7	$ 3.2	$ 0.7	$ 7.1	$ 5.4	$ 1.2	$ 12.0
2026	$ 5.0	$ 1.1	$ 11.1	$ 3.3	$ 0.7	$ 7.4	$ 5.5	$ 1.2	$ 12.2
2027	$ 5.1	$ 1.1	$ 11.4	$ 3.5	$ 0.7	$ 7.7	$ 5.6	$ 1.2	$ 12.5
2028	$ 5.1	$ 1.1	$ 11.5	$ 3.5	$ 0.8	$ 7.9	$ 5.6	$ 1.2	$ 12.5
2029	$ 5.2	$ 1.1	$ 11.7	$ 3.7	$ 0.8	$ 8.2	$ 5.7	$ 1.2	$ 12.7
Total	**$ 67.5**	**$ 14.6**	**$ 149.8**	**$ 44.4**	**$ 9.6**	**$ 98.5**	**$ 80.8**	**$ 17.5**	**$ 179.4**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38c, E.38g, and E.38k.

Exhibit F.3r Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases (Ground Water Systems Serving 100,000-999,999 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.6	$ 0.1	$ 1.2	$ 0.5	$ 0.1	$ 1.0	$ 1.0	$ 0.2	$ 2.2
2011	$ 1.4	$ 0.3	$ 3.2	$ 1.1	$ 0.2	$ 2.5	$ 2.4	$ 0.5	$ 5.4
2012	$ 2.6	$ 0.6	$ 5.7	$ 1.9	$ 0.4	$ 4.2	$ 4.3	$ 0.9	$ 9.4
2013	$ 4.0	$ 0.9	$ 8.9	$ 2.9	$ 0.6	$ 6.3	$ 6.4	$ 1.4	$ 14.0
2014	$ 5.1	$ 1.1	$ 11.3	$ 3.5	$ 0.8	$ 7.6	$ 7.7	$ 1.7	$ 16.9
2015	$ 6.2	$ 1.3	$ 13.6	$ 4.0	$ 0.9	$ 8.8	$ 8.7	$ 1.9	$ 19.2
2016	$ 7.1	$ 1.6	$ 15.7	$ 4.5	$ 1.0	$ 9.9	$ 9.5	$ 2.1	$ 21.0
2017	$ 7.9	$ 1.7	$ 17.6	$ 4.9	$ 1.1	$ 10.9	$ 10.2	$ 2.2	$ 22.5
2018	$ 8.7	$ 1.9	$ 19.2	$ 5.4	$ 1.2	$ 11.8	$ 10.8	$ 2.3	$ 23.8
2019	$ 9.3	$ 2.0	$ 20.6	$ 5.8	$ 1.3	$ 12.8	$ 11.3	$ 2.5	$ 25.0
2020	$ 9.9	$ 2.1	$ 21.9	$ 6.2	$ 1.3	$ 13.6	$ 11.7	$ 2.5	$ 25.9
2021	$ 10.4	$ 2.2	$ 23.0	$ 6.5	$ 1.4	$ 14.5	$ 12.1	$ 2.6	$ 26.8
2022	$ 10.8	$ 2.3	$ 24.1	$ 6.9	$ 1.5	$ 15.4	$ 12.4	$ 2.7	$ 27.6
2023	$ 11.2	$ 2.4	$ 25.0	$ 7.3	$ 1.6	$ 16.1	$ 12.7	$ 2.7	$ 28.3
2024	$ 11.6	$ 2.5	$ 25.8	$ 7.6	$ 1.6	$ 16.9	$ 13.0	$ 2.8	$ 29.0
2025	$ 12.0	$ 2.6	$ 26.6	$ 7.9	$ 1.7	$ 17.7	$ 13.3	$ 2.9	$ 29.6
2026	$ 12.3	$ 2.6	$ 27.4	$ 8.3	$ 1.8	$ 18.4	$ 13.6	$ 2.9	$ 30.2
2027	$ 12.6	$ 2.7	$ 28.1	$ 8.6	$ 1.8	$ 19.2	$ 13.8	$ 3.0	$ 30.8
2028	$ 12.7	$ 2.7	$ 28.4	$ 8.8	$ 1.9	$ 19.6	$ 13.8	$ 3.0	$ 30.8
2029	$ 13.0	$ 2.8	$ 29.0	$ 9.1	$ 1.9	$ 20.3	$ 14.0	$ 3.0	$ 31.3
Total	**$ 169.5**	**$ 36.7**	**$ 376.2**	**$ 111.5**	**$ 24.1**	**$ 247.6**	**$ 202.6**	**$ 43.9**	**$ 449.5**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38c, E.38g, and E.38k.

Exhibit F.3s Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases (Ground Water Systems Serving ≥1,000,000 People)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.4
2011	$ 0.2	$ 0.1	$ 0.5	$ 0.2	$ 0.0	$ 0.4	$ 0.4	$ 0.1	$ 0.9
2012	$ 0.4	$ 0.1	$ 1.0	$ 0.3	$ 0.1	$ 0.7	$ 0.7	$ 0.2	$ 1.6
2013	$ 0.7	$ 0.1	$ 1.5	$ 0.5	$ 0.1	$ 1.1	$ 1.1	$ 0.2	$ 2.3
2014	$ 0.9	$ 0.2	$ 1.9	$ 0.6	$ 0.1	$ 1.3	$ 1.3	$ 0.3	$ 2.8
2015	$ 1.0	$ 0.2	$ 2.3	$ 0.7	$ 0.1	$ 1.5	$ 1.4	$ 0.3	$ 3.2
2016	$ 1.2	$ 0.3	$ 2.6	$ 0.7	$ 0.2	$ 1.6	$ 1.6	$ 0.3	$ 3.5
2017	$ 1.3	$ 0.3	$ 2.9	$ 0.8	$ 0.2	$ 1.8	$ 1.7	$ 0.4	$ 3.8
2018	$ 1.4	$ 0.3	$ 3.2	$ 0.9	$ 0.2	$ 2.0	$ 1.8	$ 0.4	$ 4.0
2019	$ 1.6	$ 0.3	$ 3.4	$ 1.0	$ 0.2	$ 2.1	$ 1.9	$ 0.4	$ 4.2
2020	$ 1.6	$ 0.4	$ 3.6	$ 1.0	$ 0.2	$ 2.3	$ 1.9	$ 0.4	$ 4.3
2021	$ 1.7	$ 0.4	$ 3.8	$ 1.1	$ 0.2	$ 2.4	$ 2.0	$ 0.4	$ 4.5
2022	$ 1.8	$ 0.4	$ 4.0	$ 1.1	$ 0.2	$ 2.6	$ 2.1	$ 0.4	$ 4.6
2023	$ 1.9	$ 0.4	$ 4.2	$ 1.2	$ 0.3	$ 2.7	$ 2.1	$ 0.5	$ 4.7
2024	$ 1.9	$ 0.4	$ 4.3	$ 1.3	$ 0.3	$ 2.8	$ 2.2	$ 0.5	$ 4.8
2025	$ 2.0	$ 0.4	$ 4.4	$ 1.3	$ 0.3	$ 2.9	$ 2.2	$ 0.5	$ 4.9
2026	$ 2.0	$ 0.4	$ 4.6	$ 1.4	$ 0.3	$ 3.1	$ 2.3	$ 0.5	$ 5.0
2027	$ 2.1	$ 0.5	$ 4.7	$ 1.4	$ 0.3	$ 3.2	$ 2.3	$ 0.5	$ 5.1
2028	$ 2.1	$ 0.5	$ 4.7	$ 1.5	$ 0.3	$ 3.3	$ 2.3	$ 0.5	$ 5.1
2029	$ 2.2	$ 0.5	$ 4.8	$ 1.5	$ 0.3	$ 3.4	$ 2.3	$ 0.5	$ 5.2
Total	**$ 28.2**	**$ 6.1**	**$ 62.6**	**$ 18.6**	**$ 4.0**	**$ 41.2**	**$ 33.7**	**$ 7.3**	**$ 74.9**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38c, E.38g, and E.38k.

Exhibit F.3t Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases (All Ground Water Systems)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 2.0	$ 0.4	$ 4.3	$ 1.7	$ 0.4	$ 3.7	$ 3.5	$ 0.8	$ 7.7
2011	$ 5.1	$ 1.1	$ 11.2	$ 4.0	$ 0.9	$ 8.8	$ 8.7	$ 1.9	$ 19.1
2012	$ 9.3	$ 2.0	$ 20.4	$ 6.9	$ 1.5	$ 15.1	$ 15.1	$ 3.3	$ 33.3
2013	$ 14.3	$ 3.1	$ 31.6	$ 10.2	$ 2.3	$ 22.5	$ 22.6	$ 5.0	$ 49.8
2014	$ 19.6	$ 4.3	$ 43.1	$ 13.4	$ 2.9	$ 29.6	$ 29.6	$ 6.5	$ 65.1
2015	$ 24.9	$ 5.4	$ 54.9	$ 16.5	$ 3.6	$ 36.4	$ 35.9	$ 7.9	$ 79.2
2016	$ 29.4	$ 6.4	$ 64.9	$ 18.9	$ 4.1	$ 41.6	$ 40.5	$ 8.8	$ 89.2
2017	$ 33.5	$ 7.3	$ 73.9	$ 21.0	$ 4.6	$ 46.5	$ 44.1	$ 9.6	$ 97.4
2018	$ 37.1	$ 8.1	$ 82.0	$ 23.1	$ 5.0	$ 51.0	$ 47.1	$ 10.3	$ 104.0
2019	$ 40.3	$ 8.8	$ 89.3	$ 25.0	$ 5.4	$ 55.3	$ 49.6	$ 10.8	$ 109.9
2020	$ 43.1	$ 9.4	$ 95.6	$ 26.8	$ 5.8	$ 59.5	$ 51.8	$ 11.2	$ 114.8
2021	$ 45.6	$ 9.9	$ 101.2	$ 28.6	$ 6.2	$ 63.5	$ 53.7	$ 11.6	$ 119.2
2022	$ 47.8	$ 10.3	$ 106.3	$ 30.3	$ 6.6	$ 67.4	$ 55.4	$ 12.0	$ 123.2
2023	$ 49.8	$ 10.7	$ 110.7	$ 32.0	$ 6.9	$ 71.1	$ 56.9	$ 12.3	$ 126.6
2024	$ 51.6	$ 11.1	$ 114.8	$ 33.6	$ 7.2	$ 74.7	$ 58.3	$ 12.6	$ 129.8
2025	$ 53.3	$ 11.5	$ 118.7	$ 35.1	$ 7.6	$ 78.2	$ 59.6	$ 12.8	$ 132.7
2026	$ 54.9	$ 11.8	$ 122.2	$ 36.6	$ 7.9	$ 81.6	$ 60.8	$ 13.1	$ 135.4
2027	$ 56.4	$ 12.1	$ 125.8	$ 38.1	$ 8.2	$ 85.1	$ 62.0	$ 13.3	$ 138.3
2028	$ 56.9	$ 12.2	$ 127.0	$ 39.0	$ 8.4	$ 87.0	$ 62.1	$ 13.3	$ 138.6
2029	$ 58.1	$ 12.5	$ 129.8	$ 40.3	$ 8.6	$ 90.1	$ 63.0	$ 13.5	$ 140.7
Total	**$ 733.0**	**$ 158.5**	**$ 1,627.6**	**$ 481.2**	**$ 104.1**	**$ 1,068.5**	**$ 880.4**	**$ 190.6**	**$ 1,954.0**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.38c, E.38g, and E.38k.

Exhibit F.3u Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases
(All Water Systems)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 66.6	$ 14.7	$ 146.4	$ 62.9	$ 13.9	$ 138.4	$ 124.7	$ 27.5	$ 274.3
2011	$ 172.5	$ 37.9	$ 379.9	$ 149.2	$ 32.8	$ 328.7	$ 305.7	$ 67.2	$ 673.3
2012	$ 312.3	$ 68.6	$ 687.4	$ 254.6	$ 55.9	$ 560.4	$ 528.1	$ 116.0	$ 1,162.5
2013	$ 484.2	$ 106.3	$ 1,065.2	$ 377.0	$ 82.8	$ 829.5	$ 783.8	$ 172.1	$ 1,724.5
2014	$ 632.5	$ 138.6	$ 1,392.3	$ 462.0	$ 101.2	$ 1,017.0	$ 961.9	$ 210.8	$ 2,117.5
2015	$ 771.9	$ 168.9	$ 1,702.1	$ 535.3	$ 117.1	$ 1,180.4	$ 1,102.9	$ 241.2	$ 2,431.9
2016	$ 898.3	$ 196.3	$ 1,980.3	$ 598.5	$ 130.8	$ 1,319.4	$ 1,211.7	$ 264.8	$ 2,671.2
2017	$ 1,013.1	$ 221.2	$ 2,237.5	$ 656.8	$ 143.4	$ 1,450.7	$ 1,301.2	$ 284.0	$ 2,873.8
2018	$ 1,114.4	$ 242.7	$ 2,461.9	$ 711.7	$ 155.0	$ 1,572.2	$ 1,376.8	$ 299.8	$ 3,041.6
2019	$ 1,201.3	$ 261.2	$ 2,660.2	$ 763.7	$ 166.0	$ 1,691.2	$ 1,441.7	$ 313.4	$ 3,192.6
2020	$ 1,277.2	$ 277.2	$ 2,830.4	$ 813.5	$ 176.6	$ 1,802.9	$ 1,498.6	$ 325.3	$ 3,321.2
2021	$ 1,344.2	$ 291.4	$ 2,982.5	$ 861.4	$ 186.7	$ 1,911.4	$ 1,549.2	$ 335.8	$ 3,437.3
2022	$ 1,404.4	$ 303.8	$ 3,122.3	$ 907.7	$ 196.4	$ 2,018.0	$ 1,594.7	$ 345.0	$ 3,545.4
2023	$ 1,459.1	$ 314.8	$ 3,244.4	$ 952.5	$ 205.5	$ 2,117.9	$ 1,636.3	$ 353.0	$ 3,638.2
2024	$ 1,509.4	$ 325.4	$ 3,357.8	$ 996.0	$ 214.7	$ 2,215.7	$ 1,674.7	$ 361.0	$ 3,725.4
2025	$ 1,556.0	$ 334.7	$ 3,463.7	$ 1,038.4	$ 223.4	$ 2,311.5	$ 1,710.5	$ 368.0	$ 3,807.5
2026	$ 1,599.7	$ 343.7	$ 3,561.9	$ 1,079.8	$ 232.0	$ 2,404.2	$ 1,744.3	$ 374.7	$ 3,883.9
2027	$ 1,640.8	$ 351.9	$ 3,662.6	$ 1,120.2	$ 240.3	$ 2,500.5	$ 1,776.4	$ 381.0	$ 3,965.3
2028	$ 1,656.1	$ 355.4	$ 3,693.4	$ 1,143.4	$ 245.4	$ 2,550.0	$ 1,781.7	$ 382.3	$ 3,973.5
2029	$ 1,688.4	$ 361.9	$ 3,772.1	$ 1,178.6	$ 252.6	$ 2,633.1	$ 1,806.2	$ 387.1	$ 4,035.3
Total	**$ 21,802.2**	**$ 4,716.5**	**$ 48,404.3**	**$ 14,663.3**	**$ 3,172.4**	**$ 32,552.9**	**$ 25,911.1**	**$ 5,610.2**	**$ 57,496.3**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.3j and F.3t.

Exhibit F.3v Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, at 3% Discount Rate
(All Water Systems)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 57.4	$ 12.6	$ 126.3	$ 54.3	$ 12.0	$ 119.4	$ 107.6	$ 23.7	$ 236.6
2011	$ 144.4	$ 31.8	$ 318.2	$ 125.0	$ 27.5	$ 275.2	$ 256.0	$ 56.3	$ 563.8
2012	$ 253.9	$ 55.8	$ 558.9	$ 207.0	$ 45.5	$ 455.6	$ 429.4	$ 94.3	$ 945.2
2013	$ 382.2	$ 83.9	$ 840.9	$ 297.6	$ 65.3	$ 654.8	$ 618.7	$ 135.8	$ 1,361.4
2014	$ 484.7	$ 106.2	$ 1,067.1	$ 354.1	$ 77.6	$ 779.4	$ 737.2	$ 161.6	$ 1,622.9
2015	$ 574.4	$ 125.6	$ 1,266.5	$ 398.3	$ 87.1	$ 878.3	$ 820.6	$ 179.5	$ 1,809.5
2016	$ 648.9	$ 141.8	$ 1,430.6	$ 432.4	$ 94.5	$ 953.2	$ 875.4	$ 191.3	$ 1,929.7
2017	$ 710.6	$ 155.1	$ 1,569.4	$ 460.7	$ 100.6	$ 1,017.5	$ 912.7	$ 199.2	$ 2,015.7
2018	$ 758.8	$ 165.2	$ 1,676.4	$ 484.6	$ 105.5	$ 1,070.6	$ 937.5	$ 204.2	$ 2,071.2
2019	$ 794.2	$ 172.7	$ 1,758.7	$ 504.9	$ 109.8	$ 1,118.1	$ 953.2	$ 207.2	$ 2,110.7
2020	$ 819.8	$ 177.9	$ 1,816.7	$ 522.2	$ 113.3	$ 1,157.2	$ 961.9	$ 208.8	$ 2,131.7
2021	$ 837.7	$ 181.6	$ 1,858.6	$ 536.8	$ 116.4	$ 1,191.1	$ 965.4	$ 209.3	$ 2,142.0
2022	$ 849.7	$ 183.8	$ 1,889.0	$ 549.2	$ 118.8	$ 1,220.9	$ 964.8	$ 208.7	$ 2,145.0
2023	$ 857.1	$ 184.9	$ 1,905.7	$ 559.5	$ 120.7	$ 1,244.0	$ 961.1	$ 207.4	$ 2,137.1
2024	$ 860.8	$ 185.6	$ 1,914.9	$ 568.0	$ 122.5	$ 1,263.6	$ 955.0	$ 205.9	$ 2,124.6
2025	$ 861.5	$ 185.3	$ 1,917.8	$ 574.9	$ 123.7	$ 1,279.8	$ 947.1	$ 203.7	$ 2,108.1
2026	$ 859.9	$ 184.7	$ 1,914.7	$ 580.4	$ 124.7	$ 1,292.4	$ 937.6	$ 201.4	$ 2,087.8
2027	$ 856.3	$ 183.7	$ 1,911.5	$ 584.6	$ 125.4	$ 1,305.0	$ 927.1	$ 198.8	$ 2,069.5
2028	$ 839.1	$ 180.1	$ 1,871.4	$ 579.3	$ 124.3	$ 1,292.1	$ 902.8	$ 193.7	$ 2,013.3
2029	$ 830.6	$ 178.0	$ 1,855.6	$ 579.8	$ 124.3	$ 1,295.3	$ 888.5	$ 190.4	$ 1,985.1
Total	**$ 13,282.1**	**$ 2,876.5**	**$ 29,468.9**	**$ 8,953.6**	**$ 1,939.4**	**$ 19,863.6**	**$ 16,059.7**	**$ 3,481.3**	**$ 35,610.9**
Ann.	**$ 762.8**	**$ 165.2**	**$ 1,692.3**	**$ 514.2**	**$ 111.4**	**$ 1,140.7**	**$ 922.3**	**$ 199.9**	**$ 2,045.1**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibit F.3u.

Exhibit F.3w Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, at 7% Discount Rate
(All Water Systems)

TTHM - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 47.5	$ 10.5	$ 104.4	$ 44.9	$ 9.9	$ 98.7	$ 88.9	$ 19.6	$ 195.5
2011	$ 114.9	$ 25.3	$ 253.1	$ 99.4	$ 21.9	$ 219.0	$ 203.7	$ 44.8	$ 448.6
2012	$ 194.5	$ 42.7	$ 428.1	$ 158.5	$ 34.8	$ 349.0	$ 328.9	$ 72.2	$ 723.9
2013	$ 281.8	$ 61.9	$ 620.0	$ 219.4	$ 48.2	$ 482.8	$ 456.2	$ 100.2	$ 1,003.7
2014	$ 344.0	$ 75.4	$ 757.3	$ 251.3	$ 55.1	$ 553.2	$ 523.2	$ 114.7	$ 1,151.8
2015	$ 392.4	$ 85.8	$ 865.3	$ 272.1	$ 59.5	$ 600.1	$ 560.6	$ 122.6	$ 1,236.2
2016	$ 426.8	$ 93.3	$ 940.8	$ 284.3	$ 62.1	$ 626.8	$ 575.7	$ 125.8	$ 1,269.1
2017	$ 449.8	$ 98.2	$ 993.5	$ 291.6	$ 63.7	$ 644.1	$ 577.8	$ 126.1	$ 1,276.0
2018	$ 462.4	$ 100.7	$ 1,021.6	$ 295.3	$ 64.3	$ 652.4	$ 571.3	$ 124.4	$ 1,262.2
2019	$ 465.9	$ 101.3	$ 1,031.7	$ 296.2	$ 64.4	$ 655.9	$ 559.1	$ 121.6	$ 1,238.1
2020	$ 462.9	$ 100.5	$ 1,025.9	$ 294.9	$ 64.0	$ 653.5	$ 543.2	$ 117.9	$ 1,203.7
2021	$ 455.3	$ 98.7	$ 1,010.3	$ 291.8	$ 63.3	$ 647.4	$ 524.8	$ 113.8	$ 1,164.3
2022	$ 444.6	$ 96.2	$ 988.4	$ 287.4	$ 62.2	$ 638.8	$ 504.8	$ 109.2	$ 1,122.4
2023	$ 431.7	$ 93.1	$ 959.9	$ 281.8	$ 60.8	$ 626.6	$ 484.1	$ 104.5	$ 1,076.4
2024	$ 417.4	$ 90.0	$ 928.5	$ 275.4	$ 59.4	$ 612.7	$ 463.1	$ 99.8	$ 1,030.1
2025	$ 402.1	$ 86.5	$ 895.1	$ 268.3	$ 57.7	$ 597.3	$ 442.0	$ 95.1	$ 983.9
2026	$ 386.3	$ 83.0	$ 860.2	$ 260.8	$ 56.0	$ 580.7	$ 421.3	$ 90.5	$ 938.0
2027	$ 370.3	$ 79.4	$ 826.7	$ 252.8	$ 54.2	$ 564.4	$ 401.0	$ 86.0	$ 895.0
2028	$ 349.3	$ 75.0	$ 779.1	$ 241.2	$ 51.8	$ 537.9	$ 375.8	$ 80.7	$ 838.2
2029	$ 332.9	$ 71.3	$ 743.6	$ 232.4	$ 49.8	$ 519.1	$ 356.1	$ 76.3	$ 795.5
Total	**$ 7,232.9**	**$ 1,568.7**	**$ 16,033.5**	**$ 4,899.9**	**$ 1,063.0**	**$ 10,860.3**	**$ 8,961.5**	**$ 1,945.7**	**$ 19,852.9**
Ann.	**$ 620.7**	**$ 134.6**	**$ 1,375.8**	**$ 420.5**	**$ 91.2**	**$ 931.9**	**$ 769.0**	**$ 167.0**	**$ 1,703.6**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibit F.3u.

Exhibit F.3x Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, at 3% Discount Rate, by Small & Large Size Categories
(Surface Water Systems)

TTHM - Preferred Alternative

	Small Systems									Large Systems								
	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model			Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 1.4	$ 0.3	$ 3.1	$ 1.2	$ 0.3	$ 2.6	$ 2.5	$ 0.6	$ 5.6	$ 54.3	$ 12.0	$ 119.5	$ 51.6	$ 11.4	$ 113.6	$ 102.0	$ 22.5	$ 224.4
2011	$ 3.6	$ 0.8	$ 7.9	$ 2.8	$ 0.6	$ 6.2	$ 6.1	$ 1.3	$ 13.4	$ 136.6	$ 30.0	$ 300.8	$ 118.8	$ 26.1	$ 261.7	$ 242.6	$ 53.4	$ 534.4
2012	$ 6.3	$ 1.4	$ 13.9	$ 4.7	$ 1.0	$ 10.3	$ 10.3	$ 2.3	$ 22.7	$ 240.1	$ 52.7	$ 528.5	$ 196.7	$ 43.2	$ 433.0	$ 406.8	$ 89.3	$ 895.4
2013	$ 9.5	$ 2.1	$ 20.9	$ 6.8	$ 1.5	$ 14.9	$ 15.0	$ 3.3	$ 33.0	$ 361.4	$ 79.3	$ 795.1	$ 282.7	$ 62.1	$ 622.1	$ 585.9	$ 128.6	$ 1,289.1
2014	$ 13.1	$ 2.9	$ 28.8	$ 9.1	$ 2.0	$ 20.0	$ 19.9	$ 4.4	$ 43.8	$ 456.6	$ 100.1	$ 1,005.2	$ 334.7	$ 73.3	$ 736.8	$ 694.7	$ 152.2	$ 1,529.2
2015	$ 17.0	$ 3.7	$ 37.6	$ 11.5	$ 2.5	$ 25.3	$ 25.0	$ 5.5	$ 55.1	$ 538.8	$ 117.9	$ 1,188.1	$ 374.6	$ 81.9	$ 825.9	$ 768.9	$ 168.2	$ 1,695.5
2016	$ 19.9	$ 4.4	$ 43.9	$ 12.9	$ 2.8	$ 28.5	$ 27.9	$ 6.1	$ 61.4	$ 607.8	$ 132.8	$ 1,339.8	$ 405.8	$ 88.7	$ 894.6	$ 818.3	$ 178.8	$ 1,803.9
2017	$ 22.3	$ 4.9	$ 49.2	$ 14.1	$ 3.1	$ 31.2	$ 29.8	$ 6.5	$ 65.9	$ 664.8	$ 145.1	$ 1,468.3	$ 431.8	$ 94.3	$ 953.7	$ 851.9	$ 186.0	$ 1,881.5
2018	$ 24.2	$ 5.3	$ 53.4	$ 15.1	$ 3.3	$ 33.4	$ 31.2	$ 6.8	$ 68.8	$ 709.4	$ 154.5	$ 1,567.2	$ 453.8	$ 98.8	$ 1,002.5	$ 874.3	$ 190.4	$ 1,931.5
2019	$ 25.7	$ 5.6	$ 57.0	$ 16.0	$ 3.5	$ 35.4	$ 32.0	$ 7.0	$ 71.0	$ 741.8	$ 161.3	$ 1,642.7	$ 472.4	$ 102.7	$ 1,046.1	$ 888.3	$ 193.1	$ 1,967.1
2020	$ 26.9	$ 5.8	$ 59.6	$ 16.7	$ 3.6	$ 37.0	$ 32.6	$ 7.1	$ 72.2	$ 765.2	$ 166.1	$ 1,695.8	$ 488.2	$ 106.0	$ 1,082.0	$ 896.1	$ 194.5	$ 1,985.8
2021	$ 27.7	$ 6.0	$ 61.5	$ 17.3	$ 3.8	$ 38.5	$ 32.9	$ 7.1	$ 73.0	$ 781.5	$ 169.4	$ 1,734.1	$ 501.7	$ 108.7	$ 1,113.1	$ 899.0	$ 194.9	$ 1,994.7
2022	$ 28.3	$ 6.1	$ 62.9	$ 17.9	$ 3.9	$ 39.7	$ 33.0	$ 7.1	$ 73.4	$ 792.5	$ 171.4	$ 1,761.8	$ 513.0	$ 111.0	$ 1,140.4	$ 898.3	$ 194.3	$ 1,997.0
2023	$ 28.7	$ 6.2	$ 63.8	$ 18.3	$ 4.0	$ 40.8	$ 33.0	$ 7.1	$ 73.4	$ 799.1	$ 172.4	$ 1,776.9	$ 522.4	$ 112.7	$ 1,161.5	$ 894.7	$ 193.0	$ 1,989.3
2024	$ 28.9	$ 6.2	$ 64.4	$ 18.7	$ 4.0	$ 41.7	$ 32.9	$ 7.1	$ 73.1	$ 802.4	$ 173.0	$ 1,785.0	$ 530.2	$ 114.3	$ 1,179.4	$ 888.9	$ 191.6	$ 1,977.5
2025	$ 29.1	$ 6.3	$ 64.7	$ 19.0	$ 4.1	$ 42.4	$ 32.6	$ 7.0	$ 72.6	$ 803.0	$ 172.7	$ 1,787.4	$ 536.4	$ 115.4	$ 1,194.1	$ 881.4	$ 189.6	$ 1,962.0
2026	$ 29.1	$ 6.2	$ 64.7	$ 19.3	$ 4.2	$ 43.0	$ 32.3	$ 6.9	$ 72.0	$ 801.3	$ 172.2	$ 1,784.2	$ 541.4	$ 116.3	$ 1,205.5	$ 872.6	$ 187.5	$ 1,943.0
2027	$ 29.0	$ 6.2	$ 64.8	$ 19.5	$ 4.2	$ 43.6	$ 32.0	$ 6.9	$ 71.4	$ 797.9	$ 171.1	$ 1,781.0	$ 545.2	$ 116.9	$ 1,217.0	$ 862.8	$ 185.0	$ 1,925.9
2028	$ 28.5	$ 6.1	$ 63.5	$ 19.4	$ 4.2	$ 43.3	$ 31.2	$ 6.7	$ 69.5	$ 781.8	$ 167.8	$ 1,743.5	$ 540.1	$ 115.9	$ 1,204.6	$ 840.1	$ 180.3	$ 1,873.6
2029	$ 28.2	$ 6.1	$ 63.1	$ 19.5	$ 4.2	$ 43.6	$ 30.7	$ 6.6	$ 68.6	$ 773.7	$ 165.8	$ 1,728.6	$ 540.4	$ 115.8	$ 1,207.4	$ 826.8	$ 177.2	$ 1,847.3
Total	**$ 427.5**	**$ 92.5**	**$ 948.7**	**$ 280.0**	**$ 60.6**	**$ 621.5**	**$ 522.9**	**$ 113.3**	**$ 1,160.0**	**$ 12,410.1**	**$ 2,687.7**	**$ 27,533.7**	**$ 8,382.0**	**$ 1,815.6**	**$ 18,594.9**	**$ 14,994.4**	**$ 3,250.5**	**$ 33,248.1**
Ann.	**$ 24.5**	**$ 5.3**	**$ 54.5**	**$ 16.1**	**$ 3.5**	**$ 35.7**	**$ 30.0**	**$ 6.5**	**$ 66.6**	**$ 712.7**	**$ 154.3**	**$ 1,581.2**	**$ 481.4**	**$ 104.3**	**$ 1,067.9**	**$ 861.1**	**$ 186.7**	**$ 1,909.4**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.3a through F.3i.

Exhibit F.3y Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, at 7% Discount Rate, by Small & Large Size Categories
(Surface Water Systems)

TTHM - Preferred Alternative

	Small Systems									Large Systems								
	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model			Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 1.2	$ 0.3	$ 2.6	$ 1.0	$ 0.2	$ 2.2	$ 2.1	$ 0.5	$ 4.6	$ 44.9	$ 9.9	$ 98.8	$ 42.7	$ 9.4	$ 93.9	$ 84.3	$ 18.6	$ 185.5
2011	$ 2.9	$ 0.6	$ 6.3	$ 2.2	$ 0.5	$ 4.9	$ 4.9	$ 1.1	$ 10.7	$ 108.7	$ 23.9	$ 239.4	$ 94.5	$ 20.8	$ 208.2	$ 193.0	$ 42.5	$ 425.2
2012	$ 4.8	$ 1.1	$ 10.6	$ 3.6	$ 0.8	$ 7.9	$ 7.9	$ 1.7	$ 17.4	$ 183.9	$ 40.4	$ 404.8	$ 150.7	$ 33.1	$ 331.7	$ 311.6	$ 68.4	$ 685.8
2013	$ 7.0	$ 1.5	$ 15.4	$ 5.0	$ 1.1	$ 11.0	$ 11.0	$ 2.4	$ 24.3	$ 266.4	$ 58.5	$ 586.2	$ 208.4	$ 45.8	$ 458.6	$ 432.0	$ 94.8	$ 950.4
2014	$ 9.3	$ 2.0	$ 20.5	$ 6.4	$ 1.4	$ 14.2	$ 14.1	$ 3.1	$ 31.1	$ 324.1	$ 71.0	$ 713.4	$ 237.5	$ 52.1	$ 522.9	$ 493.0	$ 108.0	$ 1,085.3
2015	$ 11.6	$ 2.5	$ 25.7	$ 7.8	$ 1.7	$ 17.3	$ 17.1	$ 3.7	$ 37.6	$ 368.1	$ 80.5	$ 811.7	$ 255.9	$ 56.0	$ 564.3	$ 525.3	$ 114.9	$ 1,158.3
2016	$ 13.1	$ 2.9	$ 28.9	$ 8.5	$ 1.9	$ 18.8	$ 18.3	$ 4.0	$ 40.4	$ 399.7	$ 87.4	$ 881.1	$ 266.9	$ 58.3	$ 588.3	$ 538.1	$ 117.6	$ 1,186.3
2017	$ 14.1	$ 3.1	$ 31.1	$ 8.9	$ 2.0	$ 19.7	$ 18.9	$ 4.1	$ 41.7	$ 420.9	$ 91.9	$ 929.5	$ 273.4	$ 59.7	$ 603.7	$ 539.3	$ 117.7	$ 1,191.1
2018	$ 14.7	$ 3.2	$ 32.6	$ 9.2	$ 2.0	$ 20.4	$ 19.0	$ 4.1	$ 41.9	$ 432.3	$ 94.1	$ 955.0	$ 276.5	$ 60.2	$ 610.9	$ 532.8	$ 116.0	$ 1,177.1
2019	$ 15.1	$ 3.3	$ 33.4	$ 9.4	$ 2.0	$ 20.8	$ 18.8	$ 4.1	$ 41.6	$ 435.2	$ 94.6	$ 963.6	$ 277.1	$ 60.2	$ 613.6	$ 521.1	$ 113.3	$ 1,153.9
2020	$ 15.2	$ 3.3	$ 33.7	$ 9.4	$ 2.0	$ 20.9	$ 18.4	$ 4.0	$ 40.8	$ 432.1	$ 93.8	$ 957.6	$ 275.7	$ 59.8	$ 611.0	$ 506.0	$ 109.8	$ 1,121.3
2021	$ 15.1	$ 3.3	$ 33.4	$ 9.4	$ 2.0	$ 20.9	$ 17.9	$ 3.9	$ 39.7	$ 424.8	$ 92.1	$ 942.6	$ 272.7	$ 59.1	$ 605.0	$ 488.7	$ 105.9	$ 1,084.3
2022	$ 14.8	$ 3.2	$ 32.9	$ 9.4	$ 2.0	$ 20.8	$ 17.3	$ 3.7	$ 38.4	$ 414.7	$ 89.7	$ 921.9	$ 268.4	$ 58.1	$ 596.7	$ 470.0	$ 101.7	$ 1,045.0
2023	$ 14.5	$ 3.1	$ 32.1	$ 9.2	$ 2.0	$ 20.5	$ 16.6	$ 3.6	$ 37.0	$ 402.5	$ 86.8	$ 895.0	$ 263.1	$ 56.8	$ 585.0	$ 450.6	$ 97.2	$ 1,002.0
2024	$ 14.0	$ 3.0	$ 31.2	$ 9.1	$ 2.0	$ 20.2	$ 15.9	$ 3.4	$ 35.4	$ 389.1	$ 83.9	$ 865.5	$ 257.0	$ 55.4	$ 571.8	$ 431.0	$ 92.9	$ 958.8
2025	$ 13.6	$ 2.9	$ 30.2	$ 8.9	$ 1.9	$ 19.8	$ 15.2	$ 3.3	$ 33.9	$ 374.8	$ 80.6	$ 834.2	$ 250.4	$ 53.9	$ 557.3	$ 411.4	$ 88.5	$ 915.7
2026	$ 13.1	$ 2.8	$ 29.1	$ 8.7	$ 1.9	$ 19.3	$ 14.5	$ 3.1	$ 32.4	$ 360.0	$ 77.3	$ 801.6	$ 243.2	$ 52.3	$ 541.6	$ 392.0	$ 84.2	$ 872.9
2027	$ 12.6	$ 2.7	$ 28.0	$ 8.4	$ 1.8	$ 18.9	$ 13.8	$ 3.0	$ 30.9	$ 345.1	$ 74.0	$ 770.3	$ 235.8	$ 50.6	$ 526.3	$ 373.1	$ 80.0	$ 832.9
2028	$ 11.9	$ 2.5	$ 26.5	$ 8.1	$ 1.7	$ 18.0	$ 13.0	$ 2.8	$ 28.9	$ 325.5	$ 69.8	$ 725.9	$ 224.9	$ 48.3	$ 501.5	$ 349.7	$ 75.1	$ 780.0
2029	$ 11.3	$ 2.4	$ 25.3	$ 7.8	$ 1.7	$ 17.5	$ 12.3	$ 2.6	$ 27.5	$ 310.1	$ 66.5	$ 692.8	$ 216.6	$ 46.4	$ 483.9	$ 331.4	$ 71.0	$ 740.3
Total	**$ 229.7**	**$ 49.8**	**$ 509.4**	**$ 150.6**	**$ 32.6**	**$ 334.0**	**$ 287.1**	**$ 62.3**	**$ 636.2**	**$ 6,762.7**	**$ 1,466.8**	**$ 14,990.8**	**$ 4,591.5**	**$ 996.1**	**$ 10,176.4**	**$ 8,374.6**	**$ 1,818.3**	**$ 18,552.2**
Ann.	**$ 19.7**	**$ 4.3**	**$ 43.7**	**$ 12.9**	**$ 2.8**	**$ 28.7**	**$ 24.6**	**$ 5.3**	**$ 54.6**	**$ 580.3**	**$ 125.9**	**$ 1,286.4**	**$ 394.0**	**$ 85.5**	**$ 873.2**	**$ 718.6**	**$ 156.0**	**$ 1,592.0**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.3a through F.3i.

Exhibit F.3z Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, at 3% Discount Rate, by Small & Large Size Categories (Ground Water Systems)

TTHM - Preferred Alternative

	Small Systems									Large Systems								
	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model			Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.6	$ 0.1	$ 1.2	$ 0.5	$ 0.1	$ 1.0	$ 1.0	$ 0.2	$ 2.2	$ 1.1	$ 0.3	$ 2.5	$ 1.0	$ 0.2	$ 2.1	$ 2.0	$ 0.4	$ 4.4
2011	$ 1.4	$ 0.3	$ 3.1	$ 1.1	$ 0.2	$ 2.4	$ 2.4	$ 0.5	$ 5.3	$ 2.9	$ 0.6	$ 6.3	$ 2.2	$ 0.5	$ 4.9	$ 4.9	$ 1.1	$ 10.7
2012	$ 2.5	$ 0.5	$ 5.5	$ 1.8	$ 0.4	$ 4.0	$ 4.1	$ 0.9	$ 8.9	$ 5.1	$ 1.1	$ 11.1	$ 3.7	$ 0.8	$ 8.2	$ 8.3	$ 1.8	$ 18.2
2013	$ 3.7	$ 0.8	$ 8.2	$ 2.7	$ 0.6	$ 5.9	$ 5.9	$ 1.3	$ 12.9	$ 7.6	$ 1.7	$ 16.7	$ 5.4	$ 1.2	$ 11.9	$ 12.0	$ 2.6	$ 26.4
2014	$ 5.1	$ 1.1	$ 11.3	$ 3.6	$ 0.8	$ 7.8	$ 7.8	$ 1.7	$ 17.2	$ 9.9	$ 2.2	$ 21.7	$ 6.7	$ 1.5	$ 14.8	$ 14.9	$ 3.3	$ 32.7
2015	$ 6.7	$ 1.5	$ 14.7	$ 4.5	$ 1.0	$ 9.9	$ 9.8	$ 2.1	$ 21.6	$ 11.9	$ 2.6	$ 26.1	$ 7.8	$ 1.7	$ 17.2	$ 16.9	$ 3.7	$ 37.4
2016	$ 7.8	$ 1.7	$ 17.2	$ 5.1	$ 1.1	$ 11.2	$ 10.9	$ 2.4	$ 24.1	$ 13.4	$ 2.9	$ 29.6	$ 8.6	$ 1.9	$ 18.9	$ 18.3	$ 4.0	$ 40.3
2017	$ 8.7	$ 1.9	$ 19.3	$ 5.5	$ 1.2	$ 12.2	$ 11.7	$ 2.6	$ 25.8	$ 14.7	$ 3.2	$ 32.6	$ 9.2	$ 2.0	$ 20.4	$ 19.2	$ 4.2	$ 42.5
2018	$ 9.5	$ 2.1	$ 21.0	$ 5.9	$ 1.3	$ 13.1	$ 12.2	$ 2.7	$ 27.0	$ 15.8	$ 3.4	$ 34.9	$ 9.8	$ 2.1	$ 21.6	$ 19.8	$ 4.3	$ 43.8
2019	$ 10.1	$ 2.2	$ 22.3	$ 6.3	$ 1.4	$ 13.9	$ 12.6	$ 2.7	$ 27.8	$ 16.6	$ 3.6	$ 36.7	$ 10.3	$ 2.2	$ 22.7	$ 20.2	$ 4.4	$ 44.8
2020	$ 10.5	$ 2.3	$ 23.4	$ 6.6	$ 1.4	$ 14.5	$ 12.8	$ 2.8	$ 28.3	$ 17.1	$ 3.7	$ 38.0	$ 10.7	$ 2.3	$ 23.6	$ 20.5	$ 4.4	$ 45.4
2021	$ 10.9	$ 2.4	$ 24.1	$ 6.8	$ 1.5	$ 15.1	$ 12.9	$ 2.8	$ 28.6	$ 17.5	$ 3.8	$ 38.9	$ 11.0	$ 2.4	$ 24.5	$ 20.6	$ 4.5	$ 45.7
2022	$ 11.1	$ 2.4	$ 24.7	$ 7.0	$ 1.5	$ 15.6	$ 12.9	$ 2.8	$ 28.8	$ 17.8	$ 3.9	$ 39.6	$ 11.3	$ 2.4	$ 25.2	$ 20.6	$ 4.5	$ 45.8
2023	$ 11.3	$ 2.4	$ 25.0	$ 7.2	$ 1.6	$ 16.0	$ 12.9	$ 2.8	$ 28.8	$ 18.0	$ 3.9	$ 40.0	$ 11.6	$ 2.5	$ 25.7	$ 20.5	$ 4.4	$ 45.6
2024	$ 11.3	$ 2.4	$ 25.2	$ 7.3	$ 1.6	$ 16.3	$ 12.9	$ 2.8	$ 28.7	$ 18.1	$ 3.9	$ 40.2	$ 11.8	$ 2.5	$ 26.2	$ 20.4	$ 4.4	$ 45.4
2025	$ 11.4	$ 2.5	$ 25.4	$ 7.5	$ 1.6	$ 16.6	$ 12.8	$ 2.8	$ 28.5	$ 18.1	$ 3.9	$ 40.3	$ 12.0	$ 2.6	$ 26.7	$ 20.2	$ 4.3	$ 45.0
2026	$ 11.4	$ 2.4	$ 25.4	$ 7.6	$ 1.6	$ 16.9	$ 12.7	$ 2.7	$ 28.2	$ 18.1	$ 3.9	$ 40.3	$ 12.1	$ 2.6	$ 27.0	$ 20.0	$ 4.3	$ 44.6
2027	$ 11.4	$ 2.4	$ 25.4	$ 7.7	$ 1.6	$ 17.1	$ 12.5	$ 2.7	$ 28.0	$ 18.0	$ 3.9	$ 40.3	$ 12.2	$ 2.6	$ 27.3	$ 19.8	$ 4.2	$ 44.2
2028	$ 11.2	$ 2.4	$ 24.9	$ 7.6	$ 1.6	$ 17.0	$ 12.2	$ 2.6	$ 27.3	$ 17.7	$ 3.8	$ 39.4	$ 12.2	$ 2.6	$ 27.1	$ 19.3	$ 4.1	$ 43.0
2029	$ 11.1	$ 2.4	$ 24.7	$ 7.6	$ 1.6	$ 17.1	$ 12.0	$ 2.6	$ 26.9	$ 17.5	$ 3.8	$ 39.1	$ 12.2	$ 2.6	$ 27.2	$ 19.0	$ 4.1	$ 42.3
Total	**$ 167.6**	**$ 36.3**	**$ 372.0**	**$ 109.8**	**$ 23.8**	**$ 243.8**	**$ 205.0**	**$ 44.4**	**$ 454.8**	**$ 277.0**	**$ 60.0**	**$ 614.5**	**$ 181.8**	**$ 39.4**	**$ 403.4**	**$ 337.3**	**$ 73.1**	**$ 748.0**
Ann.	**$ 9.6**	**$ 2.1**	**$ 21.4**	**$ 6.3**	**$ 1.4**	**$ 14.0**	**$ 11.8**	**$ 2.6**	**$ 26.1**	**$ 15.9**	**$ 3.4**	**$ 35.3**	**$ 10.4**	**$ 2.3**	**$ 23.2**	**$ 19.4**	**$ 4.2**	**$ 43.0**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.3k through F.3s.

Exhibit F.3aa Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, at 7% Discount Rate, by Small & Large Size Categories (Surface Water Systems)

TTHM - Preferred Alternative

	Small Systems									Large Systems								
	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model			Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.5	$ 0.1	$ 1.0	$ 0.4	$ 0.1	$ 0.9	$ 0.8	$ 0.2	$ 1.8	$ 0.9	$ 0.2	$ 2.1	$ 0.8	$ 0.2	$ 1.7	$ 1.7	$ 0.4	$ 3.7
2011	$ 1.1	$ 0.2	$ 2.5	$ 0.9	$ 0.2	$ 1.9	$ 1.9	$ 0.4	$ 4.2	$ 2.3	$ 0.5	$ 5.0	$ 1.8	$ 0.4	$ 3.9	$ 3.9	$ 0.9	$ 8.5
2012	$ 1.9	$ 0.4	$ 4.2	$ 1.4	$ 0.3	$ 3.1	$ 3.1	$ 0.7	$ 6.8	$ 3.9	$ 0.8	$ 8.5	$ 2.9	$ 0.6	$ 6.3	$ 6.3	$ 1.4	$ 13.9
2013	$ 2.7	$ 0.6	$ 6.0	$ 2.0	$ 0.4	$ 4.3	$ 4.3	$ 1.0	$ 9.5	$ 5.6	$ 1.2	$ 12.3	$ 4.0	$ 0.9	$ 8.8	$ 8.8	$ 1.9	$ 19.4
2014	$ 3.6	$ 0.8	$ 8.0	$ 2.5	$ 0.6	$ 5.6	$ 5.5	$ 1.2	$ 12.2	$ 7.0	$ 1.5	$ 15.4	$ 4.8	$ 1.0	$ 10.5	$ 10.5	$ 2.3	$ 23.2
2015	$ 4.6	$ 1.0	$ 10.1	$ 3.1	$ 0.7	$ 6.8	$ 6.7	$ 1.5	$ 14.8	$ 8.1	$ 1.8	$ 17.9	$ 5.3	$ 1.2	$ 11.7	$ 11.6	$ 2.5	$ 25.5
2016	$ 5.1	$ 1.1	$ 11.3	$ 3.3	$ 0.7	$ 7.4	$ 7.2	$ 1.6	$ 15.8	$ 8.8	$ 1.9	$ 19.5	$ 5.6	$ 1.2	$ 12.4	$ 12.0	$ 2.6	$ 26.5
2017	$ 5.5	$ 1.2	$ 12.2	$ 3.5	$ 0.8	$ 7.7	$ 7.4	$ 1.6	$ 16.3	$ 9.3	$ 2.0	$ 20.6	$ 5.8	$ 1.3	$ 12.9	$ 12.2	$ 2.7	$ 26.9
2018	$ 5.8	$ 1.3	$ 12.8	$ 3.6	$ 0.8	$ 8.0	$ 7.4	$ 1.6	$ 16.4	$ 9.6	$ 2.1	$ 21.3	$ 6.0	$ 1.3	$ 13.2	$ 12.1	$ 2.6	$ 26.7
2019	$ 5.9	$ 1.3	$ 13.1	$ 3.7	$ 0.8	$ 8.1	$ 7.4	$ 1.6	$ 16.3	$ 9.7	$ 2.1	$ 21.5	$ 6.0	$ 1.3	$ 13.3	$ 11.9	$ 2.6	$ 26.3
2020	$ 6.0	$ 1.3	$ 13.2	$ 3.7	$ 0.8	$ 8.2	$ 7.2	$ 1.6	$ 16.0	$ 9.7	$ 2.1	$ 21.4	$ 6.0	$ 1.3	$ 13.4	$ 11.6	$ 2.5	$ 25.6
2021	$ 5.9	$ 1.3	$ 13.1	$ 3.7	$ 0.8	$ 8.2	$ 7.0	$ 1.5	$ 15.6	$ 9.5	$ 2.1	$ 21.2	$ 6.0	$ 1.3	$ 13.3	$ 11.2	$ 2.4	$ 24.8
2022	$ 5.8	$ 1.3	$ 12.9	$ 3.7	$ 0.8	$ 8.2	$ 6.8	$ 1.5	$ 15.1	$ 9.3	$ 2.0	$ 20.7	$ 5.9	$ 1.3	$ 13.2	$ 10.8	$ 2.3	$ 23.9
2023	$ 5.7	$ 1.2	$ 12.6	$ 3.6	$ 0.8	$ 8.1	$ 6.5	$ 1.4	$ 14.5	$ 9.1	$ 2.0	$ 20.2	$ 5.8	$ 1.3	$ 13.0	$ 10.3	$ 2.2	$ 23.0
2024	$ 5.5	$ 1.2	$ 12.2	$ 3.6	$ 0.8	$ 7.9	$ 6.2	$ 1.3	$ 13.9	$ 8.8	$ 1.9	$ 19.5	$ 5.7	$ 1.2	$ 12.7	$ 9.9	$ 2.1	$ 22.0
2025	$ 5.3	$ 1.1	$ 11.8	$ 3.5	$ 0.8	$ 7.8	$ 6.0	$ 1.3	$ 13.3	$ 8.5	$ 1.8	$ 18.8	$ 5.6	$ 1.2	$ 12.4	$ 9.4	$ 2.0	$ 21.0
2026	$ 5.1	$ 1.1	$ 11.4	$ 3.4	$ 0.7	$ 7.6	$ 5.7	$ 1.2	$ 12.7	$ 8.1	$ 1.7	$ 18.1	$ 5.4	$ 1.2	$ 12.1	$ 9.0	$ 1.9	$ 20.0
2027	$ 4.9	$ 1.1	$ 11.0	$ 3.3	$ 0.7	$ 7.4	$ 5.4	$ 1.2	$ 12.1	$ 7.8	$ 1.7	$ 17.4	$ 5.3	$ 1.1	$ 11.8	$ 8.6	$ 1.8	$ 19.1
2028	$ 4.7	$ 1.0	$ 10.4	$ 3.2	$ 0.7	$ 7.1	$ 5.1	$ 1.1	$ 11.4	$ 7.4	$ 1.6	$ 16.4	$ 5.1	$ 1.1	$ 11.3	$ 8.0	$ 1.7	$ 17.9
2029	$ 4.4	$ 1.0	$ 9.9	$ 3.1	$ 0.7	$ 6.8	$ 4.8	$ 1.0	$ 10.8	$ 7.0	$ 1.5	$ 15.7	$ 4.9	$ 1.0	$ 10.9	$ 7.6	$ 1.6	$ 17.0
Total	**$ 90.1**	**$ 19.5**	**$ 199.8**	**$ 59.1**	**$ 12.8**	**$ 131.0**	**$ 112.6**	**$ 24.4**	**$ 249.5**	**$ 150.5**	**$ 32.6**	**$ 333.5**	**$ 98.8**	**$ 21.4**	**$ 218.9**	**$ 187.3**	**$ 40.7**	**$ 415.0**
Ann.	**$ 7.7**	**$ 1.7**	**$ 17.1**	**$ 5.1**	**$ 1.1**	**$ 11.2**	**$ 9.7**	**$ 2.1**	**$ 21.4**	**$ 12.9**	**$ 2.8**	**$ 28.6**	**$ 8.5**	**$ 1.8**	**$ 18.8**	**$ 16.1**	**$ 3.5**	**$ 35.6**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.3k through F.3s.

Exhibit F.3ab Mean Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, at 3% Discount Rate, by System Size
(All Systems)

TTHM - Preferred Alternative

	Smoking/Lung Cancer Cessation Lag Model										Smoking/Bladder Cancer Cessation Lag Model										Arsenic/Bladder Cancer Cessation Lag Model									
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.1	$ 0.1	$ 0.5	$ 1.3	$ 6.4	$ 5.4	$ 23.7	$ 19.9	$ 57.4	$ 0.0	$ 0.1	$ 0.1	$ 0.4	$ 1.1	$ 6.1	$ 5.1	$ 22.5	$ 18.9	$ 54.3	$ 0.0	$ 0.1	$ 0.2	$ 0.9	$ 2.2	$ 12.1	$ 10.2	$ 44.5	$ 37.3	$ 107.6
2011	$ 0.0	$ 0.2	$ 0.3	$ 1.3	$ 3.2	$ 16.2	$ 13.6	$ 59.7	$ 49.9	$ 144.4	$ 0.0	$ 0.2	$ 0.2	$ 1.0	$ 2.5	$ 14.0	$ 11.8	$ 51.8	$ 43.4	$ 125.0	$ 0.0	$ 0.4	$ 0.5	$ 2.2	$ 5.4	$ 28.7	$ 24.2	$ 105.9	$ 88.7	$ 256.0
2012	$ 0.0	$ 0.4	$ 0.5	$ 2.3	$ 5.6	$ 28.5	$ 24.0	$ 104.9	$ 87.8	$ 253.9	$ 0.0	$ 0.3	$ 0.4	$ 1.7	$ 4.2	$ 23.2	$ 19.6	$ 85.8	$ 71.9	$ 207.0	$ 0.1	$ 0.6	$ 0.8	$ 3.8	$ 9.1	$ 48.1	$ 40.6	$ 177.6	$ 148.7	$ 429.4
2013	$ 0.1	$ 0.6	$ 0.7	$ 3.5	$ 8.4	$ 42.9	$ 36.1	$ 157.8	$ 132.2	$ 382.2	$ 0.0	$ 0.4	$ 0.5	$ 2.5	$ 6.0	$ 33.3	$ 28.2	$ 123.3	$ 103.4	$ 297.6	$ 0.1	$ 0.9	$ 1.2	$ 5.4	$ 13.3	$ 69.4	$ 58.5	$ 255.8	$ 214.2	$ 618.7
2014	$ 0.1	$ 0.8	$ 1.0	$ 4.8	$ 11.6	$ 59.2	$ 47.3	$ 195.9	$ 164.1	$ 484.7	$ 0.1	$ 0.5	$ 0.7	$ 3.3	$ 8.0	$ 44.2	$ 35.0	$ 142.6	$ 119.6	$ 354.1	$ 0.1	$ 1.2	$ 1.5	$ 7.2	$ 17.6	$ 91.7	$ 72.6	$ 296.7	$ 248.5	$ 737.2
2015	$ 0.1	$ 1.0	$ 1.3	$ 6.2	$ 15.1	$ 74.2	$ 56.2	$ 228.7	$ 191.5	$ 574.4	$ 0.1	$ 0.7	$ 0.9	$ 4.2	$ 10.2	$ 53.0	$ 39.2	$ 157.9	$ 132.3	$ 398.3	$ 0.2	$ 1.5	$ 1.9	$ 9.1	$ 22.1	$ 109.2	$ 80.8	$ 324.3	$ 271.6	$ 820.6
2016	$ 0.1	$ 1.2	$ 1.5	$ 7.2	$ 17.6	$ 85.9	$ 63.6	$ 256.7	$ 215.0	$ 648.9	$ 0.1	$ 0.8	$ 1.0	$ 4.7	$ 11.5	$ 58.6	$ 42.6	$ 170.4	$ 142.8	$ 432.4	$ 0.2	$ 1.6	$ 2.2	$ 10.1	$ 24.7	$ 119.4	$ 86.3	$ 343.3	$ 287.5	$ 875.4
2017	$ 0.2	$ 1.3	$ 1.7	$ 8.1	$ 19.7	$ 95.5	$ 69.8	$ 279.9	$ 234.4	$ 710.6	$ 0.1	$ 0.8	$ 1.1	$ 5.1	$ 12.5	$ 63.1	$ 45.5	$ 180.9	$ 151.6	$ 460.7	$ 0.2	$ 1.8	$ 2.3	$ 10.8	$ 26.4	$ 126.3	$ 90.2	$ 356.3	$ 298.3	$ 912.7
2018	$ 0.2	$ 1.4	$ 1.9	$ 8.8	$ 21.4	$ 103.4	$ 74.8	$ 297.7	$ 249.3	$ 758.8	$ 0.1	$ 0.9	$ 1.2	$ 5.5	$ 13.4	$ 66.9	$ 47.9	$ 189.7	$ 159.0	$ 484.6	$ 0.2	$ 1.8	$ 2.4	$ 11.3	$ 27.6	$ 131.0	$ 92.7	$ 364.9	$ 305.5	$ 937.5
2019	$ 0.2	$ 1.5	$ 2.0	$ 9.3	$ 22.8	$ 109.7	$ 78.4	$ 310.4	$ 259.9	$ 794.2	$ 0.1	$ 0.9	$ 1.2	$ 5.8	$ 14.1	$ 70.1	$ 49.9	$ 197.3	$ 165.3	$ 504.9	$ 0.2	$ 1.9	$ 2.5	$ 11.6	$ 28.4	$ 134.1	$ 94.3	$ 370.2	$ 309.9	$ 953.2
2020	$ 0.2	$ 1.6	$ 2.1	$ 9.8	$ 23.8	$ 114.3	$ 81.0	$ 319.5	$ 267.5	$ 819.8	$ 0.1	$ 1.0	$ 1.3	$ 6.1	$ 14.8	$ 72.9	$ 51.7	$ 203.7	$ 170.7	$ 522.2	$ 0.2	$ 1.9	$ 2.5	$ 11.8	$ 28.9	$ 136.0	$ 95.2	$ 373.0	$ 312.3	$ 961.9
2021	$ 0.2	$ 1.6	$ 2.1	$ 10.1	$ 24.5	$ 117.5	$ 82.9	$ 325.8	$ 272.8	$ 837.7	$ 0.1	$ 1.0	$ 1.3	$ 6.3	$ 15.4	$ 75.2	$ 53.1	$ 209.2	$ 175.2	$ 536.8	$ 0.2	$ 1.9	$ 2.5	$ 11.9	$ 29.1	$ 137.0	$ 95.6	$ 373.9	$ 313.1	$ 965.4
2022	$ 0.2	$ 1.7	$ 2.2	$ 10.3	$ 25.1	$ 119.8	$ 84.1	$ 330.0	$ 276.4	$ 849.7	$ 0.1	$ 1.1	$ 1.4	$ 6.5	$ 15.8	$ 77.1	$ 54.4	$ 213.7	$ 179.1	$ 549.2	$ 0.2	$ 1.9	$ 2.6	$ 12.0	$ 29.2	$ 137.3	$ 95.6	$ 373.4	$ 312.6	$ 964.8
2023	$ 0.2	$ 1.7	$ 2.2	$ 10.4	$ 25.4	$ 121.3	$ 84.9	$ 332.5	$ 278.5	$ 857.1	$ 0.1	$ 1.1	$ 1.4	$ 6.7	$ 16.2	$ 78.8	$ 55.4	$ 217.6	$ 182.2	$ 559.5	$ 0.2	$ 1.9	$ 2.6	$ 12.0	$ 29.2	$ 137.0	$ 95.2	$ 371.7	$ 311.2	$ 961.1
2024	$ 0.2	$ 1.7	$ 2.2	$ 10.5	$ 25.6	$ 122.1	$ 85.3	$ 333.7	$ 279.4	$ 860.8	$ 0.1	$ 1.1	$ 1.5	$ 6.8	$ 16.6	$ 80.1	$ 56.3	$ 220.7	$ 184.9	$ 568.0	$ 0.2	$ 1.9	$ 2.5	$ 11.9	$ 29.1	$ 136.4	$ 94.7	$ 369.2	$ 309.1	$ 955.0
2025	$ 0.2	$ 1.7	$ 2.3	$ 10.6	$ 25.7	$ 122.5	$ 85.4	$ 333.7	$ 279.5	$ 861.5	$ 0.1	$ 1.1	$ 1.5	$ 6.9	$ 16.9	$ 81.3	$ 56.9	$ 223.2	$ 187.0	$ 574.9	$ 0.2	$ 1.9	$ 2.5	$ 11.8	$ 28.9	$ 135.4	$ 93.9	$ 365.9	$ 306.4	$ 947.1
2026	$ 0.2	$ 1.7	$ 2.3	$ 10.6	$ 25.7	$ 122.5	$ 85.2	$ 332.9	$ 278.8	$ 859.9	$ 0.1	$ 1.1	$ 1.5	$ 7.0	$ 17.1	$ 82.2	$ 57.5	$ 225.2	$ 188.6	$ 580.4	$ 0.2	$ 1.9	$ 2.5	$ 11.7	$ 28.6	$ 134.2	$ 93.0	$ 362.2	$ 303.3	$ 937.6
2027	$ 0.2	$ 1.7	$ 2.2	$ 10.5	$ 25.7	$ 122.1	$ 84.9	$ 331.4	$ 277.5	$ 856.3	$ 0.1	$ 1.1	$ 1.5	$ 7.1	$ 17.3	$ 82.9	$ 57.9	$ 226.7	$ 189.9	$ 584.6	$ 0.2	$ 1.9	$ 2.5	$ 11.6	$ 28.3	$ 132.8	$ 91.9	$ 358.0	$ 299.8	$ 927.1
2028	$ 0.2	$ 1.7	$ 2.2	$ 10.3	$ 25.2	$ 119.8	$ 83.2	$ 324.6	$ 271.8	$ 839.1	$ 0.1	$ 1.1	$ 1.5	$ 7.1	$ 17.2	$ 82.2	$ 57.4	$ 224.6	$ 188.1	$ 579.3	$ 0.2	$ 1.8	$ 2.4	$ 11.3	$ 27.6	$ 129.4	$ 89.5	$ 348.6	$ 291.9	$ 902.8
2029	$ 0.2	$ 1.7	$ 2.2	$ 10.3	$ 25.0	$ 118.7	$ 82.4	$ 321.2	$ 269.0	$ 830.6	$ 0.1	$ 1.1	$ 1.5	$ 7.1	$ 17.3	$ 82.4	$ 57.5	$ 224.7	$ 188.1	$ 579.8	$ 0.2	$ 1.8	$ 2.4	$ 11.1	$ 27.2	$ 127.4	$ 88.1	$ 343.0	$ 287.2	$ 888.5
Total	**$ 3.1**	**$ 25.1**	**$ 33.1**	**$ 155.2**	**$ 378.5**	**$ 1,822.5**	**$ 1,308.7**	**$ 5,200.6**	**$ 4,355.2**	**$ 13,282.1**	**$ 2.1**	**$ 16.5**	**$ 21.7**	**$ 101.7**	**$ 247.9**	**$ 1,227.4**	**$ 882.9**	**$ 3,511.5**	**$ 2,941.9**	**$ 8,953.6**	**$ 3.8**	**$ 30.7**	**$ 40.5**	**$ 189.9**	**$ 463.0**	**$ 2,213.0**	**$ 1,583.2**	**$ 6,278.4**	**$ 5,257.2**	**$ 16,059.7**
Ann.	**$ 0.2**	**$ 1.4**	**$ 1.9**	**$ 8.9**	**$ 21.7**	**$ 104.7**	**$ 75.2**	**$ 298.7**	**$ 250.1**	**$ 762.8**	**$ 0.1**	**$ 0.9**	**$ 1.2**	**$ 5.8**	**$ 14.2**	**$ 70.5**	**$ 50.7**	**$ 201.7**	**$ 168.9**	**$ 514.2**	**$ 0.2**	**$ 1.8**	**$ 2.3**	**$ 10.9**	**$ 26.6**	**$ 127.1**	**$ 90.9**	**$ 360.6**	**$ 301.9**	**$ 922.3**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.3a through F.3i and F.3k through F.3s.

Exhibit F.3ac Mean Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, at 7% Discount Rate, by System Size
(All Systems)

TTHM - Preferred Alternative

	Smoking/Lung Cancer Cessation Lag Model											Smoking/Bladder Cancer Cessation Lag Model										Arsenic/Bladder Cancer Cessation Lag Model									
Year	<100	101-500	501-1K	1,001-3,3K	3,301-10K	10,001-50K	50,001-100K	100,001-1M	>1M	Total	<100	101-500	501-1K	1,001-3,3K	3,301-10K	10,001-50K	50,001-100K	100,001-1M	>1M	Total	<100	101-500	501-1K	1,001-3,3K	3,301-10K	10,001-50K	50,001-100K	100,001-1M	>1M	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.1	$ 0.1	$ 0.4	$ 1.0	$ 5.3	$ 4.5	$ 19.6	$ 16.4	$ 47.5	$ 0.0	$ 0.1	$ 0.1	$ 0.4	$ 0.9	$ 5.0	$ 4.3	$ 18.6	$ 15.6	$ 44.9	$ 0.0	$ 0.1	$ 0.2	$ 0.8	$ 1.8	$ 10.0	$ 8.4	$ 36.8	$ 30.8	$ 88.9
2011	$ 0.0	$ 0.2	$ 0.2	$ 1.0	$ 2.5	$ 12.9	$ 10.9	$ 47.5	$ 39.7	$ 114.9	$ 0.0	$ 0.1	$ 0.2	$ 0.8	$ 2.0	$ 11.1	$ 9.4	$ 41.2	$ 34.6	$ 99.4	$ 0.0	$ 0.3	$ 0.4	$ 1.8	$ 4.3	$ 22.8	$ 19.3	$ 84.2	$ 70.6	$ 203.7
2012	$ 0.0	$ 0.3	$ 0.4	$ 1.8	$ 4.3	$ 21.8	$ 18.4	$ 80.3	$ 67.3	$ 194.5	$ 0.0	$ 0.2	$ 0.3	$ 1.3	$ 3.2	$ 17.8	$ 15.0	$ 65.7	$ 55.1	$ 158.5	$ 0.1	$ 0.5	$ 0.6	$ 2.9	$ 7.0	$ 36.9	$ 31.1	$ 136.0	$ 113.9	$ 328.9
2013	$ 0.1	$ 0.4	$ 0.5	$ 2.5	$ 6.2	$ 31.6	$ 26.6	$ 116.4	$ 97.4	$ 281.8	$ 0.0	$ 0.3	$ 0.4	$ 1.8	$ 4.4	$ 24.6	$ 20.8	$ 90.9	$ 76.2	$ 219.4	$ 0.1	$ 0.6	$ 0.9	$ 4.0	$ 9.8	$ 51.1	$ 43.1	$ 188.6	$ 158.0	$ 456.2
2014	$ 0.1	$ 0.5	$ 0.7	$ 3.4	$ 8.2	$ 42.0	$ 33.6	$ 139.1	$ 116.4	$ 344.0	$ 0.0	$ 0.4	$ 0.5	$ 2.3	$ 5.7	$ 31.4	$ 24.8	$ 101.2	$ 84.9	$ 251.3	$ 0.1	$ 0.8	$ 1.1	$ 5.1	$ 12.5	$ 65.1	$ 51.5	$ 210.6	$ 176.4	$ 523.2
2015	$ 0.1	$ 0.7	$ 0.9	$ 4.2	$ 10.3	$ 50.7	$ 38.4	$ 156.3	$ 130.9	$ 392.4	$ 0.1	$ 0.5	$ 0.6	$ 2.9	$ 6.9	$ 36.2	$ 26.8	$ 107.8	$ 90.4	$ 272.1	$ 0.1	$ 1.0	$ 1.3	$ 6.2	$ 15.1	$ 74.6	$ 55.2	$ 221.6	$ 185.5	$ 560.6
2016	$ 0.1	$ 0.8	$ 1.0	$ 4.8	$ 11.6	$ 56.5	$ 41.9	$ 168.8	$ 141.4	$ 426.8	$ 0.1	$ 0.5	$ 0.7	$ 3.1	$ 7.5	$ 38.5	$ 28.0	$ 112.0	$ 93.9	$ 284.3	$ 0.1	$ 1.1	$ 1.4	$ 6.7	$ 16.2	$ 78.5	$ 56.8	$ 225.8	$ 189.1	$ 575.7
2017	$ 0.1	$ 0.8	$ 1.1	$ 5.1	$ 12.5	$ 60.5	$ 44.2	$ 177.2	$ 148.4	$ 449.8	$ 0.1	$ 0.5	$ 0.7	$ 3.2	$ 7.9	$ 40.0	$ 28.8	$ 114.5	$ 95.9	$ 291.6	$ 0.1	$ 1.1	$ 1.5	$ 6.9	$ 16.7	$ 80.0	$ 57.1	$ 225.6	$ 188.9	$ 577.8
2018	$ 0.1	$ 0.9	$ 1.1	$ 5.4	$ 13.0	$ 63.0	$ 45.6	$ 181.4	$ 151.9	$ 462.4	$ 0.1	$ 0.5	$ 0.7	$ 3.3	$ 8.2	$ 40.8	$ 29.2	$ 115.6	$ 96.9	$ 295.3	$ 0.1	$ 1.1	$ 1.5	$ 6.9	$ 16.8	$ 79.9	$ 56.5	$ 222.4	$ 186.2	$ 571.3
2019	$ 0.1	$ 0.9	$ 1.2	$ 5.5	$ 13.4	$ 64.3	$ 46.0	$ 182.1	$ 152.5	$ 465.9	$ 0.1	$ 0.6	$ 0.7	$ 3.4	$ 8.3	$ 41.1	$ 29.3	$ 115.7	$ 97.0	$ 296.2	$ 0.1	$ 1.1	$ 1.5	$ 6.8	$ 16.6	$ 78.7	$ 55.3	$ 217.1	$ 181.8	$ 559.1
2020	$ 0.1	$ 0.9	$ 1.2	$ 5.5	$ 13.4	$ 64.5	$ 45.8	$ 180.4	$ 151.1	$ 462.9	$ 0.1	$ 0.6	$ 0.7	$ 3.4	$ 8.4	$ 41.1	$ 29.2	$ 115.0	$ 96.4	$ 294.9	$ 0.1	$ 1.1	$ 1.4	$ 6.7	$ 16.3	$ 76.8	$ 53.8	$ 210.6	$ 176.3	$ 543.2
2021	$ 0.1	$ 0.9	$ 1.2	$ 5.5	$ 13.3	$ 63.9	$ 45.1	$ 177.1	$ 148.3	$ 455.3	$ 0.1	$ 0.6	$ 0.7	$ 3.4	$ 8.3	$ 40.9	$ 28.9	$ 113.7	$ 95.2	$ 291.8	$ 0.1	$ 1.1	$ 1.4	$ 6.5	$ 15.8	$ 74.5	$ 52.0	$ 203.2	$ 170.2	$ 524.8
2022	$ 0.1	$ 0.9	$ 1.1	$ 5.4	$ 13.1	$ 62.7	$ 44.0	$ 172.7	$ 144.6	$ 444.6	$ 0.1	$ 0.5	$ 0.7	$ 3.4	$ 8.3	$ 40.4	$ 28.4	$ 111.8	$ 93.7	$ 287.4	$ 0.1	$ 1.0	$ 1.3	$ 6.3	$ 15.3	$ 71.8	$ 50.0	$ 195.4	$ 163.6	$ 504.8
2023	$ 0.1	$ 0.8	$ 1.1	$ 5.2	$ 12.8	$ 61.1	$ 42.8	$ 167.5	$ 140.3	$ 431.7	$ 0.1	$ 0.5	$ 0.7	$ 3.4	$ 8.2	$ 39.7	$ 27.9	$ 109.6	$ 91.8	$ 281.8	$ 0.1	$ 1.0	$ 1.3	$ 6.0	$ 14.7	$ 69.0	$ 48.0	$ 187.2	$ 156.8	$ 484.1
2024	$ 0.1	$ 0.8	$ 1.1	$ 5.1	$ 12.4	$ 59.2	$ 41.4	$ 161.8	$ 135.5	$ 417.4	$ 0.1	$ 0.5	$ 0.7	$ 3.3	$ 8.0	$ 38.9	$ 27.3	$ 107.0	$ 89.6	$ 275.4	$ 0.1	$ 0.9	$ 1.2	$ 5.8	$ 14.1	$ 66.1	$ 45.9	$ 179.0	$ 149.9	$ 463.1
2025	$ 0.1	$ 0.8	$ 1.1	$ 4.9	$ 12.0	$ 57.2	$ 39.9	$ 155.8	$ 130.4	$ 402.1	$ 0.1	$ 0.5	$ 0.7	$ 3.2	$ 7.9	$ 37.9	$ 26.6	$ 104.2	$ 87.3	$ 268.3	$ 0.1	$ 0.9	$ 1.2	$ 5.5	$ 13.5	$ 63.2	$ 43.8	$ 170.8	$ 143.0	$ 442.0
2026	$ 0.1	$ 0.8	$ 1.0	$ 4.7	$ 11.6	$ 55.0	$ 38.3	$ 149.6	$ 125.3	$ 386.3	$ 0.1	$ 0.5	$ 0.7	$ 3.2	$ 7.7	$ 36.9	$ 25.8	$ 101.2	$ 84.8	$ 260.8	$ 0.1	$ 0.9	$ 1.1	$ 5.3	$ 12.9	$ 60.3	$ 41.8	$ 162.7	$ 136.2	$ 421.3
2027	$ 0.1	$ 0.7	$ 1.0	$ 4.6	$ 11.1	$ 52.8	$ 36.7	$ 143.3	$ 120.0	$ 370.3	$ 0.1	$ 0.5	$ 0.7	$ 3.1	$ 7.5	$ 35.8	$ 25.0	$ 98.1	$ 82.1	$ 252.8	$ 0.1	$ 0.8	$ 1.1	$ 5.0	$ 12.3	$ 57.4	$ 39.8	$ 154.8	$ 129.7	$ 401.0
2028	$ 0.1	$ 0.7	$ 0.9	$ 4.3	$ 10.5	$ 49.9	$ 34.6	$ 135.1	$ 113.2	$ 349.3	$ 0.1	$ 0.5	$ 0.6	$ 2.9	$ 7.2	$ 34.2	$ 23.9	$ 93.5	$ 78.3	$ 241.2	$ 0.1	$ 0.8	$ 1.0	$ 4.7	$ 11.5	$ 53.9	$ 37.3	$ 145.1	$ 121.5	$ 375.8
2029	$ 0.1	$ 0.7	$ 0.9	$ 4.1	$ 10.0	$ 47.6	$ 33.0	$ 128.7	$ 107.8	$ 332.9	$ 0.1	$ 0.5	$ 0.6	$ 2.8	$ 6.9	$ 33.0	$ 23.0	$ 90.0	$ 75.4	$ 232.4	$ 0.1	$ 0.7	$ 1.0	$ 4.5	$ 10.9	$ 51.1	$ 35.3	$ 137.5	$ 115.1	$ 356.1
Total	**$ 1.7**	**$ 13.5**	**$ 17.8**	**$ 83.4**	**$ 203.4**	**$ 982.5**	**$ 711.4**	**$ 2,840.5**	**$ 2,378.7**	**$ 7,232.9**	**$ 1.1**	**$ 8.9**	**$ 11.7**	**$ 54.7**	**$ 133.3**	**$ 665.3**	**$ 482.5**	**$ 1,927.5**	**$ 1,615.0**	**$ 4,899.9**	**$ 2.1**	**$ 16.9**	**$ 22.2**	**$ 104.3**	**$ 254.2**	**$ 1,221.6**	**$ 881.9**	**$ 3,515.0**	**$ 2,943.4**	**$ 8,961.5**
Ann.	**$ 0.1**	**$ 1.2**	**$ 1.5**	**$ 7.2**	**$ 17.5**	**$ 84.3**	**$ 61.0**	**$ 243.7**	**$ 204.1**	**$ 620.7**	**$ 0.1**	**$ 0.8**	**$ 1.0**	**$ 4.7**	**$ 11.4**	**$ 57.1**	**$ 41.4**	**$ 165.4**	**$ 138.6**	**$ 420.5**	**$ 0.2**	**$ 1.4**	**$ 1.9**	**$ 8.9**	**$ 21.8**	**$ 104.8**	**$ 75.7**	**$ 301.6**	**$ 252.6**	**$ 769.0**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.3a through F.3i and F.3k through F.3s.

Section F.4
Model Outputs - Preferred Alternative
HAA5 as Indicator
Lymphoma for Non-Fatal Cases

Exhibit F.4a Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (All Surface Water Systems)

HAA5 - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 146.7	$ 22.5	$ 337.3	$ 141.5	$ 21.7	$ 325.3	$ 277.6	$ 42.5	$ 638.1
2011	$ 379.5	$ 58.1	$ 872.9	$ 334.6	$ 51.2	$ 769.6	$ 678.0	$ 103.8	$ 1,559.6
2012	$ 686.6	$ 105.1	$ 1,577.2	$ 569.6	$ 87.2	$ 1,308.4	$ 1,168.7	$ 178.8	$ 2,684.8
2013	$ 1,063.7	$ 162.8	$ 2,443.2	$ 841.7	$ 128.8	$ 1,933.3	$ 1,731.0	$ 265.0	$ 3,976.0
2014	$ 1,386.8	$ 212.0	$ 3,188.0	$ 1,026.9	$ 157.0	$ 2,360.6	$ 2,115.5	$ 323.4	$ 4,863.1
2015	$ 1,689.8	$ 258.4	$ 3,886.3	$ 1,185.1	$ 181.2	$ 2,725.6	$ 2,416.3	$ 369.5	$ 5,557.2
2016	$ 1,965.0	$ 300.2	$ 4,519.0	$ 1,321.4	$ 201.9	$ 3,038.9	$ 2,648.7	$ 404.6	$ 6,091.2
2017	$ 2,214.9	$ 338.2	$ 5,098.5	$ 1,446.9	$ 220.9	$ 3,330.6	$ 2,839.4	$ 433.6	$ 6,535.9
2018	$ 2,434.4	$ 371.2	$ 5,608.5	$ 1,564.4	$ 238.5	$ 3,604.1	$ 2,999.9	$ 457.4	$ 6,911.1
2019	$ 2,622.1	$ 399.4	$ 6,051.0	$ 1,675.7	$ 255.3	$ 3,867.0	$ 3,137.7	$ 478.0	$ 7,240.8
2020	$ 2,785.0	$ 424.1	$ 6,429.7	$ 1,781.9	$ 271.3	$ 4,113.9	$ 3,258.0	$ 496.1	$ 7,521.8
2021	$ 2,928.4	$ 445.4	$ 6,761.4	$ 1,883.7	$ 286.5	$ 4,349.3	$ 3,364.6	$ 511.7	$ 7,768.5
2022	$ 3,056.7	$ 464.8	$ 7,069.5	$ 1,981.8	$ 301.4	$ 4,583.5	$ 3,460.4	$ 526.2	$ 8,003.1
2023	$ 3,172.8	$ 482.6	$ 7,339.9	$ 2,076.5	$ 315.8	$ 4,803.8	$ 3,547.5	$ 539.5	$ 8,206.6
2024	$ 3,279.0	$ 498.5	$ 7,588.5	$ 2,168.3	$ 329.6	$ 5,018.1	$ 3,627.7	$ 551.5	$ 8,395.3
2025	$ 3,377.1	$ 512.6	$ 7,816.0	$ 2,257.5	$ 342.7	$ 5,224.7	$ 3,702.3	$ 562.0	$ 8,568.5
2026	$ 3,468.5	$ 525.8	$ 8,034.5	$ 2,344.3	$ 355.4	$ 5,430.2	$ 3,772.3	$ 571.8	$ 8,738.1
2027	$ 3,554.4	$ 538.2	$ 8,245.9	$ 2,428.9	$ 367.8	$ 5,634.9	$ 3,838.7	$ 581.2	$ 8,905.5
2028	$ 3,588.4	$ 543.8	$ 8,320.3	$ 2,479.0	$ 375.7	$ 5,748.0	$ 3,851.5	$ 583.7	$ 8,930.3
2029	$ 3,655.8	$ 553.2	$ 8,484.5	$ 2,552.7	$ 386.3	$ 5,924.5	$ 3,902.2	$ 590.5	$ 9,056.5
Total	**$ 47,455.7**	**$ 7,216.8**	**$ 109,672.1**	**$ 32,062.5**	**$ 4,876.1**	**$ 74,094.3**	**$ 56,337.8**	**$ 8,570.8**	**$ 130,151.9**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.39b, E.39f, and E.39j.

Exhibit F.4b Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (All Ground Water Systems)

HAA5 - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 9.6	$ 1.5	$ 22.0	$ 8.2	$ 1.3	$ 18.8	$ 17.1	$ 2.6	$ 39.3
2011	$ 24.9	$ 3.8	$ 57.2	$ 19.6	$ 3.0	$ 45.1	$ 42.4	$ 6.5	$ 97.6
2012	$ 45.1	$ 6.9	$ 103.5	$ 33.7	$ 5.2	$ 77.4	$ 73.9	$ 11.3	$ 169.8
2013	$ 69.8	$ 10.7	$ 160.3	$ 50.2	$ 7.7	$ 115.4	$ 110.3	$ 16.9	$ 253.3
2014	$ 95.2	$ 14.6	$ 218.9	$ 65.8	$ 10.1	$ 151.2	$ 144.0	$ 22.0	$ 331.0
2015	$ 121.0	$ 18.5	$ 278.4	$ 80.7	$ 12.3	$ 185.7	$ 174.8	$ 26.7	$ 402.1
2016	$ 142.9	$ 21.8	$ 328.6	$ 92.2	$ 14.1	$ 211.9	$ 196.6	$ 30.0	$ 452.0
2017	$ 162.5	$ 24.8	$ 374.1	$ 102.6	$ 15.7	$ 236.1	$ 214.0	$ 32.7	$ 492.5
2018	$ 180.1	$ 27.5	$ 414.8	$ 112.3	$ 17.1	$ 258.7	$ 228.3	$ 34.8	$ 526.0
2019	$ 195.5	$ 29.8	$ 451.2	$ 121.5	$ 18.5	$ 280.4	$ 240.4	$ 36.6	$ 554.9
2020	$ 209.0	$ 31.8	$ 482.6	$ 130.3	$ 19.8	$ 300.8	$ 250.8	$ 38.2	$ 579.1
2021	$ 220.8	$ 33.6	$ 509.8	$ 138.7	$ 21.1	$ 320.3	$ 259.8	$ 39.5	$ 600.0
2022	$ 231.3	$ 35.2	$ 534.9	$ 146.8	$ 22.3	$ 339.6	$ 267.8	$ 40.7	$ 619.4
2023	$ 240.7	$ 36.6	$ 556.9	$ 154.7	$ 23.5	$ 357.8	$ 275.0	$ 41.8	$ 636.1
2024	$ 249.3	$ 37.9	$ 577.0	$ 162.3	$ 24.7	$ 375.5	$ 281.5	$ 42.8	$ 651.4
2025	$ 257.3	$ 39.0	$ 595.4	$ 169.6	$ 25.7	$ 392.6	$ 287.4	$ 43.6	$ 665.3
2026	$ 264.6	$ 40.1	$ 613.0	$ 176.8	$ 26.8	$ 409.5	$ 293.0	$ 44.4	$ 678.7
2027	$ 271.5	$ 41.1	$ 629.9	$ 183.8	$ 27.8	$ 426.3	$ 298.2	$ 45.1	$ 691.8
2028	$ 274.4	$ 41.6	$ 636.3	$ 188.1	$ 28.5	$ 436.2	$ 299.2	$ 45.3	$ 693.7
2029	$ 279.8	$ 42.3	$ 649.4	$ 194.2	$ 29.4	$ 450.8	$ 303.1	$ 45.9	$ 703.5
Total	**$ 3,545.3**	**$ 539.1**	**$ 8,194.0**	**$ 2,332.2**	**$ 354.6**	**$ 5,390.4**	**$ 4,257.7**	**$ 647.6**	**$ 9,837.4**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.39c, E.39g, and E.39k.

Exhibit F.4c Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases
(All Water Systems)

HAA5 - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 156.3	$ 23.9	$ 359.3	$ 149.7	$ 22.9	$ 344.1	$ 294.7	$ 45.1	$ 677.4
2011	$ 404.4	$ 61.9	$ 930.1	$ 354.2	$ 54.2	$ 814.7	$ 720.5	$ 110.3	$ 1,657.1
2012	$ 731.6	$ 112.0	$ 1,680.7	$ 603.3	$ 92.3	$ 1,385.9	$ 1,242.6	$ 190.2	$ 2,854.5
2013	$ 1,133.4	$ 173.5	$ 2,603.4	$ 891.9	$ 136.5	$ 2,048.6	$ 1,841.3	$ 281.8	$ 4,229.3
2014	$ 1,482.1	$ 226.6	$ 3,407.0	$ 1,092.7	$ 167.0	$ 2,511.8	$ 2,259.5	$ 345.4	$ 5,194.1
2015	$ 1,810.9	$ 276.9	$ 4,164.7	$ 1,265.9	$ 193.6	$ 2,911.3	$ 2,591.2	$ 396.2	$ 5,959.2
2016	$ 2,107.9	$ 322.0	$ 4,847.7	$ 1,413.6	$ 215.9	$ 3,250.8	$ 2,845.2	$ 434.6	$ 6,543.2
2017	$ 2,377.4	$ 363.0	$ 5,472.6	$ 1,549.5	$ 236.6	$ 3,566.7	$ 3,053.3	$ 466.2	$ 7,028.4
2018	$ 2,614.5	$ 398.7	$ 6,023.4	$ 1,676.7	$ 255.7	$ 3,862.8	$ 3,228.2	$ 492.2	$ 7,437.2
2019	$ 2,817.6	$ 429.2	$ 6,502.2	$ 1,797.2	$ 273.8	$ 4,147.5	$ 3,378.1	$ 514.6	$ 7,795.6
2020	$ 2,994.0	$ 455.9	$ 6,912.3	$ 1,912.2	$ 291.2	$ 4,414.8	$ 3,508.8	$ 534.3	$ 8,100.8
2021	$ 3,149.2	$ 479.0	$ 7,271.2	$ 2,022.5	$ 307.6	$ 4,669.6	$ 3,624.4	$ 551.3	$ 8,368.4
2022	$ 3,288.0	$ 500.0	$ 7,604.4	$ 2,128.6	$ 323.7	$ 4,923.1	$ 3,728.2	$ 566.9	$ 8,622.5
2023	$ 3,413.5	$ 519.2	$ 7,896.7	$ 2,231.2	$ 339.4	$ 5,161.6	$ 3,822.5	$ 581.4	$ 8,842.8
2024	$ 3,528.4	$ 536.4	$ 8,165.5	$ 2,330.6	$ 354.3	$ 5,393.6	$ 3,909.2	$ 594.3	$ 9,046.7
2025	$ 3,634.4	$ 551.7	$ 8,411.4	$ 2,427.1	$ 368.4	$ 5,617.3	$ 3,989.7	$ 605.6	$ 9,233.7
2026	$ 3,733.2	$ 565.9	$ 8,647.4	$ 2,521.1	$ 382.2	$ 5,839.7	$ 4,065.3	$ 616.2	$ 9,416.8
2027	$ 3,825.9	$ 579.3	$ 8,875.8	$ 2,612.7	$ 395.6	$ 6,061.3	$ 4,136.9	$ 626.4	$ 9,597.3
2028	$ 3,862.8	$ 585.4	$ 8,956.5	$ 2,667.2	$ 404.2	$ 6,184.2	$ 4,150.7	$ 629.0	$ 9,624.0
2029	$ 3,935.6	$ 595.6	$ 9,133.9	$ 2,747.0	$ 415.7	$ 6,375.3	$ 4,205.3	$ 636.4	$ 9,760.0
Total	**$ 51,001.0**	**$ 7,755.8**	**$ 117,866.1**	**$ 34,394.6**	**$ 5,230.7**	**$ 79,484.7**	**$ 60,595.5**	**$ 9,218.4**	**$ 139,989.3**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.4a and F.4b.

Exhibit F.4d Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 3% Discount Rate
(All Water Systems)

HAA5 - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 134.8	$ 20.6	$ 310.0	$ 129.1	$ 19.8	$ 296.8	$ 254.2	$ 38.9	$ 584.3
2011	$ 338.7	$ 51.9	$ 779.0	$ 296.6	$ 45.4	$ 682.3	$ 603.4	$ 92.4	$ 1,387.8
2012	$ 594.9	$ 91.0	$ 1,366.6	$ 490.5	$ 75.1	$ 1,126.8	$ 1,010.3	$ 154.6	$ 2,321.0
2013	$ 894.7	$ 137.0	$ 2,055.2	$ 704.1	$ 107.8	$ 1,617.2	$ 1,453.5	$ 222.5	$ 3,338.7
2014	$ 1,135.9	$ 173.7	$ 2,611.1	$ 837.4	$ 128.0	$ 1,925.1	$ 1,731.7	$ 264.7	$ 3,980.9
2015	$ 1,347.5	$ 206.0	$ 3,098.9	$ 941.9	$ 144.0	$ 2,166.3	$ 1,928.1	$ 294.8	$ 4,434.2
2016	$ 1,522.8	$ 232.6	$ 3,502.1	$ 1,021.2	$ 156.0	$ 2,348.5	$ 2,055.4	$ 314.0	$ 4,726.9
2017	$ 1,667.5	$ 254.6	$ 3,838.4	$ 1,086.8	$ 165.9	$ 2,501.6	$ 2,141.5	$ 327.0	$ 4,929.6
2018	$ 1,780.4	$ 271.5	$ 4,101.6	$ 1,141.8	$ 174.1	$ 2,630.4	$ 2,198.2	$ 335.2	$ 5,064.4
2019	$ 1,862.8	$ 283.8	$ 4,298.7	$ 1,188.2	$ 181.0	$ 2,742.0	$ 2,233.3	$ 340.2	$ 5,153.8
2020	$ 1,921.7	$ 292.6	$ 4,436.7	$ 1,227.4	$ 186.9	$ 2,833.7	$ 2,252.2	$ 342.9	$ 5,199.6
2021	$ 1,962.5	$ 298.5	$ 4,531.2	$ 1,260.3	$ 191.7	$ 2,910.0	$ 2,258.6	$ 343.5	$ 5,214.9
2022	$ 1,989.3	$ 302.5	$ 4,600.8	$ 1,287.9	$ 195.8	$ 2,978.5	$ 2,255.6	$ 343.0	$ 5,216.8
2023	$ 2,005.1	$ 305.0	$ 4,638.5	$ 1,310.6	$ 199.3	$ 3,031.9	$ 2,245.3	$ 341.5	$ 5,194.2
2024	$ 2,012.2	$ 305.9	$ 4,656.7	$ 1,329.1	$ 202.0	$ 3,075.9	$ 2,229.3	$ 338.9	$ 5,159.2
2025	$ 2,012.3	$ 305.4	$ 4,657.2	$ 1,343.8	$ 204.0	$ 3,110.2	$ 2,209.0	$ 335.3	$ 5,112.5
2026	$ 2,006.8	$ 304.2	$ 4,648.4	$ 1,355.2	$ 205.4	$ 3,139.2	$ 2,185.3	$ 331.3	$ 5,062.0
2027	$ 1,996.7	$ 302.3	$ 4,632.2	$ 1,363.5	$ 206.5	$ 3,163.3	$ 2,159.0	$ 326.9	$ 5,008.8
2028	$ 1,957.3	$ 296.6	$ 4,538.2	$ 1,351.4	$ 204.8	$ 3,133.5	$ 2,103.1	$ 318.7	$ 4,876.4
2029	$ 1,936.0	$ 293.0	$ 4,493.3	$ 1,351.3	$ 204.5	$ 3,136.2	$ 2,068.7	$ 313.1	$ 4,801.3
Total	**$ 31,079.6**	**$ 4,728.6**	**$ 71,794.6**	**$ 21,018.2**	**$ 3,198.1**	**$ 48,549.3**	**$ 37,576.0**	**$ 5,719.4**	**$ 86,767.3**
Ann.	**$ 1,784.8**	**$ 271.6**	**$ 4,123.0**	**$ 1,207.0**	**$ 183.7**	**$ 2,788.1**	**$ 2,157.9**	**$ 328.5**	**$ 4,982.9**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibit F.4c.

Exhibit F.4e Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 7% Discount Rate
(All Water Systems)

HAA5 - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 111.5	$ 17.1	$ 256.2	$ 106.7	$ 16.3	$ 245.3	$ 210.1	$ 32.2	$ 483.0
2011	$ 269.5	$ 41.3	$ 619.8	$ 236.0	$ 36.1	$ 542.8	$ 480.1	$ 73.5	$ 1,104.2
2012	$ 455.6	$ 69.7	$ 1,046.7	$ 375.7	$ 57.5	$ 863.0	$ 773.8	$ 118.4	$ 1,777.7
2013	$ 659.7	$ 101.0	$ 1,515.2	$ 519.1	$ 79.5	$ 1,192.3	$ 1,071.6	$ 164.0	$ 2,461.5
2014	$ 806.1	$ 123.2	$ 1,853.2	$ 594.3	$ 90.9	$ 1,366.3	$ 1,229.0	$ 187.9	$ 2,825.3
2015	$ 920.6	$ 140.8	$ 2,117.1	$ 643.5	$ 98.4	$ 1,479.9	$ 1,317.2	$ 201.4	$ 3,029.4
2016	$ 1,001.5	$ 153.0	$ 2,303.1	$ 671.6	$ 102.6	$ 1,544.4	$ 1,351.7	$ 206.5	$ 3,108.6
2017	$ 1,055.6	$ 161.2	$ 2,429.9	$ 688.0	$ 105.1	$ 1,583.6	$ 1,355.7	$ 207.0	$ 3,120.7
2018	$ 1,084.9	$ 165.4	$ 2,499.5	$ 695.8	$ 106.1	$ 1,602.9	$ 1,339.6	$ 204.3	$ 3,086.2
2019	$ 1,092.7	$ 166.5	$ 2,521.6	$ 697.0	$ 106.2	$ 1,608.5	$ 1,310.1	$ 199.6	$ 3,023.3
2020	$ 1,085.2	$ 165.2	$ 2,505.3	$ 693.1	$ 105.5	$ 1,600.1	$ 1,271.7	$ 193.6	$ 2,936.1
2021	$ 1,066.7	$ 162.2	$ 2,463.0	$ 685.1	$ 104.2	$ 1,581.8	$ 1,227.7	$ 186.7	$ 2,834.7
2022	$ 1,040.9	$ 158.3	$ 2,407.3	$ 673.9	$ 102.5	$ 1,558.5	$ 1,180.2	$ 179.5	$ 2,729.7
2023	$ 1,009.9	$ 153.6	$ 2,336.4	$ 660.1	$ 100.4	$ 1,527.1	$ 1,130.9	$ 172.0	$ 2,616.3
2024	$ 975.6	$ 148.3	$ 2,257.8	$ 644.4	$ 98.0	$ 1,491.4	$ 1,080.9	$ 164.3	$ 2,501.5
2025	$ 939.2	$ 142.6	$ 2,173.7	$ 627.2	$ 95.2	$ 1,451.6	$ 1,031.0	$ 156.5	$ 2,386.2
2026	$ 901.6	$ 136.7	$ 2,088.5	$ 608.9	$ 92.3	$ 1,410.4	$ 981.8	$ 148.8	$ 2,274.3
2027	$ 863.6	$ 130.7	$ 2,003.4	$ 589.7	$ 89.3	$ 1,368.1	$ 933.7	$ 141.4	$ 2,166.2
2028	$ 814.8	$ 123.5	$ 1,889.3	$ 562.6	$ 85.3	$ 1,304.5	$ 875.6	$ 132.7	$ 2,030.2
2029	$ 775.9	$ 117.4	$ 1,800.7	$ 541.6	$ 82.0	$ 1,256.9	$ 829.1	$ 125.5	$ 1,924.1
Total	**$ 16,931.0**	**$ 2,577.6**	**$ 39,087.7**	**$ 11,514.3**	**$ 1,753.2**	**$ 26,579.7**	**$ 20,981.8**	**$ 3,195.8**	**$ 48,419.0**
Ann.	**$ 1,452.9**	**$ 221.2**	**$ 3,354.1**	**$ 988.0**	**$ 150.4**	**$ 2,280.8**	**$ 1,800.5**	**$ 274.2**	**$ 4,154.9**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibit F.4c.

Exhibit F.4f Mean Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 3% Discount Rate, by System Size (All Systems)

HAA5 - Preferred Alternative

	Smoking/Lung Cancer Cessation Lag Model										Smoking/Bladder Cancer Cessation Lag Model										Arsenic/Bladder Cancer Cessation Lag Model									
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.3	$ 0.4	$ 1.6	$ 3.5	$ 15.7	$ 12.8	$ 55.2	$ 45.4	$ 134.8	$ 0.0	$ 0.3	$ 0.3	$ 1.4	$ 3.0	$ 15.0	$ 12.3	$ 53.1	$ 43.8	$ 129.1	$ 0.1	$ 0.6	$ 0.7	$ 2.9	$ 6.3	$ 29.5	$ 24.1	$ 104.2	$ 85.9	$ 254.2
2011	$ 0.1	$ 0.8	$ 1.0	$ 4.0	$ 8.8	$ 39.4	$ 32.1	$ 138.5	$ 113.9	$ 338.7	$ 0.1	$ 0.7	$ 0.8	$ 3.2	$ 7.0	$ 34.4	$ 28.2	$ 121.9	$ 100.6	$ 296.6	$ 0.2	$ 1.4	$ 1.7	$ 6.9	$ 15.1	$ 70.1	$ 57.2	$ 247.2	$ 203.6	$ 603.4
2012	$ 0.2	$ 1.5	$ 1.8	$ 7.1	$ 15.5	$ 69.3	$ 56.4	$ 243.2	$ 200.0	$ 594.9	$ 0.1	$ 1.1	$ 1.3	$ 5.3	$ 11.6	$ 56.9	$ 46.6	$ 201.4	$ 166.2	$ 490.5	$ 0.3	$ 2.4	$ 2.9	$ 11.6	$ 25.5	$ 117.5	$ 95.8	$ 413.8	$ 340.6	$ 1,010.3
2013	$ 0.3	$ 2.2	$ 2.6	$ 10.7	$ 23.3	$ 104.2	$ 84.8	$ 365.9	$ 300.8	$ 894.7	$ 0.2	$ 1.6	$ 1.9	$ 7.7	$ 16.8	$ 81.7	$ 66.8	$ 289.0	$ 238.4	$ 704.1	$ 0.4	$ 3.4	$ 4.2	$ 16.8	$ 36.9	$ 169.1	$ 137.8	$ 595.1	$ 489.8	$ 1,453.5
2014	$ 0.4	$ 3.0	$ 3.6	$ 14.7	$ 32.2	$ 143.8	$ 111.1	$ 453.9	$ 373.2	$ 1,135.9	$ 0.3	$ 2.1	$ 2.5	$ 10.2	$ 22.4	$ 108.2	$ 82.9	$ 333.7	$ 275.1	$ 837.4	$ 0.6	$ 4.6	$ 5.5	$ 22.3	$ 48.9	$ 223.2	$ 170.7	$ 689.0	$ 566.8	$ 1,731.7
2015	$ 0.5	$ 3.9	$ 4.7	$ 19.1	$ 41.8	$ 180.2	$ 131.8	$ 529.8	$ 435.7	$ 1,347.5	$ 0.3	$ 2.7	$ 3.2	$ 12.9	$ 28.3	$ 129.4	$ 92.7	$ 368.6	$ 303.8	$ 941.9	$ 0.7	$ 5.7	$ 6.9	$ 28.0	$ 61.4	$ 265.4	$ 189.7	$ 751.8	$ 618.4	$ 1,928.1
2016	$ 0.6	$ 4.6	$ 5.5	$ 22.3	$ 48.8	$ 208.4	$ 149.2	$ 594.5	$ 488.9	$ 1,522.8	$ 0.4	$ 3.0	$ 3.6	$ 14.5	$ 31.9	$ 142.8	$ 100.6	$ 397.1	$ 327.2	$ 1,021.2	$ 0.8	$ 6.4	$ 7.7	$ 31.2	$ 68.4	$ 289.9	$ 202.5	$ 794.8	$ 653.7	$ 2,055.4
2017	$ 0.7	$ 5.1	$ 6.2	$ 24.9	$ 54.6	$ 231.7	$ 163.7	$ 647.8	$ 532.9	$ 1,667.5	$ 0.4	$ 3.2	$ 3.9	$ 15.9	$ 34.8	$ 153.7	$ 107.2	$ 420.9	$ 346.7	$ 1,086.8	$ 0.9	$ 6.8	$ 8.2	$ 33.4	$ 73.1	$ 306.5	$ 211.2	$ 823.9	$ 677.5	$ 2,141.5
2018	$ 0.7	$ 5.5	$ 6.7	$ 27.0	$ 59.2	$ 250.8	$ 175.2	$ 688.7	$ 566.5	$ 1,780.4	$ 0.5	$ 3.5	$ 4.2	$ 17.0	$ 37.2	$ 162.8	$ 112.7	$ 440.9	$ 363.1	$ 1,141.8	$ 0.9	$ 7.1	$ 8.6	$ 34.8	$ 76.3	$ 317.5	$ 216.9	$ 842.9	$ 693.1	$ 2,198.2
2019	$ 0.8	$ 5.9	$ 7.1	$ 28.7	$ 63.0	$ 265.8	$ 183.7	$ 717.6	$ 590.3	$ 1,862.8	$ 0.5	$ 3.7	$ 4.4	$ 17.9	$ 39.2	$ 170.4	$ 117.3	$ 457.8	$ 377.0	$ 1,188.2	$ 1.0	$ 7.3	$ 8.8	$ 35.8	$ 78.4	$ 324.7	$ 220.5	$ 854.4	$ 702.5	$ 2,233.3
2020	$ 0.8	$ 6.2	$ 7.4	$ 30.0	$ 65.8	$ 276.7	$ 189.6	$ 738.0	$ 607.1	$ 1,921.7	$ 0.5	$ 3.8	$ 4.6	$ 18.7	$ 41.0	$ 176.8	$ 121.2	$ 472.1	$ 388.7	$ 1,227.4	$ 1.0	$ 7.4	$ 9.0	$ 36.4	$ 79.7	$ 329.0	$ 222.5	$ 860.1	$ 707.2	$ 2,252.2
2021	$ 0.8	$ 6.3	$ 7.6	$ 30.9	$ 67.8	$ 284.4	$ 193.8	$ 752.1	$ 618.7	$ 1,962.5	$ 0.5	$ 4.0	$ 4.8	$ 19.4	$ 42.5	$ 182.2	$ 124.5	$ 484.1	$ 398.5	$ 1,260.3	$ 1.0	$ 7.5	$ 9.1	$ 36.7	$ 80.3	$ 331.1	$ 223.2	$ 861.5	$ 708.3	$ 2,258.6
2022	$ 0.8	$ 6.5	$ 7.8	$ 31.5	$ 69.1	$ 289.6	$ 196.5	$ 761.2	$ 626.2	$ 1,989.3	$ 0.5	$ 4.1	$ 4.9	$ 20.0	$ 43.7	$ 186.7	$ 127.2	$ 494.0	$ 406.6	$ 1,287.9	$ 1.0	$ 7.5	$ 9.1	$ 36.8	$ 80.6	$ 331.5	$ 222.9	$ 859.6	$ 706.7	$ 2,255.6
2023	$ 0.8	$ 6.5	$ 7.9	$ 32.0	$ 70.0	$ 292.9	$ 198.1	$ 766.3	$ 630.4	$ 2,005.1	$ 0.5	$ 4.2	$ 5.1	$ 20.4	$ 44.8	$ 190.5	$ 129.5	$ 502.2	$ 413.3	$ 1,310.6	$ 1.0	$ 7.5	$ 9.1	$ 36.7	$ 80.4	$ 330.6	$ 221.9	$ 855.0	$ 703.0	$ 2,245.3
2024	$ 0.9	$ 6.6	$ 8.0	$ 32.2	$ 70.6	$ 294.7	$ 198.9	$ 768.3	$ 632.0	$ 2,012.2	$ 0.6	$ 4.3	$ 5.2	$ 20.9	$ 45.7	$ 193.6	$ 131.3	$ 508.9	$ 418.8	$ 1,329.1	$ 1.0	$ 7.5	$ 9.0	$ 36.5	$ 80.0	$ 328.8	$ 220.4	$ 848.5	$ 697.6	$ 2,229.3
2025	$ 0.9	$ 6.6	$ 8.0	$ 32.3	$ 70.8	$ 295.4	$ 199.0	$ 767.8	$ 631.6	$ 2,012.3	$ 0.6	$ 4.3	$ 5.2	$ 21.2	$ 46.4	$ 196.1	$ 132.8	$ 514.1	$ 423.0	$ 1,343.8	$ 1.0	$ 7.4	$ 9.0	$ 36.2	$ 79.4	$ 326.2	$ 218.4	$ 840.4	$ 691.0	$ 2,209.0
2026	$ 0.9	$ 6.6	$ 8.0	$ 32.3	$ 70.8	$ 295.1	$ 198.4	$ 765.2	$ 629.5	$ 2,006.8	$ 0.6	$ 4.4	$ 5.3	$ 21.5	$ 47.0	$ 198.0	$ 133.9	$ 518.1	$ 426.3	$ 1,355.2	$ 1.0	$ 7.4	$ 8.9	$ 35.9	$ 78.6	$ 323.0	$ 216.1	$ 831.1	$ 683.4	$ 2,185.3
2027	$ 0.9	$ 6.6	$ 8.0	$ 32.2	$ 70.6	$ 294.0	$ 197.5	$ 761.0	$ 626.0	$ 1,996.7	$ 0.6	$ 4.4	$ 5.4	$ 21.7	$ 47.5	$ 199.5	$ 134.8	$ 521.0	$ 428.6	$ 1,363.5	$ 0.9	$ 7.3	$ 8.8	$ 35.5	$ 77.8	$ 319.3	$ 213.5	$ 820.9	$ 675.0	$ 2,159.0
2028	$ 0.8	$ 6.5	$ 7.8	$ 31.6	$ 69.3	$ 288.5	$ 193.6	$ 745.7	$ 613.4	$ 1,957.3	$ 0.6	$ 4.4	$ 5.3	$ 21.6	$ 47.3	$ 198.0	$ 133.6	$ 516.1	$ 424.6	$ 1,351.4	$ 0.9	$ 7.1	$ 8.6	$ 34.6	$ 75.8	$ 311.3	$ 208.0	$ 799.5	$ 657.4	$ 2,103.1
2029	$ 0.8	$ 6.4	$ 7.7	$ 31.3	$ 68.7	$ 285.7	$ 191.5	$ 737.3	$ 606.5	$ 1,936.0	$ 0.6	$ 4.4	$ 5.4	$ 21.6	$ 47.4	$ 198.2	$ 133.6	$ 515.8	$ 424.3	$ 1,351.3	$ 0.9	$ 7.0	$ 8.4	$ 34.0	$ 74.6	$ 306.4	$ 204.6	$ 786.3	$ 646.6	$ 2,068.7
Total	**$ 12.7**	**$ 97.6**	**$ 117.8**	**$ 476.5**	**$ 1,044.1**	**$ 4,406.3**	**$ 3,057.7**	**$ 11,998.0**	**$ 9,869.0**	**$ 31,079.6**	**$ 8.3**	**$ 64.1**	**$ 77.4**	**$ 312.8**	**$ 685.5**	**$ 2,974.9**	**$ 2,069.8**	**$ 8,130.9**	**$ 6,694.5**	**$ 21,018.2**	**$ 15.5**	**$ 119.4**	**$ 144.1**	**$ 582.9**	**$ 1,277.2**	**$ 5,350.5**	**$ 3,698.1**	**$ 14,480.2**	**$ 11,908.1**	**$ 37,576.0**
Ann.	**$ 0.7**	**$ 5.6**	**$ 6.8**	**$ 27.4**	**$ 60.0**	**$ 253.0**	**$ 175.6**	**$ 689.0**	**$ 566.8**	**$ 1,784.8**	**$ 0.5**	**$ 3.7**	**$ 4.4**	**$ 18.0**	**$ 39.4**	**$ 170.8**	**$ 118.9**	**$ 466.9**	**$ 384.5**	**$ 1,207.0**	**$ 0.9**	**$ 6.9**	**$ 8.3**	**$ 33.5**	**$ 73.3**	**$ 307.3**	**$ 212.4**	**$ 831.6**	**$ 683.9**	**$ 2,157.9**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.39b, E.39c, E.39f, E.39g, E.39j, and E.39k.

Exhibit F.4g Mean Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 7% Discount Rate, by System Size (All Systems)

HAA5 - Preferred Alternative

	Smoking/Lung Cancer Cessation Lag Model									
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.3	$ 0.3	$ 1.3	$ 2.9	$ 13.0	$ 10.6	$ 45.6	$ 37.5	$ 111.5
2011	$ 0.1	$ 0.7	$ 0.8	$ 3.2	$ 7.0	$ 31.4	$ 25.5	$ 110.2	$ 90.6	$ 269.5
2012	$ 0.1	$ 1.1	$ 1.3	$ 5.4	$ 11.9	$ 53.1	$ 43.2	$ 186.3	$ 153.2	$ 455.6
2013	$ 0.2	$ 1.6	$ 1.9	$ 7.9	$ 17.2	$ 76.8	$ 62.5	$ 269.7	$ 221.8	$ 659.7
2014	$ 0.3	$ 2.1	$ 2.6	$ 10.4	$ 22.8	$ 102.0	$ 78.8	$ 322.2	$ 264.9	$ 806.1
2015	$ 0.3	$ 2.7	$ 3.2	$ 13.0	$ 28.6	$ 123.1	$ 90.0	$ 362.0	$ 297.6	$ 920.6
2016	$ 0.4	$ 3.0	$ 3.6	$ 14.7	$ 32.1	$ 137.0	$ 98.1	$ 391.0	$ 321.5	$ 1,001.5
2017	$ 0.4	$ 3.2	$ 3.9	$ 15.8	$ 34.5	$ 146.7	$ 103.6	$ 410.1	$ 337.3	$ 1,055.6
2018	$ 0.4	$ 3.4	$ 4.1	$ 16.5	$ 36.1	$ 152.8	$ 106.8	$ 419.7	$ 345.2	$ 1,084.9
2019	$ 0.4	$ 3.5	$ 4.2	$ 16.9	$ 36.9	$ 155.9	$ 107.7	$ 420.9	$ 346.3	$ 1,092.7
2020	$ 0.5	$ 3.5	$ 4.2	$ 17.0	$ 37.1	$ 156.3	$ 107.1	$ 416.8	$ 342.8	$ 1,085.2
2021	$ 0.4	$ 3.4	$ 4.2	$ 16.8	$ 36.8	$ 154.6	$ 105.3	$ 408.8	$ 336.3	$ 1,066.7
2022	$ 0.4	$ 3.4	$ 4.1	$ 16.5	$ 36.2	$ 151.5	$ 102.8	$ 398.3	$ 327.7	$ 1,040.9
2023	$ 0.4	$ 3.3	$ 4.0	$ 16.1	$ 35.3	$ 147.5	$ 99.8	$ 386.0	$ 317.5	$ 1,009.9
2024	$ 0.4	$ 3.2	$ 3.9	$ 15.6	$ 34.2	$ 142.9	$ 96.4	$ 372.5	$ 306.5	$ 975.6
2025	$ 0.4	$ 3.1	$ 3.7	$ 15.1	$ 33.0	$ 137.9	$ 92.9	$ 358.3	$ 294.8	$ 939.2
2026	$ 0.4	$ 3.0	$ 3.6	$ 14.5	$ 31.8	$ 132.6	$ 89.2	$ 343.8	$ 282.8	$ 901.6
2027	$ 0.4	$ 2.9	$ 3.4	$ 13.9	$ 30.5	$ 127.2	$ 85.4	$ 329.1	$ 270.7	$ 863.6
2028	$ 0.3	$ 2.7	$ 3.3	$ 13.2	$ 28.9	$ 120.1	$ 80.6	$ 310.4	$ 255.4	$ 814.8
2029	$ 0.3	$ 2.6	$ 3.1	$ 12.6	$ 27.5	$ 114.5	$ 76.8	$ 295.5	$ 243.1	$ 775.9
Total	**$ 6.8**	**$ 52.5**	**$ 63.4**	**$ 256.2**	**$ 561.4**	**$ 2,376.9**	**$ 1,663.2**	**$ 6,557.2**	**$ 5,393.5**	**$ 16,931.0**
Ann.	**$ 0.6**	**$ 4.5**	**$ 5.4**	**$ 22.0**	**$ 48.2**	**$ 204.0**	**$ 142.7**	**$ 562.7**	**$ 462.8**	**$ 1,452.9**

	Smoking/Bladder Cancer Cessation Lag Model									
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.2	$ 0.3	$ 1.1	$ 2.5	$ 12.4	$ 10.1	$ 43.9	$ 36.2	$ 106.7
2011	$ 0.1	$ 0.5	$ 0.6	$ 2.5	$ 5.5	$ 27.4	$ 22.4	$ 97.0	$ 80.0	$ 236.0
2012	$ 0.1	$ 0.8	$ 1.0	$ 4.1	$ 8.9	$ 43.6	$ 35.7	$ 154.3	$ 127.3	$ 375.7
2013	$ 0.2	$ 1.2	$ 1.4	$ 5.7	$ 12.4	$ 60.2	$ 49.3	$ 213.1	$ 175.8	$ 519.1
2014	$ 0.2	$ 1.5	$ 1.8	$ 7.3	$ 15.9	$ 76.8	$ 58.8	$ 236.8	$ 195.3	$ 594.3
2015	$ 0.2	$ 1.8	$ 2.2	$ 8.8	$ 19.4	$ 88.4	$ 63.4	$ 251.8	$ 207.5	$ 643.5
2016	$ 0.3	$ 2.0	$ 2.4	$ 9.6	$ 21.0	$ 93.9	$ 66.2	$ 261.2	$ 215.2	$ 671.6
2017	$ 0.3	$ 2.1	$ 2.5	$ 10.0	$ 22.0	$ 97.3	$ 67.9	$ 266.5	$ 219.5	$ 688.0
2018	$ 0.3	$ 2.1	$ 2.6	$ 10.3	$ 22.6	$ 99.2	$ 68.7	$ 268.7	$ 221.3	$ 695.8
2019	$ 0.3	$ 2.2	$ 2.6	$ 10.5	$ 23.0	$ 100.0	$ 68.8	$ 268.6	$ 221.1	$ 697.0
2020	$ 0.3	$ 2.2	$ 2.6	$ 10.6	$ 23.1	$ 99.8	$ 68.4	$ 266.6	$ 219.5	$ 693.1
2021	$ 0.3	$ 2.2	$ 2.6	$ 10.5	$ 23.1	$ 99.0	$ 67.7	$ 263.1	$ 216.6	$ 685.1
2022	$ 0.3	$ 2.1	$ 2.6	$ 10.4	$ 22.9	$ 97.7	$ 66.6	$ 258.5	$ 212.8	$ 673.9
2023	$ 0.3	$ 2.1	$ 2.5	$ 10.3	$ 22.6	$ 95.9	$ 65.2	$ 253.0	$ 208.2	$ 660.1
2024	$ 0.3	$ 2.1	$ 2.5	$ 10.1	$ 22.2	$ 93.9	$ 63.7	$ 246.7	$ 203.0	$ 644.4
2025	$ 0.3	$ 2.0	$ 2.4	$ 9.9	$ 21.7	$ 91.5	$ 62.0	$ 240.0	$ 197.4	$ 627.2
2026	$ 0.3	$ 2.0	$ 2.4	$ 9.6	$ 21.1	$ 89.0	$ 60.2	$ 232.8	$ 191.5	$ 608.9
2027	$ 0.2	$ 1.9	$ 2.3	$ 9.4	$ 20.6	$ 86.3	$ 58.3	$ 225.3	$ 185.4	$ 589.7
2028	$ 0.2	$ 1.8	$ 2.2	$ 9.0	$ 19.7	$ 82.4	$ 55.6	$ 214.9	$ 176.8	$ 562.6
2029	$ 0.2	$ 1.8	$ 2.1	$ 8.7	$ 19.0	$ 79.4	$ 53.5	$ 206.7	$ 170.0	$ 541.6
Total	**$ 4.5**	**$ 34.5**	**$ 41.6**	**$ 168.4**	**$ 369.0**	**$ 1,614.2**	**$ 1,132.4**	**$ 4,469.3**	**$ 3,680.3**	**$ 11,514.3**
Ann.	**$ 0.4**	**$ 3.0**	**$ 3.6**	**$ 14.5**	**$ 31.7**	**$ 138.5**	**$ 97.2**	**$ 383.5**	**$ 315.8**	**$ 988.0**

	Arsenic/Bladder Cancer Cessation Lag Model									
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.1	$ 0.5	$ 0.6	$ 2.4	$ 5.2	$ 24.4	$ 19.9	$ 86.1	$ 71.0	$ 210.1
2011	$ 0.1	$ 1.1	$ 1.4	$ 5.5	$ 12.0	$ 55.8	$ 45.5	$ 196.7	$ 162.0	$ 480.1
2012	$ 0.2	$ 1.8	$ 2.2	$ 8.9	$ 19.5	$ 90.0	$ 73.4	$ 316.9	$ 260.9	$ 773.8
2013	$ 0.3	$ 2.5	$ 3.1	$ 12.4	$ 27.2	$ 124.6	$ 101.6	$ 438.8	$ 361.1	$ 1,071.6
2014	$ 0.4	$ 3.2	$ 3.9	$ 15.9	$ 34.7	$ 158.4	$ 121.2	$ 489.0	$ 402.3	$ 1,229.0
2015	$ 0.5	$ 3.9	$ 4.7	$ 19.1	$ 41.9	$ 181.3	$ 129.6	$ 513.6	$ 422.5	$ 1,317.2
2016	$ 0.5	$ 4.2	$ 5.1	$ 20.5	$ 45.0	$ 190.7	$ 133.2	$ 522.7	$ 429.9	$ 1,351.7
2017	$ 0.6	$ 4.3	$ 5.2	$ 21.1	$ 46.3	$ 194.0	$ 133.7	$ 521.6	$ 428.9	$ 1,355.7
2018	$ 0.6	$ 4.3	$ 5.2	$ 21.2	$ 46.5	$ 193.5	$ 132.2	$ 513.7	$ 422.4	$ 1,339.6
2019	$ 0.6	$ 4.3	$ 5.2	$ 21.0	$ 46.0	$ 190.5	$ 129.4	$ 501.2	$ 412.1	$ 1,310.1
2020	$ 0.5	$ 4.2	$ 5.1	$ 20.5	$ 45.0	$ 185.8	$ 125.6	$ 485.7	$ 399.3	$ 1,271.7
2021	$ 0.5	$ 4.1	$ 4.9	$ 19.9	$ 43.7	$ 179.9	$ 121.3	$ 468.3	$ 385.0	$ 1,227.7
2022	$ 0.5	$ 3.9	$ 4.8	$ 19.2	$ 42.2	$ 173.4	$ 116.6	$ 449.8	$ 369.8	$ 1,180.2
2023	$ 0.5	$ 3.8	$ 4.6	$ 18.5	$ 40.5	$ 166.5	$ 111.8	$ 430.7	$ 354.1	$ 1,130.9
2024	$ 0.5	$ 3.6	$ 4.4	$ 17.7	$ 38.8	$ 159.4	$ 106.9	$ 411.4	$ 338.3	$ 1,080.9
2025	$ 0.4	$ 3.5	$ 4.2	$ 16.9	$ 37.1	$ 152.2	$ 101.9	$ 392.2	$ 322.5	$ 1,031.0
2026	$ 0.4	$ 3.3	$ 4.0	$ 16.1	$ 35.3	$ 145.1	$ 97.1	$ 373.4	$ 307.0	$ 981.8
2027	$ 0.4	$ 3.1	$ 3.8	$ 15.3	$ 33.6	$ 138.1	$ 92.3	$ 355.0	$ 291.9	$ 933.7
2028	$ 0.4	$ 2.9	$ 3.6	$ 14.4	$ 31.5	$ 129.6	$ 86.6	$ 332.9	$ 273.7	$ 875.6
2029	$ 0.4	$ 2.8	$ 3.4	$ 13.6	$ 29.9	$ 122.8	$ 82.0	$ 315.1	$ 259.1	$ 829.1
Total	**$ 8.5**	**$ 65.6**	**$ 79.2**	**$ 320.2**	**$ 701.8**	**$ 2,956.1**	**$ 2,061.8**	**$ 8,114.8**	**$ 6,673.7**	**$ 20,981.8**
Ann.	**$ 0.7**	**$ 5.6**	**$ 6.8**	**$ 27.5**	**$ 60.2**	**$ 253.7**	**$ 176.9**	**$ 696.3**	**$ 572.7**	**$ 1,800.5**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.39b, E.39c, E.39f, E.39g, E.39j, and E.39k.

Section F.5
Model Outputs - Preferred Alternative
HAA5 as Indicator
Bronchitis for Non-Fatal Cases

Exhibit F.5a Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases
(All Surface Water Systems)

HAA5 - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 72.5	$ 16.0	$ 159.4	$ 69.9	$ 15.4	$ 153.7	$ 137.1	$ 30.2	$ 301.5
2011	$ 187.6	$ 41.3	$ 413.2	$ 165.4	$ 36.4	$ 364.3	$ 335.2	$ 73.7	$ 738.3
2012	$ 339.6	$ 74.6	$ 747.6	$ 281.7	$ 61.9	$ 620.2	$ 578.1	$ 127.0	$ 1,272.5
2013	$ 526.6	$ 115.6	$ 1,158.5	$ 416.7	$ 91.5	$ 916.7	$ 856.9	$ 188.1	$ 1,885.4
2014	$ 687.0	$ 150.6	$ 1,512.4	$ 508.7	$ 111.5	$ 1,119.9	$ 1,048.0	$ 229.7	$ 2,307.1
2015	$ 837.8	$ 183.3	$ 1,847.4	$ 587.6	$ 128.5	$ 1,295.6	$ 1,198.0	$ 262.1	$ 2,641.6
2016	$ 975.0	$ 213.1	$ 2,149.3	$ 655.6	$ 143.3	$ 1,445.3	$ 1,314.2	$ 287.2	$ 2,897.1
2017	$ 1,099.8	$ 240.1	$ 2,428.9	$ 718.4	$ 156.8	$ 1,586.7	$ 1,409.9	$ 307.8	$ 3,113.7
2018	$ 1,209.7	$ 263.4	$ 2,672.7	$ 777.4	$ 169.3	$ 1,717.5	$ 1,490.7	$ 324.6	$ 3,293.4
2019	$ 1,304.0	$ 283.5	$ 2,887.6	$ 833.4	$ 181.2	$ 1,845.4	$ 1,560.4	$ 339.2	$ 3,455.4
2020	$ 1,386.2	$ 300.9	$ 3,071.9	$ 886.9	$ 192.5	$ 1,965.5	$ 1,621.6	$ 352.0	$ 3,593.6
2021	$ 1,458.7	$ 316.2	$ 3,236.7	$ 938.4	$ 203.4	$ 2,082.0	$ 1,676.0	$ 363.3	$ 3,718.8
2022	$ 1,523.9	$ 329.7	$ 3,388.0	$ 988.0	$ 213.8	$ 2,196.6	$ 1,725.2	$ 373.2	$ 3,835.4
2023	$ 1,583.1	$ 341.6	$ 3,520.0	$ 1,036.1	$ 223.6	$ 2,303.8	$ 1,770.1	$ 381.9	$ 3,935.7
2024	$ 1,637.5	$ 353.0	$ 3,642.8	$ 1,082.8	$ 233.4	$ 2,408.9	$ 1,811.6	$ 390.5	$ 4,030.1
2025	$ 1,687.9	$ 363.1	$ 3,757.3	$ 1,128.3	$ 242.7	$ 2,511.6	$ 1,850.5	$ 398.1	$ 4,119.1
2026	$ 1,735.1	$ 372.8	$ 3,863.5	$ 1,172.7	$ 252.0	$ 2,611.2	$ 1,887.1	$ 405.4	$ 4,201.9
2027	$ 1,779.6	$ 381.7	$ 3,972.5	$ 1,216.1	$ 260.8	$ 2,714.6	$ 1,922.0	$ 412.2	$ 4,290.3
2028	$ 1,796.1	$ 385.4	$ 4,005.7	$ 1,240.8	$ 266.3	$ 2,767.3	$ 1,927.8	$ 413.7	$ 4,299.4
2029	$ 1,831.0	$ 392.4	$ 4,090.8	$ 1,278.6	$ 274.0	$ 2,856.5	$ 1,954.5	$ 418.9	$ 4,366.5
Total	**$ 23,658.9**	**$ 5,118.1**	**$ 52,526.2**	**$ 15,983.6**	**$ 3,458.2**	**$ 35,483.4**	**$ 28,074.7**	**$ 6,078.8**	**$ 62,296.7**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.39b, E.39f, and E.39j.

Exhibit F.5b Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases (All Ground Water Systems)

HAA5 - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 4.7	$ 1.0	$ 10.4	$ 4.0	$ 0.9	$ 8.9	$ 8.4	$ 1.9	$ 18.6
2011	$ 12.3	$ 2.7	$ 27.1	$ 9.7	$ 2.1	$ 21.3	$ 21.0	$ 4.6	$ 46.2
2012	$ 22.3	$ 4.9	$ 49.1	$ 16.7	$ 3.7	$ 36.7	$ 36.6	$ 8.0	$ 80.5
2013	$ 34.5	$ 7.6	$ 76.0	$ 24.9	$ 5.5	$ 54.7	$ 54.6	$ 12.0	$ 120.1
2014	$ 47.2	$ 10.3	$ 103.9	$ 32.6	$ 7.1	$ 71.7	$ 71.3	$ 15.6	$ 157.0
2015	$ 60.0	$ 13.1	$ 132.3	$ 40.0	$ 8.8	$ 88.3	$ 86.7	$ 19.0	$ 191.1
2016	$ 70.9	$ 15.5	$ 156.3	$ 45.7	$ 10.0	$ 100.8	$ 97.5	$ 21.3	$ 215.0
2017	$ 80.7	$ 17.6	$ 178.2	$ 50.9	$ 11.1	$ 112.5	$ 106.2	$ 23.2	$ 234.6
2018	$ 89.5	$ 19.5	$ 197.7	$ 55.8	$ 12.2	$ 123.3	$ 113.5	$ 24.7	$ 250.7
2019	$ 97.2	$ 21.1	$ 215.3	$ 60.4	$ 13.1	$ 133.8	$ 119.6	$ 26.0	$ 264.8
2020	$ 104.0	$ 22.6	$ 230.5	$ 64.9	$ 14.1	$ 143.7	$ 124.8	$ 27.1	$ 276.7
2021	$ 110.0	$ 23.8	$ 244.0	$ 69.1	$ 15.0	$ 153.3	$ 129.4	$ 28.1	$ 287.2
2022	$ 115.3	$ 24.9	$ 256.3	$ 73.2	$ 15.8	$ 162.8	$ 133.5	$ 28.9	$ 296.9
2023	$ 120.1	$ 25.9	$ 267.1	$ 77.2	$ 16.7	$ 171.6	$ 137.2	$ 29.6	$ 305.1
2024	$ 124.5	$ 26.8	$ 277.0	$ 81.0	$ 17.5	$ 180.3	$ 140.6	$ 30.3	$ 312.7
2025	$ 128.6	$ 27.7	$ 286.2	$ 84.8	$ 18.2	$ 188.7	$ 143.7	$ 30.9	$ 319.8
2026	$ 132.4	$ 28.4	$ 294.8	$ 88.4	$ 19.0	$ 196.9	$ 146.6	$ 31.5	$ 326.3
2027	$ 135.9	$ 29.2	$ 303.5	$ 92.0	$ 19.7	$ 205.4	$ 149.3	$ 32.0	$ 333.3
2028	$ 137.3	$ 29.5	$ 306.3	$ 94.2	$ 20.2	$ 210.0	$ 149.8	$ 32.1	$ 334.0
2029	$ 140.1	$ 30.0	$ 313.1	$ 97.3	$ 20.9	$ 217.3	$ 151.8	$ 32.5	$ 339.2
Total	**$ 1,767.7**	**$ 382.3**	**$ 3,925.1**	**$ 1,162.9**	**$ 251.5**	**$ 2,582.1**	**$ 2,122.1**	**$ 459.3**	**$ 4,709.7**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.39c, E.39g, and E.39k.

Exhibit F.5c Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases
(All Water Systems)

HAA5 - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 156.3	$ 23.9	$ 359.3	$ 149.7	$ 22.9	$ 344.1	$ 294.7	$ 45.1	$ 677.4
2011	$ 404.4	$ 61.9	$ 930.1	$ 354.2	$ 54.2	$ 814.7	$ 720.5	$ 110.3	$ 1,657.1
2012	$ 731.6	$ 112.0	$ 1,680.7	$ 603.3	$ 92.3	$ 1,385.9	$ 1,242.6	$ 190.2	$ 2,854.5
2013	$ 1,133.4	$ 173.5	$ 2,603.4	$ 891.9	$ 136.5	$ 2,048.6	$ 1,841.3	$ 281.8	$ 4,229.3
2014	$ 1,482.1	$ 226.6	$ 3,407.0	$ 1,092.7	$ 167.0	$ 2,511.8	$ 2,259.5	$ 345.4	$ 5,194.1
2015	$ 1,810.9	$ 276.9	$ 4,164.7	$ 1,265.9	$ 193.6	$ 2,911.3	$ 2,591.2	$ 396.2	$ 5,959.2
2016	$ 2,107.9	$ 322.0	$ 4,847.7	$ 1,413.6	$ 215.9	$ 3,250.8	$ 2,845.2	$ 434.6	$ 6,543.2
2017	$ 2,377.4	$ 363.0	$ 5,472.6	$ 1,549.5	$ 236.6	$ 3,566.7	$ 3,053.3	$ 466.2	$ 7,028.4
2018	$ 2,614.5	$ 398.7	$ 6,023.4	$ 1,676.7	$ 255.7	$ 3,862.8	$ 3,228.2	$ 492.2	$ 7,437.2
2019	$ 2,817.6	$ 429.2	$ 6,502.2	$ 1,797.2	$ 273.8	$ 4,147.5	$ 3,378.1	$ 514.6	$ 7,795.6
2020	$ 2,994.0	$ 455.9	$ 6,912.3	$ 1,912.2	$ 291.2	$ 4,414.8	$ 3,508.8	$ 534.3	$ 8,100.8
2021	$ 3,149.2	$ 479.0	$ 7,271.2	$ 2,022.5	$ 307.6	$ 4,669.6	$ 3,624.4	$ 551.3	$ 8,368.4
2022	$ 3,288.0	$ 500.0	$ 7,604.4	$ 2,128.6	$ 323.7	$ 4,923.1	$ 3,728.2	$ 566.9	$ 8,622.5
2023	$ 3,413.5	$ 519.2	$ 7,896.7	$ 2,231.2	$ 339.4	$ 5,161.6	$ 3,822.5	$ 581.4	$ 8,842.8
2024	$ 3,528.4	$ 536.4	$ 8,165.5	$ 2,330.6	$ 354.3	$ 5,393.6	$ 3,909.2	$ 594.3	$ 9,046.7
2025	$ 3,634.4	$ 551.7	$ 8,411.4	$ 2,427.1	$ 368.4	$ 5,617.3	$ 3,989.7	$ 605.6	$ 9,233.7
2026	$ 3,733.2	$ 565.9	$ 8,647.4	$ 2,521.1	$ 382.2	$ 5,839.7	$ 4,065.3	$ 616.2	$ 9,416.8
2027	$ 3,825.9	$ 579.3	$ 8,875.8	$ 2,612.7	$ 395.6	$ 6,061.3	$ 4,136.9	$ 626.4	$ 9,597.3
2028	$ 3,862.8	$ 585.4	$ 8,956.5	$ 2,667.2	$ 404.2	$ 6,184.2	$ 4,150.7	$ 629.0	$ 9,624.0
2029	$ 3,935.6	$ 595.6	$ 9,133.9	$ 2,747.0	$ 415.7	$ 6,375.3	$ 4,205.3	$ 636.4	$ 9,760.0
Total	**$ 51,001.0**	**$ 7,755.8**	**$ 117,866.1**	**$ 34,394.6**	**$ 5,230.7**	**$ 79,484.7**	**$ 60,595.5**	**$ 9,218.4**	**$ 139,989.3**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.
Source: Derived from Exhibits F.5a and F.5b.

Exhibit F.5d Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, at 3% (All Water Systems)

HAA5 - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 134.8	$ 20.6	$ 310.0	$ 129.1	$ 19.8	$ 296.8	$ 254.2	$ 38.9	$ 584.3
2011	$ 338.7	$ 51.9	$ 779.0	$ 296.6	$ 45.4	$ 682.3	$ 603.4	$ 92.4	$ 1,387.8
2012	$ 594.9	$ 91.0	$ 1,366.6	$ 490.5	$ 75.1	$ 1,126.8	$ 1,010.3	$ 154.6	$ 2,321.0
2013	$ 894.7	$ 137.0	$ 2,055.2	$ 704.1	$ 107.8	$ 1,617.2	$ 1,453.5	$ 222.5	$ 3,338.7
2014	$ 1,135.9	$ 173.7	$ 2,611.1	$ 837.4	$ 128.0	$ 1,925.1	$ 1,731.7	$ 264.7	$ 3,980.9
2015	$ 1,347.5	$ 206.0	$ 3,098.9	$ 941.9	$ 144.0	$ 2,166.3	$ 1,928.1	$ 294.8	$ 4,434.2
2016	$ 1,522.8	$ 232.6	$ 3,502.1	$ 1,021.2	$ 156.0	$ 2,348.5	$ 2,055.4	$ 314.0	$ 4,726.9
2017	$ 1,667.5	$ 254.6	$ 3,838.4	$ 1,086.8	$ 165.9	$ 2,501.6	$ 2,141.5	$ 327.0	$ 4,929.6
2018	$ 1,780.4	$ 271.5	$ 4,101.6	$ 1,141.8	$ 174.1	$ 2,630.4	$ 2,198.2	$ 335.2	$ 5,064.4
2019	$ 1,862.8	$ 283.8	$ 4,298.7	$ 1,188.2	$ 181.0	$ 2,742.0	$ 2,233.3	$ 340.2	$ 5,153.8
2020	$ 1,921.7	$ 292.6	$ 4,436.7	$ 1,227.4	$ 186.9	$ 2,833.7	$ 2,252.2	$ 342.9	$ 5,199.6
2021	$ 1,962.5	$ 298.5	$ 4,531.2	$ 1,260.3	$ 191.7	$ 2,910.0	$ 2,258.6	$ 343.5	$ 5,214.9
2022	$ 1,989.3	$ 302.5	$ 4,600.8	$ 1,287.9	$ 195.8	$ 2,978.5	$ 2,255.6	$ 343.0	$ 5,216.8
2023	$ 2,005.1	$ 305.0	$ 4,638.5	$ 1,310.6	$ 199.3	$ 3,031.9	$ 2,245.3	$ 341.5	$ 5,194.2
2024	$ 2,012.2	$ 305.9	$ 4,656.7	$ 1,329.1	$ 202.0	$ 3,075.9	$ 2,229.3	$ 338.9	$ 5,159.2
2025	$ 2,012.3	$ 305.4	$ 4,657.2	$ 1,343.8	$ 204.0	$ 3,110.2	$ 2,209.0	$ 335.3	$ 5,112.5
2026	$ 2,006.8	$ 304.2	$ 4,648.4	$ 1,355.2	$ 205.4	$ 3,139.2	$ 2,185.3	$ 331.3	$ 5,062.0
2027	$ 1,996.7	$ 302.3	$ 4,632.2	$ 1,363.5	$ 206.5	$ 3,163.3	$ 2,159.0	$ 326.9	$ 5,008.8
2028	$ 1,957.3	$ 296.6	$ 4,538.2	$ 1,351.4	$ 204.8	$ 3,133.5	$ 2,103.1	$ 318.7	$ 4,876.4
2029	$ 1,936.0	$ 293.0	$ 4,493.3	$ 1,351.3	$ 204.5	$ 3,136.2	$ 2,068.7	$ 313.1	$ 4,801.3
Total	**$ 31,079.6**	**$ 4,728.6**	**$ 71,794.6**	**$ 21,018.2**	**$ 3,198.1**	**$ 48,549.3**	**$ 37,576.0**	**$ 5,719.4**	**$ 86,767.3**
Ann.	**$ 1,784.8**	**$ 271.6**	**$ 4,123.0**	**$ 1,207.0**	**$ 183.7**	**$ 2,788.1**	**$ 2,157.9**	**$ 328.5**	**$ 4,982.9**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibit F.5c.

Exhibit F.5e Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal (All Water Systems)

HAA5 - Preferred Alternative

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 111.5	$ 17.1	$ 256.2	$ 106.7	$ 16.3	$ 245.3	$ 210.1	$ 32.2	$ 483.0
2011	$ 269.5	$ 41.3	$ 619.8	$ 236.0	$ 36.1	$ 542.8	$ 480.1	$ 73.5	$ 1,104.2
2012	$ 455.6	$ 69.7	$ 1,046.7	$ 375.7	$ 57.5	$ 863.0	$ 773.8	$ 118.4	$ 1,777.7
2013	$ 659.7	$ 101.0	$ 1,515.2	$ 519.1	$ 79.5	$ 1,192.3	$ 1,071.6	$ 164.0	$ 2,461.5
2014	$ 806.1	$ 123.2	$ 1,853.2	$ 594.3	$ 90.9	$ 1,366.3	$ 1,229.0	$ 187.9	$ 2,825.3
2015	$ 920.6	$ 140.8	$ 2,117.1	$ 643.5	$ 98.4	$ 1,479.9	$ 1,317.2	$ 201.4	$ 3,029.4
2016	$ 1,001.5	$ 153.0	$ 2,303.1	$ 671.6	$ 102.6	$ 1,544.4	$ 1,351.7	$ 206.5	$ 3,108.6
2017	$ 1,055.6	$ 161.2	$ 2,429.9	$ 688.0	$ 105.1	$ 1,583.6	$ 1,355.7	$ 207.0	$ 3,120.7
2018	$ 1,084.9	$ 165.4	$ 2,499.5	$ 695.8	$ 106.1	$ 1,602.9	$ 1,339.6	$ 204.3	$ 3,086.2
2019	$ 1,092.7	$ 166.5	$ 2,521.6	$ 697.0	$ 106.2	$ 1,608.5	$ 1,310.1	$ 199.6	$ 3,023.3
2020	$ 1,085.2	$ 165.2	$ 2,505.3	$ 693.1	$ 105.5	$ 1,600.1	$ 1,271.7	$ 193.6	$ 2,936.1
2021	$ 1,066.7	$ 162.2	$ 2,463.0	$ 685.1	$ 104.2	$ 1,581.8	$ 1,227.7	$ 186.7	$ 2,834.7
2022	$ 1,040.9	$ 158.3	$ 2,407.3	$ 673.9	$ 102.5	$ 1,558.5	$ 1,180.2	$ 179.5	$ 2,729.7
2023	$ 1,009.9	$ 153.6	$ 2,336.4	$ 660.1	$ 100.4	$ 1,527.1	$ 1,130.9	$ 172.0	$ 2,616.3
2024	$ 975.6	$ 148.3	$ 2,257.8	$ 644.4	$ 98.0	$ 1,491.4	$ 1,080.9	$ 164.3	$ 2,501.5
2025	$ 939.2	$ 142.6	$ 2,173.7	$ 627.2	$ 95.2	$ 1,451.6	$ 1,031.0	$ 156.5	$ 2,386.2
2026	$ 901.6	$ 136.7	$ 2,088.5	$ 608.9	$ 92.3	$ 1,410.4	$ 981.8	$ 148.8	$ 2,274.3
2027	$ 863.6	$ 130.7	$ 2,003.4	$ 589.7	$ 89.3	$ 1,368.1	$ 933.7	$ 141.4	$ 2,166.2
2028	$ 814.8	$ 123.5	$ 1,889.3	$ 562.6	$ 85.3	$ 1,304.5	$ 875.6	$ 132.7	$ 2,030.2
2029	$ 775.9	$ 117.4	$ 1,800.7	$ 541.6	$ 82.0	$ 1,256.9	$ 829.1	$ 125.5	$ 1,924.1
Total	**$ 16,931.0**	**$ 2,577.6**	**$ 39,087.7**	**$ 11,514.3**	**$ 1,753.2**	**$ 26,579.7**	**$ 20,981.8**	**$ 3,195.8**	**$ 48,419.0**
Ann.	**$ 1,452.9**	**$ 221.2**	**$ 3,354.1**	**$ 988.0**	**$ 150.4**	**$ 2,280.8**	**$ 1,800.5**	**$ 274.2**	**$ 4,154.9**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibit F.5c.

Exhibit F.5f Mean Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, at 3% Discount Rate, by System Size
(All Systems)

HAA5 - Preferred Alternative

	Smoking/Lung Cancer Cessation Lag Model									
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.2	$ 0.2	$ 0.8	$ 1.7	$ 7.8	$ 6.3	$ 27.2	$ 22.4	$ 66.6
2011	$ 0.1	$ 0.4	$ 0.5	$ 2.0	$ 4.4	$ 19.5	$ 15.9	$ 68.5	$ 56.3	$ 167.4
2012	$ 0.1	$ 0.7	$ 0.9	$ 3.5	$ 7.7	$ 34.3	$ 27.9	$ 120.3	$ 98.9	$ 294.3
2013	$ 0.1	$ 1.1	$ 1.3	$ 5.3	$ 11.6	$ 51.6	$ 42.0	$ 181.1	$ 148.9	$ 442.9
2014	$ 0.2	$ 1.5	$ 1.8	$ 7.3	$ 15.9	$ 71.2	$ 55.0	$ 224.9	$ 184.9	$ 562.7
2015	$ 0.3	$ 1.9	$ 2.3	$ 9.5	$ 20.7	$ 89.3	$ 65.3	$ 262.7	$ 216.0	$ 668.0
2016	$ 0.3	$ 2.3	$ 2.7	$ 11.1	$ 24.2	$ 103.4	$ 74.0	$ 295.0	$ 242.6	$ 755.6
2017	$ 0.3	$ 2.5	$ 3.1	$ 12.4	$ 27.1	$ 115.1	$ 81.3	$ 321.7	$ 264.6	$ 828.0
2018	$ 0.4	$ 2.8	$ 3.3	$ 13.4	$ 29.4	$ 124.6	$ 87.1	$ 342.2	$ 281.5	$ 884.7
2019	$ 0.4	$ 2.9	$ 3.5	$ 14.3	$ 31.3	$ 132.2	$ 91.3	$ 356.9	$ 293.6	$ 926.4
2020	$ 0.4	$ 3.1	$ 3.7	$ 14.9	$ 32.7	$ 137.7	$ 94.4	$ 367.3	$ 302.2	$ 956.5
2021	$ 0.4	$ 3.2	$ 3.8	$ 15.4	$ 33.8	$ 141.7	$ 96.5	$ 374.7	$ 308.2	$ 977.6
2022	$ 0.4	$ 3.2	$ 3.9	$ 15.7	$ 34.5	$ 144.4	$ 98.0	$ 379.5	$ 312.2	$ 991.7
2023	$ 0.4	$ 3.3	$ 3.9	$ 15.9	$ 34.9	$ 146.2	$ 98.9	$ 382.4	$ 314.6	$ 1,000.5
2024	$ 0.4	$ 3.3	$ 4.0	$ 16.1	$ 35.2	$ 147.2	$ 99.3	$ 383.7	$ 315.6	$ 1,004.9
2025	$ 0.4	$ 3.3	$ 4.0	$ 16.1	$ 35.4	$ 147.6	$ 99.4	$ 383.7	$ 315.7	$ 1,005.8
2026	$ 0.4	$ 3.3	$ 4.0	$ 16.2	$ 35.4	$ 147.6	$ 99.3	$ 382.8	$ 314.9	$ 1,003.9
2027	$ 0.4	$ 3.3	$ 4.0	$ 16.1	$ 35.3	$ 147.2	$ 98.9	$ 381.0	$ 313.4	$ 999.7
2028	$ 0.4	$ 3.2	$ 3.9	$ 15.8	$ 34.7	$ 144.4	$ 96.9	$ 373.2	$ 307.0	$ 979.7
2029	$ 0.4	$ 3.2	$ 3.9	$ 15.7	$ 34.4	$ 143.1	$ 95.9	$ 369.3	$ 303.8	$ 969.7
Total	**$ 6.3**	**$ 48.7**	**$ 58.7**	**$ 237.5**	**$ 520.4**	**$ 2,196.0**	**$ 1,523.6**	**$ 5,978.0**	**$ 4,917.3**	**$ 15,486.5**
Ann.	**$ 0.4**	**$ 2.8**	**$ 3.4**	**$ 13.6**	**$ 29.9**	**$ 126.1**	**$ 87.5**	**$ 343.3**	**$ 282.4**	**$ 889.4**

	Smoking/Bladder Cancer Cessation Lag Model									
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.1	$ 0.2	$ 0.7	$ 1.5	$ 7.4	$ 6.1	$ 26.2	$ 21.6	$ 63.8
2011	$ 0.0	$ 0.3	$ 0.4	$ 1.6	$ 3.4	$ 17.0	$ 13.9	$ 60.2	$ 49.7	$ 146.6
2012	$ 0.1	$ 0.5	$ 0.6	$ 2.6	$ 5.7	$ 28.1	$ 23.0	$ 99.6	$ 82.2	$ 242.6
2013	$ 0.1	$ 0.8	$ 0.9	$ 3.8	$ 8.3	$ 40.4	$ 33.1	$ 143.1	$ 118.0	$ 348.5
2014	$ 0.1	$ 1.0	$ 1.3	$ 5.1	$ 11.1	$ 53.6	$ 41.0	$ 165.3	$ 136.3	$ 414.9
2015	$ 0.2	$ 1.3	$ 1.6	$ 6.4	$ 14.1	$ 64.1	$ 46.0	$ 182.7	$ 150.6	$ 467.0
2016	$ 0.2	$ 1.5	$ 1.8	$ 7.2	$ 15.8	$ 70.9	$ 49.9	$ 197.0	$ 162.3	$ 506.7
2017	$ 0.2	$ 1.6	$ 1.9	$ 7.9	$ 17.3	$ 76.3	$ 53.2	$ 209.0	$ 172.2	$ 539.6
2018	$ 0.2	$ 1.7	$ 2.1	$ 8.4	$ 18.5	$ 80.9	$ 56.0	$ 219.1	$ 180.4	$ 567.4
2019	$ 0.2	$ 1.8	$ 2.2	$ 8.9	$ 19.5	$ 84.7	$ 58.3	$ 227.7	$ 187.5	$ 590.9
2020	$ 0.2	$ 1.9	$ 2.3	$ 9.3	$ 20.4	$ 88.0	$ 60.3	$ 235.0	$ 193.4	$ 610.9
2021	$ 0.3	$ 2.0	$ 2.4	$ 9.7	$ 21.1	$ 90.8	$ 62.0	$ 241.1	$ 198.5	$ 627.8
2022	$ 0.3	$ 2.0	$ 2.5	$ 9.9	$ 21.8	$ 93.1	$ 63.4	$ 246.3	$ 202.7	$ 642.1
2023	$ 0.3	$ 2.1	$ 2.5	$ 10.2	$ 22.4	$ 95.0	$ 64.6	$ 250.6	$ 206.2	$ 653.9
2024	$ 0.3	$ 2.1	$ 2.6	$ 10.4	$ 22.8	$ 96.7	$ 65.6	$ 254.1	$ 209.1	$ 663.7
2025	$ 0.3	$ 2.2	$ 2.6	$ 10.6	$ 23.2	$ 98.0	$ 66.4	$ 257.0	$ 211.4	$ 671.7
2026	$ 0.3	$ 2.2	$ 2.7	$ 10.7	$ 23.5	$ 99.1	$ 67.0	$ 259.2	$ 213.3	$ 677.9
2027	$ 0.3	$ 2.2	$ 2.7	$ 10.9	$ 23.8	$ 99.9	$ 67.5	$ 260.9	$ 214.6	$ 682.7
2028	$ 0.3	$ 2.2	$ 2.7	$ 10.8	$ 23.7	$ 99.1	$ 66.9	$ 258.3	$ 212.5	$ 676.4
2029	$ 0.3	$ 2.2	$ 2.7	$ 10.8	$ 23.8	$ 99.3	$ 66.9	$ 258.3	$ 212.5	$ 676.8
Total	**$ 4.1**	**$ 31.9**	**$ 38.6**	**$ 155.9**	**$ 341.7**	**$ 1,482.5**	**$ 1,031.3**	**$ 4,050.8**	**$ 3,335.2**	**$ 10,472.1**
Ann.	**$ 0.2**	**$ 1.8**	**$ 2.2**	**$ 9.0**	**$ 19.6**	**$ 85.1**	**$ 59.2**	**$ 232.6**	**$ 191.5**	**$ 601.4**

	Arsenic/Bladder Cancer Cessation Lag Model									
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.3	$ 0.3	$ 1.4	$ 3.1	$ 14.6	$ 11.9	$ 51.5	$ 42.4	$ 125.6
2011	$ 0.1	$ 0.7	$ 0.8	$ 3.4	$ 7.4	$ 34.7	$ 28.3	$ 122.2	$ 100.6	$ 298.3
2012	$ 0.2	$ 1.2	$ 1.4	$ 5.7	$ 12.6	$ 58.1	$ 47.4	$ 204.7	$ 168.5	$ 499.8
2013	$ 0.2	$ 1.7	$ 2.1	$ 8.3	$ 18.3	$ 83.7	$ 68.2	$ 294.6	$ 242.5	$ 719.6
2014	$ 0.3	$ 2.3	$ 2.7	$ 11.1	$ 24.2	$ 110.6	$ 84.6	$ 341.3	$ 280.8	$ 857.9
2015	$ 0.4	$ 2.8	$ 3.4	$ 13.9	$ 30.4	$ 131.6	$ 94.1	$ 372.7	$ 306.6	$ 955.9
2016	$ 0.4	$ 3.2	$ 3.8	$ 15.5	$ 33.9	$ 143.9	$ 100.5	$ 394.4	$ 324.3	$ 1,019.8
2017	$ 0.4	$ 3.4	$ 4.1	$ 16.6	$ 36.3	$ 152.2	$ 104.9	$ 409.1	$ 336.4	$ 1,063.4
2018	$ 0.5	$ 3.5	$ 4.3	$ 17.3	$ 37.9	$ 157.8	$ 107.8	$ 418.9	$ 344.4	$ 1,092.4
2019	$ 0.5	$ 3.6	$ 4.4	$ 17.8	$ 39.0	$ 161.5	$ 109.7	$ 424.9	$ 349.4	$ 1,110.7
2020	$ 0.5	$ 3.7	$ 4.5	$ 18.1	$ 39.7	$ 163.7	$ 110.7	$ 428.1	$ 352.0	$ 1,121.0
2021	$ 0.5	$ 3.7	$ 4.5	$ 18.3	$ 40.0	$ 164.9	$ 111.2	$ 429.2	$ 352.8	$ 1,125.1
2022	$ 0.5	$ 3.8	$ 4.5	$ 18.3	$ 40.2	$ 165.3	$ 111.1	$ 428.5	$ 352.3	$ 1,124.5
2023	$ 0.5	$ 3.8	$ 4.5	$ 18.3	$ 40.1	$ 165.0	$ 110.7	$ 426.6	$ 350.8	$ 1,120.3
2024	$ 0.5	$ 3.7	$ 4.5	$ 18.2	$ 40.0	$ 164.2	$ 110.1	$ 423.7	$ 348.4	$ 1,113.3
2025	$ 0.5	$ 3.7	$ 4.5	$ 18.1	$ 39.7	$ 163.0	$ 109.2	$ 420.1	$ 345.4	$ 1,104.1
2026	$ 0.5	$ 3.7	$ 4.4	$ 18.0	$ 39.3	$ 161.6	$ 108.1	$ 415.8	$ 341.9	$ 1,093.2
2027	$ 0.5	$ 3.6	$ 4.4	$ 17.8	$ 38.9	$ 159.9	$ 106.9	$ 411.0	$ 338.0	$ 1,081.0
2028	$ 0.5	$ 3.5	$ 4.3	$ 17.3	$ 37.9	$ 155.8	$ 104.1	$ 400.2	$ 329.1	$ 1,052.7
2029	$ 0.5	$ 3.5	$ 4.2	$ 17.0	$ 37.3	$ 153.4	$ 102.5	$ 393.8	$ 323.8	$ 1,036.2
Total	**$ 7.7**	**$ 59.5**	**$ 71.8**	**$ 290.4**	**$ 636.3**	**$ 2,665.3**	**$ 1,841.9**	**$ 7,211.3**	**$ 5,930.3**	**$ 18,714.6**
Ann.	**$ 0.4**	**$ 3.4**	**$ 4.1**	**$ 16.7**	**$ 36.5**	**$ 153.1**	**$ 105.8**	**$ 414.1**	**$ 340.6**	**$ 1,074.7**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.39b, E.39c, E.39f, E.39g, E.39j, and E.39k.

Exhibit F.5g Mean Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, at 7% Discount Rate, by System Size (All Systems)

HAA5 - Preferred Alternative

	Smoking/Lung Cancer Cessation Lag Model										Smoking/Bladder Cancer Cessation Lag Model										Arsenic/Bladder Cancer Cessation Lag Model									
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.1	$ 0.2	$ 0.7	$ 1.4	$ 6.4	$ 5.2	$ 22.5	$ 18.5	$ 55.1	$ 0.0	$ 0.1	$ 0.1	$ 0.6	$ 1.2	$ 6.1	$ 5.0	$ 21.7	$ 17.9	$ 52.7	$ 0.0	$ 0.2	$ 0.3	$ 1.2	$ 2.6	$ 12.1	$ 9.8	$ 42.6	$ 35.1	$ 103.8
2011	$ 0.0	$ 0.3	$ 0.4	$ 1.6	$ 3.5	$ 15.5	$ 12.6	$ 54.5	$ 44.8	$ 133.2	$ 0.0	$ 0.3	$ 0.3	$ 1.2	$ 2.7	$ 13.5	$ 11.1	$ 47.9	$ 39.6	$ 116.7	$ 0.1	$ 0.6	$ 0.7	$ 2.7	$ 5.9	$ 27.6	$ 22.5	$ 97.2	$ 80.1	$ 237.3
2012	$ 0.1	$ 0.6	$ 0.7	$ 2.7	$ 5.9	$ 26.2	$ 21.4	$ 92.2	$ 75.8	$ 225.4	$ 0.1	$ 0.4	$ 0.5	$ 2.0	$ 4.4	$ 21.6	$ 17.6	$ 76.3	$ 63.0	$ 185.8	$ 0.1	$ 0.9	$ 1.1	$ 4.4	$ 9.6	$ 44.5	$ 36.3	$ 156.8	$ 129.1	$ 382.8
2013	$ 0.1	$ 0.8	$ 1.0	$ 3.9	$ 8.5	$ 38.0	$ 30.9	$ 133.5	$ 109.8	$ 326.6	$ 0.1	$ 0.6	$ 0.7	$ 2.8	$ 6.1	$ 29.8	$ 24.4	$ 105.5	$ 87.0	$ 257.0	$ 0.2	$ 1.3	$ 1.5	$ 6.1	$ 13.5	$ 61.7	$ 50.3	$ 217.2	$ 178.8	$ 530.5
2014	$ 0.1	$ 1.1	$ 1.3	$ 5.2	$ 11.3	$ 50.6	$ 39.1	$ 159.6	$ 131.2	$ 399.4	$ 0.1	$ 0.7	$ 0.9	$ 3.6	$ 7.9	$ 38.1	$ 29.1	$ 117.3	$ 96.7	$ 294.4	$ 0.2	$ 1.6	$ 1.9	$ 7.9	$ 17.2	$ 78.5	$ 60.0	$ 242.2	$ 199.3	$ 608.9
2015	$ 0.2	$ 1.3	$ 1.6	$ 6.5	$ 14.2	$ 61.0	$ 44.6	$ 179.4	$ 147.6	$ 456.4	$ 0.1	$ 0.9	$ 1.1	$ 4.4	$ 9.6	$ 43.8	$ 31.4	$ 124.8	$ 102.9	$ 319.0	$ 0.3	$ 1.9	$ 2.3	$ 9.5	$ 20.8	$ 89.9	$ 64.3	$ 254.7	$ 209.5	$ 653.1
2016	$ 0.2	$ 1.5	$ 1.8	$ 7.3	$ 15.9	$ 68.0	$ 48.7	$ 194.0	$ 159.5	$ 496.9	$ 0.1	$ 1.0	$ 1.2	$ 4.7	$ 10.4	$ 46.6	$ 32.8	$ 129.6	$ 106.8	$ 333.2	$ 0.3	$ 2.1	$ 2.5	$ 10.2	$ 22.3	$ 94.6	$ 66.1	$ 259.4	$ 213.3	$ 670.7
2017	$ 0.2	$ 1.6	$ 1.9	$ 7.8	$ 17.2	$ 72.8	$ 51.5	$ 203.6	$ 167.5	$ 524.2	$ 0.1	$ 1.0	$ 1.2	$ 5.0	$ 10.9	$ 48.3	$ 33.7	$ 132.3	$ 109.0	$ 341.6	$ 0.3	$ 2.1	$ 2.6	$ 10.5	$ 23.0	$ 96.3	$ 66.4	$ 259.0	$ 213.0	$ 673.2
2018	$ 0.2	$ 1.7	$ 2.0	$ 8.2	$ 17.9	$ 75.9	$ 53.1	$ 208.5	$ 171.5	$ 539.1	$ 0.1	$ 1.1	$ 1.3	$ 5.1	$ 11.3	$ 49.3	$ 34.1	$ 133.5	$ 110.0	$ 345.8	$ 0.3	$ 2.2	$ 2.6	$ 10.5	$ 23.1	$ 96.2	$ 65.7	$ 255.3	$ 209.9	$ 665.7
2019	$ 0.2	$ 1.7	$ 2.1	$ 8.4	$ 18.4	$ 77.5	$ 53.6	$ 209.3	$ 172.2	$ 543.4	$ 0.1	$ 1.1	$ 1.3	$ 5.2	$ 11.4	$ 49.7	$ 34.2	$ 133.6	$ 110.0	$ 346.6	$ 0.3	$ 2.1	$ 2.6	$ 10.4	$ 22.9	$ 94.7	$ 64.3	$ 249.2	$ 204.9	$ 651.5
2020	$ 0.2	$ 1.7	$ 2.1	$ 8.4	$ 18.5	$ 77.8	$ 53.3	$ 207.4	$ 170.6	$ 540.1	$ 0.1	$ 1.1	$ 1.3	$ 5.3	$ 11.5	$ 49.7	$ 34.1	$ 132.7	$ 109.2	$ 345.0	$ 0.3	$ 2.1	$ 2.5	$ 10.2	$ 22.4	$ 92.5	$ 62.5	$ 241.7	$ 198.8	$ 633.0
2021	$ 0.2	$ 1.7	$ 2.1	$ 8.4	$ 18.3	$ 77.0	$ 52.5	$ 203.6	$ 167.5	$ 531.4	$ 0.1	$ 1.1	$ 1.3	$ 5.2	$ 11.5	$ 49.3	$ 33.7	$ 131.1	$ 107.9	$ 341.3	$ 0.3	$ 2.0	$ 2.5	$ 9.9	$ 21.8	$ 89.6	$ 60.4	$ 233.3	$ 191.8	$ 611.6
2022	$ 0.2	$ 1.7	$ 2.0	$ 8.2	$ 18.0	$ 75.5	$ 51.3	$ 198.6	$ 163.3	$ 518.9	$ 0.1	$ 1.1	$ 1.3	$ 5.2	$ 11.4	$ 48.7	$ 33.2	$ 128.9	$ 106.1	$ 336.0	$ 0.3	$ 2.0	$ 2.4	$ 9.6	$ 21.0	$ 86.5	$ 58.2	$ 224.2	$ 184.4	$ 588.4
2023	$ 0.2	$ 1.6	$ 2.0	$ 8.0	$ 17.6	$ 73.6	$ 49.8	$ 192.6	$ 158.4	$ 503.9	$ 0.1	$ 1.1	$ 1.3	$ 5.1	$ 11.3	$ 47.9	$ 32.5	$ 126.2	$ 103.9	$ 329.4	$ 0.2	$ 1.9	$ 2.3	$ 9.2	$ 20.2	$ 83.1	$ 55.8	$ 214.9	$ 176.7	$ 564.3
2024	$ 0.2	$ 1.6	$ 1.9	$ 7.8	$ 17.1	$ 71.4	$ 48.2	$ 186.0	$ 153.0	$ 487.2	$ 0.1	$ 1.0	$ 1.2	$ 5.0	$ 11.1	$ 46.9	$ 31.8	$ 123.2	$ 101.4	$ 321.8	$ 0.2	$ 1.8	$ 2.2	$ 8.8	$ 19.4	$ 79.6	$ 53.4	$ 205.4	$ 168.9	$ 539.8
2025	$ 0.2	$ 1.5	$ 1.9	$ 7.5	$ 16.5	$ 68.9	$ 46.4	$ 179.1	$ 147.3	$ 469.4	$ 0.1	$ 1.0	$ 1.2	$ 4.9	$ 10.8	$ 45.7	$ 31.0	$ 119.9	$ 98.7	$ 313.5	$ 0.2	$ 1.7	$ 2.1	$ 8.5	$ 18.5	$ 76.1	$ 51.0	$ 196.1	$ 161.2	$ 515.3
2026	$ 0.2	$ 1.5	$ 1.8	$ 7.3	$ 15.9	$ 66.3	$ 44.6	$ 172.0	$ 141.5	$ 451.0	$ 0.1	$ 1.0	$ 1.2	$ 4.8	$ 10.6	$ 44.5	$ 30.1	$ 116.4	$ 95.8	$ 304.6	$ 0.2	$ 1.7	$ 2.0	$ 8.1	$ 17.7	$ 72.6	$ 48.6	$ 186.8	$ 153.6	$ 491.2
2027	$ 0.2	$ 1.4	$ 1.7	$ 7.0	$ 15.3	$ 63.7	$ 42.8	$ 164.8	$ 135.6	$ 432.4	$ 0.1	$ 1.0	$ 1.2	$ 4.7	$ 10.3	$ 43.2	$ 29.2	$ 112.8	$ 92.8	$ 295.3	$ 0.2	$ 1.6	$ 1.9	$ 7.7	$ 16.8	$ 69.2	$ 46.2	$ 177.8	$ 146.2	$ 467.5
2028	$ 0.2	$ 1.4	$ 1.6	$ 6.6	$ 14.4	$ 60.1	$ 40.3	$ 155.4	$ 127.8	$ 407.9	$ 0.1	$ 0.9	$ 1.1	$ 4.5	$ 9.9	$ 41.3	$ 27.8	$ 107.5	$ 88.5	$ 281.6	$ 0.2	$ 1.5	$ 1.8	$ 7.2	$ 15.8	$ 64.9	$ 43.3	$ 166.6	$ 137.0	$ 438.3
2029	$ 0.2	$ 1.3	$ 1.6	$ 6.3	$ 13.8	$ 57.3	$ 38.4	$ 148.0	$ 121.7	$ 388.6	$ 0.1	$ 0.9	$ 1.1	$ 4.3	$ 9.5	$ 39.8	$ 26.8	$ 103.5	$ 85.2	$ 271.2	$ 0.2	$ 1.4	$ 1.7	$ 6.8	$ 15.0	$ 61.5	$ 41.1	$ 157.8	$ 129.8	$ 415.2
Total	**$ 3.4**	**$ 26.1**	**$ 31.6**	**$ 127.6**	**$ 279.6**	**$ 1,183.8**	**$ 828.2**	**$ 3,264.8**	**$ 2,685.4**	**$ 8,430.4**	**$ 2.2**	**$ 17.2**	**$ 20.7**	**$ 83.9**	**$ 183.8**	**$ 803.8**	**$ 563.8**	**$ 2,224.9**	**$ 1,832.1**	**$ 5,732.5**	**$ 4.2**	**$ 32.7**	**$ 39.4**	**$ 159.4**	**$ 349.4**	**$ 1,471.5**	**$ 1,026.1**	**$ 4,038.1**	**$ 3,321.0**	**$ 10,441.9**
Ann.	**$ 0.3**	**$ 2.2**	**$ 2.7**	**$ 11.0**	**$ 24.0**	**$ 101.6**	**$ 71.1**	**$ 280.2**	**$ 230.4**	**$ 723.4**	**$ 0.2**	**$ 1.5**	**$ 1.8**	**$ 7.2**	**$ 15.8**	**$ 69.0**	**$ 48.4**	**$ 190.9**	**$ 157.2**	**$ 491.9**	**$ 0.4**	**$ 2.8**	**$ 3.4**	**$ 13.7**	**$ 30.0**	**$ 126.3**	**$ 88.1**	**$ 346.5**	**$ 285.0**	**$ 896.0**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.39b, E.39c, E.39f, E.39g, E.39j, and E.39k.

Section F.6
Model Outputs - Alternative 1
TTHM as Indicator
Lymphoma for Non-Fatal Cases

Exhibit F.6a Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Smoking/Lung Cancer Cessation Lag Model)

TTHM - Alternative 1

Year	Surface Water Systems			Ground Water Systems			All Systems		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 122.6	$ 18.8	$ 281.8	$ 4.2	$ 0.6	$ 9.6	$ 126.8	$ 19.4	$ 291.4
2011	$ 326.7	$ 50.0	$ 751.4	$ 11.2	$ 1.7	$ 25.7	$ 337.8	$ 51.7	$ 777.1
2012	$ 596.2	$ 91.2	$ 1,369.6	$ 20.4	$ 3.1	$ 46.8	$ 616.5	$ 94.4	$ 1,416.4
2013	$ 921.0	$ 141.0	$ 2,115.4	$ 31.4	$ 4.8	$ 72.2	$ 952.4	$ 145.8	$ 2,187.6
2014	$ 1,190.1	$ 181.9	$ 2,735.9	$ 42.5	$ 6.5	$ 97.8	$ 1,232.7	$ 188.4	$ 2,833.6
2015	$ 1,420.1	$ 217.2	$ 3,266.1	$ 53.2	$ 8.1	$ 122.4	$ 1,473.4	$ 225.3	$ 3,388.5
2016	$ 1,613.6	$ 246.5	$ 3,710.8	$ 61.8	$ 9.4	$ 142.2	$ 1,675.4	$ 255.9	$ 3,853.0
2017	$ 1,781.3	$ 272.0	$ 4,100.3	$ 69.2	$ 10.6	$ 159.3	$ 1,850.5	$ 282.6	$ 4,259.5
2018	$ 1,929.0	$ 294.1	$ 4,444.2	$ 75.6	$ 11.5	$ 174.2	$ 2,004.7	$ 305.7	$ 4,618.4
2019	$ 2,061.0	$ 314.0	$ 4,756.2	$ 81.3	$ 12.4	$ 187.6	$ 2,142.3	$ 326.3	$ 4,943.9
2020	$ 2,180.1	$ 332.0	$ 5,033.4	$ 86.4	$ 13.2	$ 199.5	$ 2,266.6	$ 345.1	$ 5,232.9
2021	$ 2,288.6	$ 348.1	$ 5,284.1	$ 91.0	$ 13.8	$ 210.2	$ 2,379.6	$ 361.9	$ 5,494.3
2022	$ 2,388.0	$ 363.1	$ 5,523.0	$ 95.3	$ 14.5	$ 220.3	$ 2,483.3	$ 377.6	$ 5,743.3
2023	$ 2,479.9	$ 377.2	$ 5,736.8	$ 99.2	$ 15.1	$ 229.4	$ 2,579.0	$ 392.3	$ 5,966.2
2024	$ 2,565.2	$ 390.0	$ 5,936.5	$ 102.8	$ 15.6	$ 237.8	$ 2,668.0	$ 405.6	$ 6,174.3
2025	$ 2,645.0	$ 401.5	$ 6,121.5	$ 106.1	$ 16.1	$ 245.6	$ 2,751.1	$ 417.6	$ 6,367.0
2026	$ 2,719.9	$ 412.3	$ 6,300.4	$ 109.3	$ 16.6	$ 253.1	$ 2,829.2	$ 428.9	$ 6,553.4
2027	$ 2,790.7	$ 422.5	$ 6,474.3	$ 112.2	$ 17.0	$ 260.3	$ 2,902.9	$ 439.5	$ 6,734.6
2028	$ 2,820.8	$ 427.5	$ 6,540.5	$ 113.5	$ 17.2	$ 263.2	$ 2,934.4	$ 444.7	$ 6,803.8
2029	$ 2,877.1	$ 435.4	$ 6,677.3	$ 115.9	$ 17.5	$ 268.9	$ 2,993.0	$ 452.9	$ 6,946.3
Total	**$ 37,717.0**	**$ 5,736.2**	**$ 87,159.4**	**$ 1,482.5**	**$ 225.4**	**$ 3,426.1**	**$ 39,199.4**	**$ 5,961.6**	**$ 90,585.6**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.40b, and E.40c.

Exhibit F.6b Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, Smoking/Lung Cancer Cessation Lag Model (All Water Systems)

TTHM - Alternative 1

Year	3% Discount Rate			7% Discount Rate		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 109.4	$ 16.7	$ 251.4	$ 90.4	$ 13.8	$ 207.8
2011	$ 282.9	$ 43.3	$ 650.8	$ 225.1	$ 34.5	$ 517.8
2012	$ 501.3	$ 76.7	$ 1,151.6	$ 384.0	$ 58.8	$ 882.0
2013	$ 751.8	$ 115.1	$ 1,726.9	$ 554.3	$ 84.8	$ 1,273.2
2014	$ 944.7	$ 144.4	$ 2,171.7	$ 670.5	$ 102.5	$ 1,541.3
2015	$ 1,096.3	$ 167.6	$ 2,521.3	$ 749.0	$ 114.5	$ 1,722.5
2016	$ 1,210.4	$ 184.9	$ 2,783.5	$ 796.0	$ 121.6	$ 1,830.5
2017	$ 1,297.9	$ 198.2	$ 2,987.6	$ 821.6	$ 125.5	$ 1,891.3
2018	$ 1,365.1	$ 208.1	$ 3,144.9	$ 831.9	$ 126.8	$ 1,916.5
2019	$ 1,416.3	$ 215.8	$ 3,268.5	$ 830.8	$ 126.6	$ 1,917.3
2020	$ 1,454.8	$ 221.5	$ 3,358.8	$ 821.5	$ 125.1	$ 1,896.6
2021	$ 1,482.9	$ 225.5	$ 3,423.9	$ 806.1	$ 122.6	$ 1,861.1
2022	$ 1,502.4	$ 228.5	$ 3,474.8	$ 786.1	$ 119.5	$ 1,818.2
2023	$ 1,514.9	$ 230.4	$ 3,504.5	$ 763.0	$ 116.1	$ 1,765.2
2024	$ 1,521.5	$ 231.3	$ 3,521.1	$ 737.7	$ 112.1	$ 1,707.2
2025	$ 1,523.2	$ 231.2	$ 3,525.3	$ 710.9	$ 107.9	$ 1,645.4
2026	$ 1,520.8	$ 230.5	$ 3,522.8	$ 683.3	$ 103.6	$ 1,582.7
2027	$ 1,515.0	$ 229.4	$ 3,514.7	$ 655.2	$ 99.2	$ 1,520.1
2028	$ 1,486.8	$ 225.3	$ 3,447.4	$ 619.0	$ 93.8	$ 1,435.2
2029	$ 1,472.4	$ 222.8	$ 3,417.1	$ 590.1	$ 89.3	$ 1,369.4
Total	**$ 23,970.9**	**$ 3,647.4**	**$ 55,368.7**	**$ 13,126.5**	**$ 1,998.6**	**$ 30,301.5**
Ann.	**$ 1,376.6**	**$ 209.5**	**$ 3,179.7**	**$ 1,126.4**	**$ 171.5**	**$ 2,600.2**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibit F.6a.

Exhibit F.6c Mean Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 3% Discount Rate, by System Size
(All Systems)

TTHM - Alternative 1

Smoking/Lung Cancer Cessation Lag Model										
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.2	$ 0.3	$ 1.2	$ 3.0	$ 12.2	$ 10.3	$ 44.8	$ 37.4	$ 109.4
2011	$ 0.1	$ 0.5	$ 0.6	$ 3.1	$ 7.7	$ 31.6	$ 26.5	$ 115.9	$ 96.8	$ 282.9
2012	$ 0.1	$ 0.9	$ 1.1	$ 5.5	$ 13.7	$ 56.1	$ 47.0	$ 205.3	$ 171.6	$ 501.3
2013	$ 0.2	$ 1.3	$ 1.7	$ 8.3	$ 20.5	$ 84.1	$ 70.5	$ 307.9	$ 257.3	$ 751.8
2014	$ 0.2	$ 1.8	$ 2.4	$ 11.3	$ 28.0	$ 114.7	$ 91.5	$ 378.6	$ 316.3	$ 944.7
2015	$ 0.3	$ 2.3	$ 3.0	$ 14.5	$ 35.9	$ 141.6	$ 106.5	$ 431.6	$ 360.6	$ 1,096.3
2016	$ 0.3	$ 2.6	$ 3.5	$ 16.7	$ 41.5	$ 161.0	$ 117.9	$ 472.3	$ 394.6	$ 1,210.4
2017	$ 0.4	$ 2.9	$ 3.8	$ 18.4	$ 45.7	$ 175.8	$ 126.7	$ 503.6	$ 420.7	$ 1,297.9
2018	$ 0.4	$ 3.1	$ 4.1	$ 19.7	$ 48.9	$ 187.1	$ 133.4	$ 527.6	$ 440.8	$ 1,365.1
2019	$ 0.4	$ 3.2	$ 4.3	$ 20.7	$ 51.3	$ 195.7	$ 138.5	$ 545.9	$ 456.2	$ 1,416.3
2020	$ 0.4	$ 3.3	$ 4.5	$ 21.5	$ 53.2	$ 202.3	$ 142.4	$ 559.6	$ 467.6	$ 1,454.8
2021	$ 0.4	$ 3.4	$ 4.6	$ 22.1	$ 54.6	$ 207.2	$ 145.2	$ 569.6	$ 475.9	$ 1,482.9
2022	$ 0.4	$ 3.5	$ 4.7	$ 22.5	$ 55.6	$ 210.7	$ 147.2	$ 576.4	$ 481.6	$ 1,502.4
2023	$ 0.4	$ 3.5	$ 4.7	$ 22.7	$ 56.3	$ 213.0	$ 148.5	$ 580.6	$ 485.1	$ 1,514.9
2024	$ 0.4	$ 3.6	$ 4.8	$ 22.9	$ 56.7	$ 214.5	$ 149.1	$ 582.6	$ 486.8	$ 1,521.5
2025	$ 0.4	$ 3.6	$ 4.8	$ 23.0	$ 57.0	$ 215.1	$ 149.3	$ 582.9	$ 487.0	$ 1,523.2
2026	$ 0.4	$ 3.6	$ 4.8	$ 23.0	$ 57.0	$ 215.2	$ 149.1	$ 581.7	$ 486.0	$ 1,520.8
2027	$ 0.4	$ 3.6	$ 4.8	$ 23.0	$ 56.9	$ 214.6	$ 148.6	$ 579.2	$ 483.9	$ 1,515.0
2028	$ 0.4	$ 3.5	$ 4.7	$ 22.6	$ 55.9	$ 210.9	$ 145.9	$ 568.2	$ 474.7	$ 1,486.8
2029	$ 0.4	$ 3.5	$ 4.7	$ 22.4	$ 55.5	$ 209.0	$ 144.5	$ 562.5	$ 470.0	$ 1,472.4
Total	**$ 6.7**	**$ 53.6**	**$ 71.8**	**$ 345.3**	**$ 854.8**	**$ 3,272.4**	**$ 2,338.6**	**$ 9,276.7**	**$ 7,751.0**	**$ 23,970.9**
Ann.	**$ 0.4**	**$ 3.1**	**$ 4.1**	**$ 19.8**	**$ 49.1**	**$ 187.9**	**$ 134.3**	**$ 532.7**	**$ 445.1**	**$ 1,376.6**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and E.40d.

Exhibit F.6d Mean Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 7% Discount Rate, by System Size
(All Systems)

TTHM - Alternative 1

Smoking/Lung Cancer Cessation Lag Model										
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.2	$ 0.2	$ 1.0	$ 2.5	$ 10.1	$ 8.5	$ 37.0	$ 30.9	$ 90.4
2011	$ 0.0	$ 0.4	$ 0.5	$ 2.5	$ 6.1	$ 25.2	$ 21.1	$ 92.2	$ 77.0	$ 225.1
2012	$ 0.1	$ 0.7	$ 0.9	$ 4.2	$ 10.5	$ 42.9	$ 36.0	$ 157.3	$ 131.4	$ 384.0
2013	$ 0.1	$ 0.9	$ 1.3	$ 6.1	$ 15.1	$ 62.0	$ 52.0	$ 227.0	$ 189.7	$ 554.3
2014	$ 0.2	$ 1.2	$ 1.7	$ 8.0	$ 19.9	$ 81.4	$ 64.9	$ 268.7	$ 224.5	$ 670.5
2015	$ 0.2	$ 1.5	$ 2.1	$ 9.9	$ 24.5	$ 96.7	$ 72.8	$ 294.9	$ 246.4	$ 749.0
2016	$ 0.2	$ 1.7	$ 2.3	$ 11.0	$ 27.3	$ 105.9	$ 77.5	$ 310.6	$ 259.5	$ 796.0
2017	$ 0.2	$ 1.8	$ 2.4	$ 11.7	$ 28.9	$ 111.3	$ 80.2	$ 318.8	$ 266.4	$ 821.6
2018	$ 0.2	$ 1.9	$ 2.5	$ 12.0	$ 29.8	$ 114.0	$ 81.3	$ 321.5	$ 268.6	$ 831.9
2019	$ 0.2	$ 1.9	$ 2.5	$ 12.2	$ 30.1	$ 114.8	$ 81.3	$ 320.3	$ 267.6	$ 830.8
2020	$ 0.2	$ 1.9	$ 2.5	$ 12.1	$ 30.0	$ 114.2	$ 80.4	$ 316.0	$ 264.0	$ 821.5
2021	$ 0.2	$ 1.9	$ 2.5	$ 12.0	$ 29.7	$ 112.6	$ 78.9	$ 309.6	$ 258.7	$ 806.1
2022	$ 0.2	$ 1.8	$ 2.4	$ 11.8	$ 29.1	$ 110.2	$ 77.0	$ 301.6	$ 252.0	$ 786.1
2023	$ 0.2	$ 1.8	$ 2.4	$ 11.5	$ 28.4	$ 107.3	$ 74.8	$ 292.4	$ 244.3	$ 763.0
2024	$ 0.2	$ 1.7	$ 2.3	$ 11.1	$ 27.5	$ 104.0	$ 72.3	$ 282.5	$ 236.0	$ 737.7
2025	$ 0.2	$ 1.7	$ 2.2	$ 10.7	$ 26.6	$ 100.4	$ 69.7	$ 272.1	$ 227.3	$ 710.9
2026	$ 0.2	$ 1.6	$ 2.2	$ 10.3	$ 25.6	$ 96.7	$ 67.0	$ 261.3	$ 218.4	$ 683.3
2027	$ 0.2	$ 1.5	$ 2.1	$ 9.9	$ 24.6	$ 92.8	$ 64.3	$ 250.5	$ 209.3	$ 655.2
2028	$ 0.2	$ 1.5	$ 2.0	$ 9.4	$ 23.3	$ 87.8	$ 60.7	$ 236.5	$ 197.6	$ 619.0
2029	$ 0.2	$ 1.4	$ 1.9	$ 9.0	$ 22.2	$ 83.8	$ 57.9	$ 225.4	$ 188.3	$ 590.1
Total	**$ 3.6**	**$ 28.9**	**$ 38.8**	**$ 186.5**	**$ 461.7**	**$ 1,774.2**	**$ 1,278.6**	**$ 5,096.2**	**$ 4,258.0**	**$ 13,126.5**
Ann.	**$ 0.3**	**$ 2.5**	**$ 3.3**	**$ 16.0**	**$ 39.6**	**$ 152.2**	**$ 109.7**	**$ 437.3**	**$ 365.4**	**$ 1,126.4**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and E.40d.

Section F.7
Model Outputs - Alternative 1
TTHM as Indicator
Bronchitis for Non-Fatal Cases

Exhibit F.7a Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases (Smoking/Lung Cancer Cessation Lag Model)

TTHM - Alternative 1

Year	Surface Water Systems			Ground Water Systems			All Systems		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 60.6	$ 13.3	$ 133.2	$ 2.1	$ 0.5	$ 4.5	$ 62.6	$ 13.8	$ 137.7
2011	$ 161.5	$ 35.5	$ 355.7	$ 5.5	$ 1.2	$ 12.1	$ 167.0	$ 36.7	$ 367.8
2012	$ 294.9	$ 64.8	$ 649.2	$ 10.1	$ 2.2	$ 22.2	$ 305.0	$ 67.0	$ 671.3
2013	$ 455.9	$ 100.1	$ 1,003.1	$ 15.6	$ 3.4	$ 34.2	$ 471.5	$ 103.5	$ 1,037.4
2014	$ 589.6	$ 129.2	$ 1,297.9	$ 21.1	$ 4.6	$ 46.4	$ 610.7	$ 133.8	$ 1,344.3
2015	$ 704.1	$ 154.0	$ 1,552.5	$ 26.4	$ 5.8	$ 58.2	$ 730.5	$ 159.8	$ 1,610.7
2016	$ 800.6	$ 175.0	$ 1,764.9	$ 30.7	$ 6.7	$ 67.6	$ 831.3	$ 181.7	$ 1,832.6
2017	$ 884.5	$ 193.1	$ 1,953.4	$ 34.4	$ 7.5	$ 75.9	$ 918.8	$ 200.6	$ 2,029.3
2018	$ 958.6	$ 208.7	$ 2,117.8	$ 37.6	$ 8.2	$ 83.0	$ 996.2	$ 216.9	$ 2,200.8
2019	$ 1,025.0	$ 222.8	$ 2,269.8	$ 40.4	$ 8.8	$ 89.5	$ 1,065.4	$ 231.6	$ 2,359.3
2020	$ 1,085.1	$ 235.5	$ 2,404.8	$ 43.0	$ 9.3	$ 95.3	$ 1,128.1	$ 244.9	$ 2,500.1
2021	$ 1,140.0	$ 247.1	$ 2,529.5	$ 45.4	$ 9.8	$ 100.6	$ 1,185.4	$ 256.9	$ 2,630.1
2022	$ 1,190.5	$ 257.6	$ 2,646.8	$ 47.5	$ 10.3	$ 105.6	$ 1,238.0	$ 267.8	$ 2,752.4
2023	$ 1,237.4	$ 267.0	$ 2,751.3	$ 49.5	$ 10.7	$ 110.0	$ 1,286.8	$ 277.6	$ 2,861.3
2024	$ 1,281.0	$ 276.2	$ 2,849.8	$ 51.3	$ 11.1	$ 114.2	$ 1,332.3	$ 287.2	$ 2,963.9
2025	$ 1,322.0	$ 284.4	$ 2,942.7	$ 53.0	$ 11.4	$ 118.1	$ 1,375.0	$ 295.8	$ 3,060.8
2026	$ 1,360.6	$ 292.3	$ 3,029.6	$ 54.7	$ 11.7	$ 121.7	$ 1,415.3	$ 304.1	$ 3,151.3
2027	$ 1,397.3	$ 299.7	$ 3,119.0	$ 56.2	$ 12.0	$ 125.4	$ 1,453.4	$ 311.7	$ 3,244.4
2028	$ 1,411.9	$ 303.0	$ 3,148.9	$ 56.8	$ 12.2	$ 126.7	$ 1,468.7	$ 315.2	$ 3,275.6
2029	$ 1,441.0	$ 308.9	$ 3,219.5	$ 58.0	$ 12.4	$ 129.7	$ 1,499.1	$ 321.3	$ 3,349.1
Total	**$ 18,802.2**	**$ 4,068.2**	**$ 41,739.3**	**$ 739.1**	**$ 159.9**	**$ 1,641.0**	**$ 19,541.3**	**$ 4,228.0**	**$ 43,380.3**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.40b, and E.40c.

Exhibit F.7b Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, Smoking/Lung Cancer Cessation Lag Model
(All Water Systems)

TTHM - Alternative 1

	3% Discount Rate			7% Discount Rate		
		90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 54.0	$ 11.9	$ 118.8	$ 44.6	$ 9.8	$ 98.2
2011	$ 139.9	$ 30.8	$ 308.1	$ 111.3	$ 24.5	$ 245.1
2012	$ 248.0	$ 54.5	$ 545.8	$ 189.9	$ 41.7	$ 418.1
2013	$ 372.2	$ 81.7	$ 818.9	$ 274.4	$ 60.2	$ 603.8
2014	$ 468.0	$ 102.6	$ 1,030.3	$ 332.2	$ 72.8	$ 731.2
2015	$ 543.5	$ 118.9	$ 1,198.5	$ 371.3	$ 81.2	$ 818.8
2016	$ 600.5	$ 131.2	$ 1,323.9	$ 394.9	$ 86.3	$ 870.6
2017	$ 644.4	$ 140.7	$ 1,423.3	$ 408.0	$ 89.1	$ 901.0
2018	$ 678.4	$ 147.7	$ 1,498.7	$ 413.4	$ 90.0	$ 913.3
2019	$ 704.4	$ 153.1	$ 1,559.8	$ 413.2	$ 89.8	$ 915.0
2020	$ 724.1	$ 157.2	$ 1,604.7	$ 408.9	$ 88.7	$ 906.2
2021	$ 738.7	$ 160.1	$ 1,639.0	$ 401.5	$ 87.0	$ 890.9
2022	$ 749.0	$ 162.0	$ 1,665.3	$ 391.9	$ 84.8	$ 871.3
2023	$ 755.9	$ 163.1	$ 1,680.7	$ 380.7	$ 82.1	$ 846.5
2024	$ 759.8	$ 163.8	$ 1,690.3	$ 368.4	$ 79.4	$ 819.5
2025	$ 761.3	$ 163.8	$ 1,694.7	$ 355.3	$ 76.4	$ 791.0
2026	$ 760.8	$ 163.4	$ 1,694.0	$ 341.8	$ 73.4	$ 761.1
2027	$ 758.5	$ 162.7	$ 1,693.2	$ 328.1	$ 70.4	$ 732.3
2028	$ 744.2	$ 159.7	$ 1,659.7	$ 309.8	$ 66.5	$ 691.0
2029	$ 737.4	$ 158.1	$ 1,647.6	$ 295.5	$ 63.3	$ 660.3
Total	**$ 11,943.1**	**$ 2,587.0**	**$ 26,495.1**	**$ 6,535.3**	**$ 1,417.7**	**$ 14,485.1**
Ann.	**$ 685.9**	**$ 148.6**	**$ 1,521.6**	**$ 560.8**	**$ 121.7**	**$ 1,243.0**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibit F.7a.

Exhibit F.7c Mean Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, at 3% Discount Rate, by System Size
(All Systems)

TTHM - Alternative 1

Smoking/Lung Cancer Cessation Lag Model										
Year	**<100**	**100-499**	**500-999**	**1,000-3,299**	**3,300-9,999**	**10,000-49,999**	**50,000-99,999**	**100,000-999,999**	**≥1,000,000**	**Total**
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.1	$ 0.1	$ 0.6	$ 1.5	$ 6.0	$ 5.1	$ 22.1	$ 18.5	$ 54.0
2011	$ 0.0	$ 0.2	$ 0.3	$ 1.5	$ 3.8	$ 15.6	$ 13.1	$ 57.3	$ 47.9	$ 139.9
2012	$ 0.1	$ 0.4	$ 0.6	$ 2.7	$ 6.8	$ 27.7	$ 23.3	$ 101.6	$ 84.9	$ 248.0
2013	$ 0.1	$ 0.6	$ 0.9	$ 4.1	$ 10.2	$ 41.6	$ 34.9	$ 152.4	$ 127.4	$ 372.2
2014	$ 0.1	$ 0.9	$ 1.2	$ 5.6	$ 13.9	$ 56.8	$ 45.3	$ 187.6	$ 156.7	$ 468.0
2015	$ 0.1	$ 1.1	$ 1.5	$ 7.2	$ 17.8	$ 70.2	$ 52.8	$ 214.0	$ 178.8	$ 543.5
2016	$ 0.2	$ 1.3	$ 1.7	$ 8.3	$ 20.6	$ 79.9	$ 58.5	$ 234.3	$ 195.8	$ 600.5
2017	$ 0.2	$ 1.4	$ 1.9	$ 9.2	$ 22.7	$ 87.3	$ 62.9	$ 250.0	$ 208.9	$ 644.4
2018	$ 0.2	$ 1.5	$ 2.0	$ 9.8	$ 24.3	$ 93.0	$ 66.3	$ 262.2	$ 219.1	$ 678.4
2019	$ 0.2	$ 1.6	$ 2.1	$ 10.3	$ 25.5	$ 97.3	$ 68.9	$ 271.5	$ 226.9	$ 704.4
2020	$ 0.2	$ 1.7	$ 2.2	$ 10.7	$ 26.5	$ 100.7	$ 70.9	$ 278.5	$ 232.7	$ 724.1
2021	$ 0.2	$ 1.7	$ 2.3	$ 11.0	$ 27.2	$ 103.2	$ 72.3	$ 283.7	$ 237.1	$ 738.7
2022	$ 0.2	$ 1.7	$ 2.3	$ 11.2	$ 27.7	$ 105.0	$ 73.4	$ 287.3	$ 240.1	$ 749.0
2023	$ 0.2	$ 1.8	$ 2.4	$ 11.3	$ 28.1	$ 106.3	$ 74.1	$ 289.7	$ 242.0	$ 755.9
2024	$ 0.2	$ 1.8	$ 2.4	$ 11.4	$ 28.3	$ 107.1	$ 74.5	$ 291.0	$ 243.1	$ 759.8
2025	$ 0.2	$ 1.8	$ 2.4	$ 11.5	$ 28.5	$ 107.5	$ 74.6	$ 291.3	$ 243.4	$ 761.3
2026	$ 0.2	$ 1.8	$ 2.4	$ 11.5	$ 28.5	$ 107.6	$ 74.6	$ 291.0	$ 243.1	$ 760.8
2027	$ 0.2	$ 1.8	$ 2.4	$ 11.5	$ 28.5	$ 107.5	$ 74.4	$ 290.0	$ 242.3	$ 758.5
2028	$ 0.2	$ 1.8	$ 2.4	$ 11.3	$ 28.0	$ 105.6	$ 73.0	$ 284.4	$ 237.6	$ 744.2
2029	$ 0.2	$ 1.7	$ 2.3	$ 11.2	$ 27.8	$ 104.7	$ 72.4	$ 281.7	$ 235.4	$ 737.4
Total	**$ 3.3**	**$ 26.7**	**$ 35.8**	**$ 172.1**	**$ 426.0**	**$ 1,630.7**	**$ 1,165.2**	**$ 4,621.7**	**$ 3,861.6**	**$ 11,943.1**
Ann.	**$ 0.2**	**$ 1.5**	**$ 2.1**	**$ 9.9**	**$ 24.5**	**$ 93.6**	**$ 66.9**	**$ 265.4**	**$ 221.8**	**$ 685.9**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and E.40d.

Exhibit F.7d Mean Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, at 7% Discount Rate, by System Size
(All Systems)

TTHM - Alternative 1

Smoking/Lung Cancer Cessation Lag Model										
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.1	$ 0.1	$ 0.5	$ 1.2	$ 5.0	$ 4.2	$ 18.3	$ 15.3	$ 44.6
2011	$ 0.0	$ 0.2	$ 0.3	$ 1.2	$ 3.0	$ 12.4	$ 10.4	$ 45.6	$ 38.1	$ 111.3
2012	$ 0.0	$ 0.3	$ 0.4	$ 2.1	$ 5.2	$ 21.2	$ 17.8	$ 77.8	$ 65.0	$ 189.9
2013	$ 0.1	$ 0.5	$ 0.6	$ 3.0	$ 7.5	$ 30.7	$ 25.7	$ 112.4	$ 93.9	$ 274.4
2014	$ 0.1	$ 0.6	$ 0.8	$ 4.0	$ 9.8	$ 40.3	$ 32.2	$ 133.1	$ 111.2	$ 332.2
2015	$ 0.1	$ 0.8	$ 1.0	$ 4.9	$ 12.2	$ 48.0	$ 36.1	$ 146.2	$ 122.2	$ 371.3
2016	$ 0.1	$ 0.8	$ 1.1	$ 5.5	$ 13.5	$ 52.5	$ 38.5	$ 154.1	$ 128.8	$ 394.9
2017	$ 0.1	$ 0.9	$ 1.2	$ 5.8	$ 14.4	$ 55.2	$ 39.8	$ 158.3	$ 132.3	$ 408.0
2018	$ 0.1	$ 0.9	$ 1.2	$ 6.0	$ 14.8	$ 56.6	$ 40.4	$ 159.8	$ 133.5	$ 413.4
2019	$ 0.1	$ 0.9	$ 1.3	$ 6.0	$ 15.0	$ 57.1	$ 40.4	$ 159.3	$ 133.1	$ 413.2
2020	$ 0.1	$ 0.9	$ 1.3	$ 6.0	$ 15.0	$ 56.9	$ 40.0	$ 157.3	$ 131.4	$ 408.9
2021	$ 0.1	$ 0.9	$ 1.2	$ 6.0	$ 14.8	$ 56.1	$ 39.3	$ 154.2	$ 128.9	$ 401.5
2022	$ 0.1	$ 0.9	$ 1.2	$ 5.9	$ 14.5	$ 55.0	$ 38.4	$ 150.3	$ 125.6	$ 391.9
2023	$ 0.1	$ 0.9	$ 1.2	$ 5.7	$ 14.2	$ 53.5	$ 37.3	$ 145.9	$ 121.9	$ 380.7
2024	$ 0.1	$ 0.9	$ 1.2	$ 5.5	$ 13.7	$ 51.9	$ 36.1	$ 141.1	$ 117.9	$ 368.4
2025	$ 0.1	$ 0.8	$ 1.1	$ 5.4	$ 13.3	$ 50.2	$ 34.8	$ 136.0	$ 113.6	$ 355.3
2026	$ 0.1	$ 0.8	$ 1.1	$ 5.2	$ 12.8	$ 48.4	$ 33.5	$ 130.7	$ 109.2	$ 341.8
2027	$ 0.1	$ 0.8	$ 1.0	$ 5.0	$ 12.3	$ 46.5	$ 32.2	$ 125.4	$ 104.8	$ 328.1
2028	$ 0.1	$ 0.7	$ 1.0	$ 4.7	$ 11.7	$ 43.9	$ 30.4	$ 118.4	$ 98.9	$ 309.8
2029	$ 0.1	$ 0.7	$ 0.9	$ 4.5	$ 11.1	$ 42.0	$ 29.0	$ 112.9	$ 94.3	$ 295.5
Total	**$ 1.8**	**$ 14.4**	**$ 19.3**	**$ 92.9**	**$ 229.9**	**$ 883.5**	**$ 636.6**	**$ 2,537.1**	**$ 2,119.8**	**$ 6,535.3**
Ann.	**$ 0.2**	**$ 1.2**	**$ 1.7**	**$ 8.0**	**$ 19.7**	**$ 75.8**	**$ 54.6**	**$ 217.7**	**$ 181.9**	**$ 560.8**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and E.40d.

Section F.8
Model Outputs - Alternative 2
TTHM as Indicator
Lymphoma for Non-Fatal Cases

Exhibit F.8a Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Smoking/Lung Cancer Cessation Lag Model)

TTHM - Alternative 2

Year	Surface Water Systems			Ground Water Systems			All Systems		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 434.5	$ 66.5	$ 998.7	$ 39.5	$ 6.1	$ 90.9	$ 474.0	$ 72.6	$ 1,089.6
2011	$ 1,157.5	$ 177.2	$ 2,662.4	$ 105.3	$ 16.1	$ 242.3	$ 1,262.9	$ 193.4	$ 2,904.7
2012	$ 2,112.2	$ 323.2	$ 4,852.2	$ 192.2	$ 29.4	$ 441.6	$ 2,304.4	$ 352.6	$ 5,293.8
2013	$ 3,262.5	$ 499.4	$ 7,493.8	$ 296.9	$ 45.4	$ 682.0	$ 3,559.4	$ 544.8	$ 8,175.8
2014	$ 4,215.5	$ 644.5	$ 9,690.5	$ 398.7	$ 61.0	$ 916.5	$ 4,614.2	$ 705.4	$ 10,607.1
2015	$ 5,029.8	$ 769.1	$ 11,567.7	$ 493.6	$ 75.5	$ 1,135.1	$ 5,523.4	$ 844.6	$ 12,702.8
2016	$ 5,714.7	$ 873.0	$ 13,142.1	$ 570.8	$ 87.2	$ 1,312.7	$ 6,285.5	$ 960.2	$ 14,454.8
2017	$ 6,308.1	$ 963.2	$ 14,520.6	$ 636.9	$ 97.2	$ 1,466.0	$ 6,945.0	$ 1,060.5	$ 15,986.6
2018	$ 6,831.2	$ 1,041.6	$ 15,737.9	$ 694.7	$ 105.9	$ 1,600.4	$ 7,525.9	$ 1,147.5	$ 17,338.3
2019	$ 7,298.4	$ 1,111.8	$ 16,842.6	$ 745.9	$ 113.6	$ 1,721.4	$ 8,044.4	$ 1,225.4	$ 18,564.0
2020	$ 7,720.0	$ 1,175.5	$ 17,823.5	$ 792.0	$ 120.6	$ 1,828.5	$ 8,512.0	$ 1,296.1	$ 19,652.1
2021	$ 8,103.8	$ 1,232.5	$ 18,710.9	$ 833.8	$ 126.8	$ 1,925.1	$ 8,937.6	$ 1,359.4	$ 20,636.0
2022	$ 8,455.8	$ 1,285.8	$ 19,556.6	$ 871.9	$ 132.6	$ 2,016.6	$ 9,327.8	$ 1,418.4	$ 21,573.2
2023	$ 8,780.9	$ 1,335.5	$ 20,313.4	$ 907.1	$ 138.0	$ 2,098.4	$ 9,688.0	$ 1,473.5	$ 22,411.9
2024	$ 9,083.0	$ 1,380.8	$ 21,020.2	$ 939.7	$ 142.8	$ 2,174.6	$ 10,022.6	$ 1,523.6	$ 23,194.8
2025	$ 9,365.3	$ 1,421.6	$ 21,674.9	$ 970.0	$ 147.2	$ 2,245.0	$ 10,335.3	$ 1,568.8	$ 23,919.9
2026	$ 9,630.6	$ 1,459.8	$ 22,308.1	$ 998.5	$ 151.4	$ 2,312.9	$ 10,629.1	$ 1,611.2	$ 24,621.0
2027	$ 9,881.1	$ 1,496.1	$ 22,923.7	$ 1,025.3	$ 155.2	$ 2,378.7	$ 10,906.4	$ 1,651.3	$ 25,302.4
2028	$ 9,987.8	$ 1,513.6	$ 23,158.2	$ 1,037.1	$ 157.2	$ 2,404.7	$ 11,024.9	$ 1,670.7	$ 25,562.9
2029	$ 10,187.0	$ 1,541.6	$ 23,642.5	$ 1,058.4	$ 160.2	$ 2,456.5	$ 11,245.4	$ 1,701.8	$ 26,098.9
Total	**$ 133,559.8**	**$ 20,312.4**	**$ 308,640.7**	**$ 13,608.4**	**$ 2,069.5**	**$ 31,450.0**	**$ 147,168.2**	**$ 22,381.8**	**$ 340,090.7**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.41b, and E.41c.

Exhibit F.8b Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, Smoking/Lung Cancer Cessation Lag Model (All Water Systems)

TTHM - Alternative 2

	3% Discount Rate			7% Discount Rate		
		90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 408.9	$ 62.6	$ 939.9	$ 338.0	$ 51.7	$ 776.9
2011	$ 1,057.7	$ 161.9	$ 2,432.7	$ 841.5	$ 128.9	$ 1,935.6
2012	$ 1,873.7	$ 286.7	$ 4,304.4	$ 1,435.1	$ 219.6	$ 3,296.7
2013	$ 2,809.8	$ 430.1	$ 6,454.0	$ 2,071.6	$ 317.1	$ 4,758.4
2014	$ 3,536.4	$ 540.6	$ 8,129.4	$ 2,509.8	$ 383.7	$ 5,769.5
2015	$ 4,109.9	$ 628.5	$ 9,452.1	$ 2,807.8	$ 429.3	$ 6,457.5
2016	$ 4,540.7	$ 693.7	$ 10,442.4	$ 2,986.2	$ 456.2	$ 6,867.3
2017	$ 4,871.1	$ 743.8	$ 11,212.7	$ 3,083.7	$ 470.9	$ 7,098.2
2018	$ 5,124.8	$ 781.4	$ 11,806.5	$ 3,123.0	$ 476.2	$ 7,194.8
2019	$ 5,318.3	$ 810.1	$ 12,273.0	$ 3,119.7	$ 475.2	$ 7,199.4
2020	$ 5,463.6	$ 831.9	$ 12,613.9	$ 3,085.2	$ 469.8	$ 7,122.8
2021	$ 5,569.6	$ 847.1	$ 12,859.7	$ 3,027.5	$ 460.5	$ 6,990.1
2022	$ 5,643.5	$ 858.2	$ 13,052.2	$ 2,952.9	$ 449.0	$ 6,829.5
2023	$ 5,690.7	$ 865.5	$ 13,164.6	$ 2,866.3	$ 435.9	$ 6,630.9
2024	$ 5,715.8	$ 868.9	$ 13,227.7	$ 2,771.3	$ 421.3	$ 6,413.6
2025	$ 5,722.4	$ 868.6	$ 13,243.9	$ 2,670.8	$ 405.4	$ 6,181.4
2026	$ 5,713.6	$ 866.1	$ 13,235.0	$ 2,567.1	$ 389.1	$ 5,946.3
2027	$ 5,692.0	$ 861.8	$ 13,205.1	$ 2,461.7	$ 372.7	$ 5,711.1
2028	$ 5,586.2	$ 846.6	$ 12,952.5	$ 2,325.7	$ 352.4	$ 5,392.4
2029	$ 5,532.0	$ 837.2	$ 12,838.9	$ 2,217.0	$ 335.5	$ 5,145.3
Total	**$ 89,980.6**	**$ 13,691.3**	**$ 207,840.7**	**$ 49,261.9**	**$ 7,500.5**	**$ 113,717.7**
Ann.	**$ 5,167.4**	**$ 786.3**	**$ 11,935.8**	**$ 4,227.2**	**$ 643.6**	**$ 9,758.2**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibit F.8a.

Exhibit F.8c Mean Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 3% Discount Rate, by System Size
(All Systems)

TTHM - Alternative 2

Smoking/Lung Cancer Cessation Lag Model										
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.1	$ 0.9	$ 1.2	$ 5.1	$ 12.0	$ 50.0	$ 39.2	$ 166.5	$ 133.9	$ 408.9
2011	$ 0.3	$ 2.4	$ 3.0	$ 13.3	$ 30.9	$ 129.4	$ 101.3	$ 430.6	$ 346.4	$ 1,057.7
2012	$ 0.5	$ 4.3	$ 5.4	$ 23.6	$ 54.8	$ 229.2	$ 179.4	$ 762.8	$ 613.7	$ 1,873.7
2013	$ 0.8	$ 6.4	$ 8.1	$ 35.3	$ 82.2	$ 343.7	$ 269.1	$ 1,144.0	$ 920.3	$ 2,809.8
2014	$ 1.1	$ 8.7	$ 11.0	$ 48.2	$ 112.1	$ 468.7	$ 348.9	$ 1,406.3	$ 1,131.3	$ 3,536.4
2015	$ 1.4	$ 11.2	$ 14.1	$ 61.8	$ 143.8	$ 578.5	$ 406.2	$ 1,603.1	$ 1,289.6	$ 4,109.9
2016	$ 1.7	$ 13.0	$ 16.3	$ 71.4	$ 166.1	$ 657.9	$ 449.6	$ 1,753.9	$ 1,410.9	$ 4,540.7
2017	$ 1.8	$ 14.3	$ 18.0	$ 78.6	$ 182.9	$ 718.1	$ 482.9	$ 1,870.1	$ 1,504.4	$ 4,871.1
2018	$ 1.9	$ 15.3	$ 19.3	$ 84.2	$ 195.7	$ 764.3	$ 508.6	$ 1,959.4	$ 1,576.2	$ 5,124.8
2019	$ 2.0	$ 16.0	$ 20.2	$ 88.4	$ 205.6	$ 799.7	$ 528.1	$ 2,027.3	$ 1,630.9	$ 5,318.3
2020	$ 2.1	$ 16.6	$ 21.0	$ 91.6	$ 213.1	$ 826.5	$ 542.8	$ 2,078.2	$ 1,671.8	$ 5,463.6
2021	$ 2.2	$ 17.1	$ 21.5	$ 94.0	$ 218.6	$ 846.4	$ 553.6	$ 2,114.9	$ 1,701.3	$ 5,569.6
2022	$ 2.2	$ 17.4	$ 21.9	$ 95.8	$ 222.7	$ 860.7	$ 561.1	$ 2,140.1	$ 1,721.6	$ 5,643.5
2023	$ 2.2	$ 17.6	$ 22.2	$ 97.0	$ 225.5	$ 870.3	$ 566.0	$ 2,155.7	$ 1,734.2	$ 5,690.7
2024	$ 2.3	$ 17.7	$ 22.4	$ 97.7	$ 227.2	$ 876.2	$ 568.6	$ 2,163.4	$ 1,740.3	$ 5,715.8
2025	$ 2.3	$ 17.8	$ 22.4	$ 98.1	$ 228.1	$ 878.9	$ 569.4	$ 2,164.3	$ 1,741.1	$ 5,722.4
2026	$ 2.3	$ 17.8	$ 22.5	$ 98.2	$ 228.3	$ 878.9	$ 568.6	$ 2,159.8	$ 1,737.4	$ 5,713.6
2027	$ 2.3	$ 17.8	$ 22.4	$ 98.0	$ 227.9	$ 876.7	$ 566.5	$ 2,150.5	$ 1,729.9	$ 5,692.0
2028	$ 2.2	$ 17.5	$ 22.0	$ 96.3	$ 224.0	$ 861.4	$ 556.0	$ 2,109.7	$ 1,697.1	$ 5,586.2
2029	$ 2.2	$ 17.3	$ 21.9	$ 95.5	$ 222.1	$ 853.9	$ 550.7	$ 2,088.4	$ 1,680.0	$ 5,532.0
Total	**$ 34.1**	**$ 267.1**	**$ 336.8**	**$ 1,472.1**	**$ 3,423.7**	**$ 13,369.3**	**$ 8,916.5**	**$ 34,448.9**	**$ 27,712.2**	**$ 89,980.6**
Ann.	**$ 2.0**	**$ 15.3**	**$ 19.3**	**$ 84.5**	**$ 196.6**	**$ 767.8**	**$ 512.1**	**$ 1,978.3**	**$ 1,591.4**	**$ 5,167.4**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and E.41d.

Exhibit F.8d Mean Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 7% Discount Rate, by System Size
(All Systems)

TTHM - Alternative 2

Smoking/Lung Cancer Cessation Lag Model										
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.1	$ 0.8	$ 1.0	$ 4.3	$ 9.9	$ 41.3	$ 32.4	$ 137.6	$ 110.7	$ 338.0
2011	$ 0.2	$ 1.9	$ 2.4	$ 10.6	$ 24.6	$ 102.9	$ 80.6	$ 342.6	$ 275.6	$ 841.5
2012	$ 0.4	$ 3.3	$ 4.1	$ 18.1	$ 42.0	$ 175.5	$ 137.4	$ 584.3	$ 470.0	$ 1,435.1
2013	$ 0.6	$ 4.7	$ 6.0	$ 26.1	$ 60.6	$ 253.4	$ 198.4	$ 843.4	$ 678.5	$ 2,071.6
2014	$ 0.8	$ 6.2	$ 7.8	$ 34.2	$ 79.6	$ 332.7	$ 247.6	$ 998.1	$ 802.9	$ 2,509.8
2015	$ 1.0	$ 7.7	$ 9.7	$ 42.2	$ 98.3	$ 395.3	$ 277.5	$ 1,095.2	$ 881.0	$ 2,807.8
2016	$ 1.1	$ 8.5	$ 10.7	$ 47.0	$ 109.2	$ 432.7	$ 295.7	$ 1,153.4	$ 927.9	$ 2,986.2
2017	$ 1.2	$ 9.0	$ 11.4	$ 49.8	$ 115.8	$ 454.6	$ 305.7	$ 1,183.8	$ 952.3	$ 3,083.7
2018	$ 1.2	$ 9.3	$ 11.7	$ 51.3	$ 119.3	$ 465.8	$ 309.9	$ 1,194.0	$ 960.5	$ 3,123.0
2019	$ 1.2	$ 9.4	$ 11.9	$ 51.9	$ 120.6	$ 469.1	$ 309.8	$ 1,189.3	$ 956.7	$ 3,119.7
2020	$ 1.2	$ 9.4	$ 11.8	$ 51.7	$ 120.3	$ 466.7	$ 306.5	$ 1,173.5	$ 944.0	$ 3,085.2
2021	$ 1.2	$ 9.3	$ 11.7	$ 51.1	$ 118.8	$ 460.1	$ 300.9	$ 1,149.6	$ 924.8	$ 3,027.5
2022	$ 1.2	$ 9.1	$ 11.5	$ 50.1	$ 116.5	$ 450.3	$ 293.6	$ 1,119.8	$ 900.8	$ 2,952.9
2023	$ 1.1	$ 8.9	$ 11.2	$ 48.8	$ 113.6	$ 438.4	$ 285.1	$ 1,085.8	$ 873.5	$ 2,866.3
2024	$ 1.1	$ 8.6	$ 10.8	$ 47.4	$ 110.2	$ 424.8	$ 275.7	$ 1,048.9	$ 843.8	$ 2,771.3
2025	$ 1.1	$ 8.3	$ 10.5	$ 45.8	$ 106.5	$ 410.2	$ 265.7	$ 1,010.2	$ 812.6	$ 2,670.8
2026	$ 1.0	$ 8.0	$ 10.1	$ 44.1	$ 102.6	$ 394.9	$ 255.5	$ 970.3	$ 780.6	$ 2,567.1
2027	$ 1.0	$ 7.7	$ 9.7	$ 42.4	$ 98.5	$ 379.2	$ 245.0	$ 930.1	$ 748.2	$ 2,461.7
2028	$ 0.9	$ 7.3	$ 9.2	$ 40.1	$ 93.3	$ 358.6	$ 231.5	$ 878.3	$ 706.5	$ 2,325.7
2029	$ 0.9	$ 6.9	$ 8.8	$ 38.3	$ 89.0	$ 342.2	$ 220.7	$ 837.0	$ 673.3	$ 2,217.0
Total	**$ 18.4**	**$ 144.3**	**$ 181.9**	**$ 795.1**	**$ 1,849.1**	**$ 7,248.6**	**$ 4,875.2**	**$ 18,925.2**	**$ 15,224.2**	**$ 49,261.9**
Ann.	**$ 1.6**	**$ 12.4**	**$ 15.6**	**$ 68.2**	**$ 158.7**	**$ 622.0**	**$ 418.3**	**$ 1,624.0**	**$ 1,306.4**	**$ 4,227.2**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and E.41d.

Section F.9
Model Outputs - Alternative 2
TTHM as Indicator
Bronchitis for Non-Fatal Cases

Exhibit F.9a Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases (Smoking/Lung Cancer Cessation Lag Model)

TTHM - Alternative 2

Year	Surface Water Systems			Ground Water Systems			All Systems		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 214.6	$ 47.2	$ 471.9	$ 19.5	$ 4.3	$ 43.0	$ 234.1	$ 51.5	$ 514.9
2011	$ 572.2	$ 125.8	$ 1,260.4	$ 52.1	$ 11.5	$ 114.7	$ 624.3	$ 137.3	$ 1,375.1
2012	$ 1,044.9	$ 229.5	$ 2,299.8	$ 95.1	$ 20.9	$ 209.3	$ 1,139.9	$ 250.4	$ 2,509.1
2013	$ 1,615.1	$ 354.6	$ 3,553.5	$ 147.0	$ 32.3	$ 323.4	$ 1,762.1	$ 386.8	$ 3,876.9
2014	$ 2,088.4	$ 457.6	$ 4,597.3	$ 197.5	$ 43.3	$ 434.8	$ 2,285.9	$ 500.9	$ 5,032.1
2015	$ 2,493.7	$ 545.5	$ 5,498.7	$ 244.7	$ 53.5	$ 539.6	$ 2,738.4	$ 599.0	$ 6,038.3
2016	$ 2,835.4	$ 619.7	$ 6,250.6	$ 283.2	$ 61.9	$ 624.3	$ 3,118.6	$ 681.6	$ 6,874.9
2017	$ 3,132.2	$ 683.7	$ 6,917.7	$ 316.2	$ 69.0	$ 698.4	$ 3,448.5	$ 752.8	$ 7,616.1
2018	$ 3,394.7	$ 739.2	$ 7,499.7	$ 345.2	$ 75.2	$ 762.6	$ 3,739.8	$ 814.4	$ 8,262.3
2019	$ 3,629.7	$ 789.1	$ 8,037.5	$ 371.0	$ 80.7	$ 821.5	$ 4,000.7	$ 869.8	$ 8,859.0
2020	$ 3,842.5	$ 834.0	$ 8,515.5	$ 394.2	$ 85.6	$ 873.6	$ 4,236.7	$ 919.6	$ 9,389.1
2021	$ 4,036.8	$ 875.0	$ 8,956.9	$ 415.3	$ 90.0	$ 921.5	$ 4,452.1	$ 965.1	$ 9,878.4
2022	$ 4,215.6	$ 912.0	$ 9,372.2	$ 434.7	$ 94.0	$ 966.4	$ 4,650.3	$ 1,006.1	$ 10,338.7
2023	$ 4,381.4	$ 945.3	$ 9,741.9	$ 452.6	$ 97.7	$ 1,006.4	$ 4,834.0	$ 1,043.0	$ 10,748.2
2024	$ 4,535.9	$ 977.8	$ 10,090.5	$ 469.3	$ 101.2	$ 1,043.9	$ 5,005.2	$ 1,079.0	$ 11,134.4
2025	$ 4,680.9	$ 1,006.9	$ 10,419.6	$ 484.8	$ 104.3	$ 1,079.2	$ 5,165.7	$ 1,111.2	$ 11,498.9
2026	$ 4,817.7	$ 1,035.0	$ 10,727.2	$ 499.5	$ 107.3	$ 1,112.2	$ 5,317.2	$ 1,142.4	$ 11,839.4
2027	$ 4,947.3	$ 1,061.1	$ 11,043.6	$ 513.4	$ 110.1	$ 1,145.9	$ 5,460.7	$ 1,171.2	$ 12,189.5
2028	$ 4,999.2	$ 1,072.8	$ 11,149.3	$ 519.1	$ 111.4	$ 1,157.7	$ 5,518.3	$ 1,184.2	$ 12,307.1
2029	$ 5,102.3	$ 1,093.6	$ 11,399.2	$ 530.1	$ 113.6	$ 1,184.4	$ 5,632.4	$ 1,207.2	$ 12,583.5
Total	**$ 66,580.4**	**$ 14,405.8**	**$ 147,803.0**	**$ 6,784.6**	**$ 1,467.7**	**$ 15,062.9**	**$ 73,364.9**	**$ 15,873.4**	**$ 162,865.9**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.41b, and E.41c.

Exhibit F.9b Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, Smoking/Lung Cancer Cessation Lag Model
(All Water Systems)

TTHM - Alternative 2

	3% Discount Rate			7% Discount Rate		
		90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 202.0	$ 44.5	$ 444.1	$ 166.9	$ 36.8	$ 367.1
2011	$ 522.8	$ 115.0	$ 1,151.6	$ 416.0	$ 91.5	$ 916.3
2012	$ 926.9	$ 203.6	$ 2,040.1	$ 709.9	$ 155.9	$ 1,562.6
2013	$ 1,391.0	$ 305.4	$ 3,060.4	$ 1,025.5	$ 225.1	$ 2,256.4
2014	$ 1,752.0	$ 383.9	$ 3,856.7	$ 1,243.4	$ 272.5	$ 2,737.1
2015	$ 2,037.6	$ 445.7	$ 4,493.1	$ 1,392.1	$ 304.5	$ 3,069.6
2016	$ 2,252.9	$ 492.4	$ 4,966.6	$ 1,481.6	$ 323.8	$ 3,266.2
2017	$ 2,418.7	$ 528.0	$ 5,341.8	$ 1,531.2	$ 334.2	$ 3,381.6
2018	$ 2,546.7	$ 554.6	$ 5,626.3	$ 1,551.9	$ 338.0	$ 3,428.6
2019	$ 2,644.9	$ 575.0	$ 5,856.9	$ 1,551.5	$ 337.3	$ 3,435.7
2020	$ 2,719.4	$ 590.2	$ 6,026.5	$ 1,535.6	$ 333.3	$ 3,403.0
2021	$ 2,774.4	$ 601.4	$ 6,155.9	$ 1,508.1	$ 326.9	$ 3,346.2
2022	$ 2,813.5	$ 608.7	$ 6,255.1	$ 1,472.2	$ 318.5	$ 3,273.0
2023	$ 2,839.4	$ 612.6	$ 6,313.5	$ 1,430.2	$ 308.6	$ 3,180.0
2024	$ 2,854.4	$ 615.3	$ 6,349.8	$ 1,384.0	$ 298.3	$ 3,078.8
2025	$ 2,860.1	$ 615.3	$ 6,366.6	$ 1,334.9	$ 287.2	$ 2,971.5
2026	$ 2,858.2	$ 614.1	$ 6,364.3	$ 1,284.2	$ 275.9	$ 2,859.4
2027	$ 2,849.9	$ 611.2	$ 6,361.6	$ 1,232.6	$ 264.4	$ 2,751.3
2028	$ 2,796.1	$ 600.0	$ 6,235.9	$ 1,164.1	$ 249.8	$ 2,596.1
2029	$ 2,770.8	$ 593.9	$ 6,190.3	$ 1,110.4	$ 238.0	$ 2,480.8
Total	**$ 44,831.7**	**$ 9,710.8**	**$ 99,456.9**	**$ 24,526.1**	**$ 5,320.4**	**$ 54,361.2**
Ann.	**$ 2,574.6**	**$ 557.7**	**$ 5,711.6**	**$ 2,104.6**	**$ 456.5**	**$ 4,664.8**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibit F.9a.

Exhibit F.9c Mean Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, at 3% Discount Rate, by System Size
(All Systems)

TTHM - Alternative 2

Smoking/Lung Cancer Cessation Lag Model										
Year	**<100**	**100-499**	**500-999**	**1,000-3,299**	**3,300-9,999**	**10,000-49,999**	**50,000-99,999**	**100,000-999,999**	**≥1,000,000**	**Total**
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.1	$ 0.5	$ 0.6	$ 2.5	$ 5.9	$ 24.7	$ 19.3	$ 82.2	$ 66.1	$ 202.0
2011	$ 0.2	$ 1.2	$ 1.5	$ 6.6	$ 15.3	$ 63.9	$ 50.1	$ 212.9	$ 171.2	$ 522.8
2012	$ 0.3	$ 2.1	$ 2.7	$ 11.7	$ 27.1	$ 113.4	$ 88.8	$ 377.4	$ 303.6	$ 926.9
2013	$ 0.4	$ 3.2	$ 4.0	$ 17.5	$ 40.7	$ 170.1	$ 133.2	$ 566.3	$ 455.6	$ 1,391.0
2014	$ 0.6	$ 4.3	$ 5.5	$ 23.9	$ 55.5	$ 232.2	$ 172.8	$ 696.7	$ 560.4	$ 1,752.0
2015	$ 0.7	$ 5.6	$ 7.0	$ 30.7	$ 71.3	$ 286.8	$ 201.4	$ 794.8	$ 639.4	$ 2,037.6
2016	$ 0.8	$ 6.4	$ 8.1	$ 35.4	$ 82.4	$ 326.4	$ 223.1	$ 870.2	$ 700.0	$ 2,252.9
2017	$ 0.9	$ 7.1	$ 8.9	$ 39.0	$ 90.8	$ 356.6	$ 239.8	$ 928.6	$ 747.0	$ 2,418.7
2018	$ 1.0	$ 7.6	$ 9.6	$ 41.8	$ 97.3	$ 379.8	$ 252.7	$ 973.7	$ 783.3	$ 2,546.7
2019	$ 1.0	$ 8.0	$ 10.1	$ 44.0	$ 102.2	$ 397.7	$ 262.7	$ 1,008.2	$ 811.1	$ 2,644.9
2020	$ 1.1	$ 8.3	$ 10.4	$ 45.6	$ 106.0	$ 411.3	$ 270.2	$ 1,034.4	$ 832.1	$ 2,719.4
2021	$ 1.1	$ 8.5	$ 10.7	$ 46.8	$ 108.9	$ 421.6	$ 275.8	$ 1,053.5	$ 847.5	$ 2,774.4
2022	$ 1.1	$ 8.7	$ 10.9	$ 47.7	$ 111.0	$ 429.1	$ 279.8	$ 1,067.0	$ 858.3	$ 2,813.5
2023	$ 1.1	$ 8.8	$ 11.1	$ 48.4	$ 112.5	$ 434.3	$ 282.4	$ 1,075.6	$ 865.3	$ 2,839.4
2024	$ 1.1	$ 8.9	$ 11.2	$ 48.8	$ 113.5	$ 437.6	$ 283.9	$ 1,080.4	$ 869.1	$ 2,854.4
2025	$ 1.1	$ 8.9	$ 11.2	$ 49.0	$ 114.0	$ 439.3	$ 284.6	$ 1,081.8	$ 870.2	$ 2,860.1
2026	$ 1.1	$ 8.9	$ 11.2	$ 49.1	$ 114.2	$ 439.7	$ 284.4	$ 1,080.4	$ 869.1	$ 2,858.2
2027	$ 1.1	$ 8.9	$ 11.2	$ 49.1	$ 114.1	$ 439.0	$ 283.6	$ 1,076.7	$ 866.2	$ 2,849.9
2028	$ 1.1	$ 8.7	$ 11.0	$ 48.2	$ 112.1	$ 431.2	$ 278.3	$ 1,055.9	$ 849.4	$ 2,796.1
2029	$ 1.1	$ 8.7	$ 10.9	$ 47.8	$ 111.3	$ 427.7	$ 275.8	$ 1,046.0	$ 841.5	$ 2,770.8
Total	**$ 17.0**	**$ 133.1**	**$ 167.8**	**$ 733.7**	**$ 1,706.2**	**$ 6,662.3**	**$ 4,442.7**	**$ 17,162.6**	**$ 13,806.3**	**$ 44,831.7**
Ann.	**$ 1.0**	**$ 7.6**	**$ 9.6**	**$ 42.1**	**$ 98.0**	**$ 382.6**	**$ 255.1**	**$ 985.6**	**$ 792.9**	**$ 2,574.6**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and E.41d.

Exhibit F.9d Mean Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, at 7% Discount Rate, by System Size
(All Systems)

TTHM - Alternative 2

Smoking/Lung Cancer Cessation Lag Model										
Year	**<100**	**100-499**	**500-999**	**1,000-3,299**	**3,300-9,999**	**10,000-49,999**	**50,000-99,999**	**100,000-999,999**	**≥1,000,000**	**Total**
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.4	$ 0.5	$ 2.1	$ 4.9	$ 20.4	$ 16.0	$ 68.0	$ 54.7	$ 166.9
2011	$ 0.1	$ 0.9	$ 1.2	$ 5.2	$ 12.2	$ 50.9	$ 39.8	$ 169.4	$ 136.2	$ 416.0
2012	$ 0.2	$ 1.6	$ 2.0	$ 8.9	$ 20.8	$ 86.8	$ 68.0	$ 289.0	$ 232.5	$ 709.9
2013	$ 0.3	$ 2.3	$ 3.0	$ 12.9	$ 30.0	$ 125.4	$ 98.2	$ 417.5	$ 335.9	$ 1,025.5
2014	$ 0.4	$ 3.1	$ 3.9	$ 17.0	$ 39.4	$ 164.8	$ 122.7	$ 494.4	$ 397.8	$ 1,243.4
2015	$ 0.5	$ 3.8	$ 4.8	$ 20.9	$ 48.7	$ 196.0	$ 137.6	$ 543.0	$ 436.8	$ 1,392.1
2016	$ 0.5	$ 4.2	$ 5.3	$ 23.3	$ 54.2	$ 214.7	$ 146.7	$ 572.3	$ 460.4	$ 1,481.6
2017	$ 0.6	$ 4.5	$ 5.7	$ 24.7	$ 57.5	$ 225.7	$ 151.8	$ 587.8	$ 472.9	$ 1,531.2
2018	$ 0.6	$ 4.6	$ 5.8	$ 25.5	$ 59.3	$ 231.5	$ 154.0	$ 593.3	$ 477.3	$ 1,551.9
2019	$ 0.6	$ 4.7	$ 5.9	$ 25.8	$ 60.0	$ 233.3	$ 154.1	$ 591.4	$ 475.8	$ 1,551.5
2020	$ 0.6	$ 4.7	$ 5.9	$ 25.7	$ 59.9	$ 232.3	$ 152.6	$ 584.1	$ 469.9	$ 1,535.6
2021	$ 0.6	$ 4.6	$ 5.8	$ 25.5	$ 59.2	$ 229.2	$ 149.9	$ 572.7	$ 460.7	$ 1,508.1
2022	$ 0.6	$ 4.5	$ 5.7	$ 25.0	$ 58.1	$ 224.5	$ 146.4	$ 558.3	$ 449.1	$ 1,472.2
2023	$ 0.6	$ 4.4	$ 5.6	$ 24.4	$ 56.7	$ 218.7	$ 142.2	$ 541.8	$ 435.8	$ 1,430.2
2024	$ 0.5	$ 4.3	$ 5.4	$ 23.7	$ 55.0	$ 212.2	$ 137.7	$ 523.8	$ 421.4	$ 1,384.0
2025	$ 0.5	$ 4.2	$ 5.2	$ 22.9	$ 53.2	$ 205.0	$ 132.8	$ 504.9	$ 406.2	$ 1,334.9
2026	$ 0.5	$ 4.0	$ 5.0	$ 22.1	$ 51.3	$ 197.5	$ 127.8	$ 485.4	$ 390.5	$ 1,284.2
2027	$ 0.5	$ 3.8	$ 4.9	$ 21.2	$ 49.3	$ 189.9	$ 122.7	$ 465.7	$ 374.6	$ 1,232.6
2028	$ 0.5	$ 3.6	$ 4.6	$ 20.1	$ 46.7	$ 179.5	$ 115.9	$ 439.6	$ 353.6	$ 1,164.1
2029	$ 0.4	$ 3.5	$ 4.4	$ 19.2	$ 44.6	$ 171.4	$ 110.5	$ 419.2	$ 337.2	$ 1,110.4
Total	**$ 9.2**	**$ 71.8**	**$ 90.6**	**$ 396.0**	**$ 920.9**	**$ 3,609.6**	**$ 2,427.3**	**$ 9,421.6**	**$ 7,579.2**	**$ 24,526.1**
Ann.	**$ 0.8**	**$ 6.2**	**$ 7.8**	**$ 34.0**	**$ 79.0**	**$ 309.7**	**$ 208.3**	**$ 808.5**	**$ 650.4**	**$ 2,104.6**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and E.41d.

Section F.10
Model Outputs - Alternative 3
TTHM as Indicator
Lymphoma for Non-Fatal Cases

Exhibit F.10a Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Smoking/Lung Cancer Cessation Lag Model)

TTHM - Alternative 3

Year	Surface Water Systems			Ground Water Systems			All Systems		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 593.4	$ 90.8	$ 1,364.1	$ 61.0	$ 9.3	$ 140.1	$ 654.3	$ 100.2	$ 1,504.2
2011	$ 1,580.3	$ 242.0	$ 3,634.9	$ 162.3	$ 24.9	$ 373.4	$ 1,742.7	$ 266.8	$ 4,008.3
2012	$ 2,882.9	$ 441.2	$ 6,622.7	$ 296.2	$ 45.3	$ 680.4	$ 3,179.0	$ 486.5	$ 7,303.0
2013	$ 4,452.1	$ 681.5	$ 10,226.2	$ 457.4	$ 70.0	$ 1,050.5	$ 4,909.4	$ 751.5	$ 11,276.7
2014	$ 5,751.2	$ 879.2	$ 13,220.8	$ 614.0	$ 93.9	$ 1,411.4	$ 6,365.2	$ 973.1	$ 14,632.2
2015	$ 6,861.0	$ 1,049.1	$ 15,779.2	$ 759.9	$ 116.2	$ 1,747.6	$ 7,620.9	$ 1,165.3	$ 17,526.7
2016	$ 7,794.1	$ 1,190.7	$ 17,924.3	$ 878.6	$ 134.2	$ 2,020.6	$ 8,672.8	$ 1,324.9	$ 19,944.9
2017	$ 8,602.7	$ 1,313.6	$ 19,802.4	$ 980.2	$ 149.7	$ 2,256.3	$ 9,582.9	$ 1,463.3	$ 22,058.8
2018	$ 9,315.4	$ 1,420.4	$ 21,460.9	$ 1,069.0	$ 163.0	$ 2,462.8	$ 10,384.4	$ 1,583.4	$ 23,923.8
2019	$ 9,951.8	$ 1,516.0	$ 22,965.9	$ 1,147.9	$ 174.9	$ 2,648.9	$ 11,099.7	$ 1,690.8	$ 25,614.8
2020	$ 10,526.2	$ 1,602.8	$ 24,302.3	$ 1,218.7	$ 185.6	$ 2,813.6	$ 11,744.9	$ 1,788.4	$ 27,115.8
2021	$ 11,049.1	$ 1,680.5	$ 25,511.1	$ 1,282.9	$ 195.1	$ 2,962.0	$ 12,331.9	$ 1,875.6	$ 28,473.1
2022	$ 11,528.6	$ 1,753.1	$ 26,663.3	$ 1,341.5	$ 204.0	$ 3,102.7	$ 12,870.1	$ 1,957.1	$ 29,766.0
2023	$ 11,971.4	$ 1,820.8	$ 27,694.3	$ 1,395.6	$ 212.3	$ 3,228.4	$ 13,367.0	$ 2,033.0	$ 30,922.8
2024	$ 12,383.0	$ 1,882.4	$ 28,657.2	$ 1,445.6	$ 219.8	$ 3,345.5	$ 13,828.6	$ 2,102.2	$ 32,002.7
2025	$ 12,767.6	$ 1,938.0	$ 29,549.1	$ 1,492.3	$ 226.5	$ 3,453.7	$ 14,259.9	$ 2,164.5	$ 33,002.9
2026	$ 13,129.0	$ 1,990.2	$ 30,411.8	$ 1,536.1	$ 232.8	$ 3,558.1	$ 14,665.1	$ 2,223.0	$ 33,969.9
2027	$ 13,470.3	$ 2,039.5	$ 31,250.5	$ 1,577.3	$ 238.8	$ 3,659.2	$ 15,047.6	$ 2,278.3	$ 34,909.8
2028	$ 13,615.6	$ 2,063.3	$ 31,569.8	$ 1,595.4	$ 241.8	$ 3,699.2	$ 15,211.0	$ 2,305.1	$ 35,269.1
2029	$ 13,887.0	$ 2,101.6	$ 32,229.6	$ 1,628.2	$ 246.4	$ 3,778.8	$ 15,515.2	$ 2,348.0	$ 36,008.3
Total	**$ 182,112.8**	**$ 27,696.6**	**$ 420,840.5**	**$ 20,939.8**	**$ 3,184.4**	**$ 48,393.3**	**$ 203,052.6**	**$ 30,880.9**	**$ 469,233.7**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.42b, and E.42c.

Exhibit F.10b Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, Smoking/Lung Cancer Cessation Lag Model
(All Water Systems)

TTHM - Alternative 3

	3% Discount Rate			7% Discount Rate		
		90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 564.4	$ 86.4	$ 1,297.6	$ 466.5	$ 71.4	$ 1,072.5
2011	$ 1,459.5	$ 223.5	$ 3,356.9	$ 1,161.2	$ 177.8	$ 2,670.9
2012	$ 2,584.8	$ 395.6	$ 5,938.0	$ 1,979.7	$ 303.0	$ 4,548.0
2013	$ 3,875.6	$ 593.2	$ 8,901.9	$ 2,857.3	$ 437.4	$ 6,563.1
2014	$ 4,878.4	$ 745.8	$ 11,214.4	$ 3,462.2	$ 529.3	$ 7,959.0
2015	$ 5,670.7	$ 867.1	$ 13,041.5	$ 3,874.1	$ 592.4	$ 8,909.7
2016	$ 6,265.4	$ 957.1	$ 14,408.6	$ 4,120.4	$ 629.4	$ 9,475.7
2017	$ 6,721.2	$ 1,026.3	$ 15,471.6	$ 4,254.9	$ 649.7	$ 9,794.3
2018	$ 7,071.3	$ 1,078.2	$ 16,290.9	$ 4,309.2	$ 657.1	$ 9,927.5
2019	$ 7,338.2	$ 1,117.8	$ 16,934.4	$ 4,304.7	$ 655.7	$ 9,933.8
2020	$ 7,538.6	$ 1,147.9	$ 17,404.6	$ 4,256.9	$ 648.2	$ 9,828.0
2021	$ 7,684.9	$ 1,168.8	$ 17,743.5	$ 4,177.3	$ 635.3	$ 9,644.8
2022	$ 7,786.6	$ 1,184.1	$ 18,008.9	$ 4,074.4	$ 619.6	$ 9,423.1
2023	$ 7,851.7	$ 1,194.2	$ 18,163.9	$ 3,954.8	$ 601.5	$ 9,148.9
2024	$ 7,886.2	$ 1,198.8	$ 18,250.7	$ 3,823.7	$ 581.3	$ 8,849.0
2025	$ 7,895.3	$ 1,198.4	$ 18,272.9	$ 3,685.0	$ 559.3	$ 8,528.6
2026	$ 7,883.2	$ 1,195.0	$ 18,260.5	$ 3,541.8	$ 536.9	$ 8,204.2
2027	$ 7,853.2	$ 1,189.1	$ 18,219.1	$ 3,396.4	$ 514.3	$ 7,879.6
2028	$ 7,707.3	$ 1,168.0	$ 17,870.5	$ 3,208.7	$ 486.3	$ 7,439.9
2029	$ 7,632.4	$ 1,155.1	$ 17,713.7	$ 3,058.8	$ 462.9	$ 7,098.9
Total	**$ 124,149.0**	**$ 18,890.3**	**$ 286,764.2**	**$ 67,968.0**	**$ 10,348.6**	**$ 156,899.6**
Ann.	**$ 7,129.6**	**$ 1,084.8**	**$ 16,468.3**	**$ 5,832.4**	**$ 888.0**	**$ 13,463.6**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibit F.10a.

Exhibit F.10c Mean Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 3% Discount Rate, by System Size
(All Systems)

TTHM - Alternative 3

Smoking/Lung Cancer Cessation Lag Model										
Year	**<100**	**100-499**	**500-999**	**1,000-3,299**	**3,300-9,999**	**10,000-49,999**	**50,000-99,999**	**100,000-999,999**	**≥1,000,000**	**Total**
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.2	$ 1.4	$ 1.7	$ 7.4	$ 16.9	$ 70.0	$ 54.2	$ 229.4	$ 183.2	$ 564.4
2011	$ 0.5	$ 3.6	$ 4.5	$ 19.1	$ 43.7	$ 181.1	$ 140.2	$ 593.1	$ 473.8	$ 1,459.5
2012	$ 0.8	$ 6.3	$ 7.9	$ 33.8	$ 77.4	$ 320.8	$ 248.3	$ 1,050.5	$ 839.1	$ 2,584.8
2013	$ 1.2	$ 9.5	$ 11.8	$ 50.7	$ 116.0	$ 480.9	$ 372.2	$ 1,575.0	$ 1,258.2	$ 3,875.6
2014	$ 1.7	$ 13.0	$ 16.2	$ 69.1	$ 158.2	$ 655.8	$ 482.5	$ 1,935.7	$ 1,546.3	$ 4,878.4
2015	$ 2.1	$ 16.6	$ 20.7	$ 88.6	$ 202.9	$ 809.4	$ 561.6	$ 2,206.2	$ 1,762.4	$ 5,670.7
2016	$ 2.5	$ 19.2	$ 23.9	$ 102.3	$ 234.3	$ 920.3	$ 621.6	$ 2,413.4	$ 1,927.9	$ 6,265.4
2017	$ 2.7	$ 21.2	$ 26.3	$ 112.7	$ 257.9	$ 1,004.4	$ 667.6	$ 2,573.0	$ 2,055.4	$ 6,721.2
2018	$ 2.9	$ 22.6	$ 28.2	$ 120.6	$ 276.0	$ 1,068.9	$ 703.0	$ 2,695.7	$ 2,153.4	$ 7,071.3
2019	$ 3.0	$ 23.8	$ 29.6	$ 126.6	$ 289.9	$ 1,118.2	$ 730.0	$ 2,789.1	$ 2,228.0	$ 7,338.2
2020	$ 3.2	$ 24.7	$ 30.7	$ 131.2	$ 300.4	$ 1,155.6	$ 750.3	$ 2,858.8	$ 2,283.7	$ 7,538.6
2021	$ 3.2	$ 25.3	$ 31.5	$ 134.7	$ 308.3	$ 1,183.4	$ 765.1	$ 2,909.3	$ 2,324.0	$ 7,684.9
2022	$ 3.3	$ 25.8	$ 32.1	$ 137.2	$ 314.0	$ 1,203.4	$ 775.5	$ 2,943.9	$ 2,351.6	$ 7,786.6
2023	$ 3.3	$ 26.1	$ 32.5	$ 138.9	$ 317.9	$ 1,216.9	$ 782.2	$ 2,965.3	$ 2,368.7	$ 7,851.7
2024	$ 3.4	$ 26.3	$ 32.7	$ 140.0	$ 320.4	$ 1,225.0	$ 785.8	$ 2,975.7	$ 2,377.1	$ 7,886.2
2025	$ 3.4	$ 26.4	$ 32.9	$ 140.5	$ 321.6	$ 1,228.8	$ 786.8	$ 2,977.0	$ 2,378.1	$ 7,895.3
2026	$ 3.4	$ 26.4	$ 32.9	$ 140.6	$ 321.8	$ 1,228.8	$ 785.7	$ 2,970.6	$ 2,373.0	$ 7,883.2
2027	$ 3.4	$ 26.4	$ 32.8	$ 140.3	$ 321.2	$ 1,225.7	$ 782.8	$ 2,957.8	$ 2,362.8	$ 7,853.2
2028	$ 3.3	$ 25.9	$ 32.3	$ 137.9	$ 315.7	$ 1,204.3	$ 768.3	$ 2,901.6	$ 2,317.9	$ 7,707.3
2029	$ 3.3	$ 25.7	$ 32.0	$ 136.8	$ 313.1	$ 1,193.7	$ 761.0	$ 2,872.4	$ 2,294.5	$ 7,632.4
Total	**$ 50.8**	**$ 396.2**	**$ 493.1**	**$ 2,109.0**	**$ 4,827.4**	**$ 18,695.4**	**$12,324.6**	**$ 47,393.3**	**$ 37,859.3**	**$124,149.0**
Ann.	**$ 2.9**	**$ 22.8**	**$ 28.3**	**$ 121.1**	**$ 277.2**	**$ 1,073.6**	**$ 707.8**	**$ 2,721.7**	**$ 2,174.2**	**$ 7,129.6**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and E.42d.

Exhibit F.10d Mean Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 7% Discount Rate, by System Size
(All Systems)

TTHM - Alternative 3

Smoking/Lung Cancer Cessation Lag Model										
Year	**<100**	**100-499**	**500-999**	**1,000-3,299**	**3,300-9,999**	**10,000-49,999**	**50,000-99,999**	**100,000-999,999**	**≥1,000,000**	**Total**
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.1	$ 1.1	$ 1.4	$ 6.1	$ 14.0	$ 57.9	$ 44.8	$ 189.6	$ 151.5	$ 466.5
2011	$ 0.4	$ 2.9	$ 3.6	$ 15.2	$ 34.8	$ 144.1	$ 111.5	$ 471.9	$ 377.0	$ 1,161.2
2012	$ 0.6	$ 4.9	$ 6.1	$ 25.9	$ 59.3	$ 245.7	$ 190.1	$ 804.6	$ 642.7	$ 1,979.7
2013	$ 0.9	$ 7.0	$ 8.7	$ 37.4	$ 85.5	$ 354.6	$ 274.4	$ 1,161.2	$ 927.6	$ 2,857.3
2014	$ 1.2	$ 9.2	$ 11.5	$ 49.0	$ 112.3	$ 465.5	$ 342.4	$ 1,373.8	$ 1,097.4	$ 3,462.2
2015	$ 1.5	$ 11.4	$ 14.2	$ 60.6	$ 138.6	$ 553.0	$ 383.7	$ 1,507.2	$ 1,204.0	$ 3,874.1
2016	$ 1.6	$ 12.6	$ 15.7	$ 67.3	$ 154.1	$ 605.2	$ 408.8	$ 1,587.2	$ 1,267.9	$ 4,120.4
2017	$ 1.7	$ 13.4	$ 16.7	$ 71.3	$ 163.3	$ 635.8	$ 422.6	$ 1,628.9	$ 1,301.2	$ 4,254.9
2018	$ 1.8	$ 13.8	$ 17.2	$ 73.5	$ 168.2	$ 651.4	$ 428.4	$ 1,642.7	$ 1,312.3	$ 4,309.2
2019	$ 1.8	$ 14.0	$ 17.4	$ 74.3	$ 170.0	$ 656.0	$ 428.2	$ 1,636.1	$ 1,307.0	$ 4,304.7
2020	$ 1.8	$ 13.9	$ 17.3	$ 74.1	$ 169.6	$ 652.6	$ 423.7	$ 1,614.3	$ 1,289.6	$ 4,256.9
2021	$ 1.8	$ 13.8	$ 17.1	$ 73.2	$ 167.6	$ 643.3	$ 415.9	$ 1,581.4	$ 1,263.3	$ 4,177.3
2022	$ 1.7	$ 13.5	$ 16.8	$ 71.8	$ 164.3	$ 629.7	$ 405.8	$ 1,540.4	$ 1,230.5	$ 4,074.4
2023	$ 1.7	$ 13.1	$ 16.4	$ 70.0	$ 160.1	$ 612.9	$ 394.0	$ 1,493.6	$ 1,193.1	$ 3,954.8
2024	$ 1.6	$ 12.7	$ 15.9	$ 67.9	$ 155.3	$ 594.0	$ 381.0	$ 1,442.8	$ 1,152.5	$ 3,823.7
2025	$ 1.6	$ 12.3	$ 15.3	$ 65.6	$ 150.1	$ 573.5	$ 367.2	$ 1,389.5	$ 1,109.9	$ 3,685.0
2026	$ 1.5	$ 11.9	$ 14.8	$ 63.2	$ 144.6	$ 552.1	$ 353.0	$ 1,334.6	$ 1,066.2	$ 3,541.8
2027	$ 1.5	$ 11.4	$ 14.2	$ 60.7	$ 138.9	$ 530.1	$ 338.6	$ 1,279.2	$ 1,021.9	$ 3,396.4
2028	$ 1.4	$ 10.8	$ 13.4	$ 57.4	$ 131.5	$ 501.4	$ 319.9	$ 1,208.0	$ 965.0	$ 3,208.7
2029	$ 1.3	$ 10.3	$ 12.8	$ 54.8	$ 125.5	$ 478.4	$ 305.0	$ 1,151.1	$ 919.6	$ 3,058.8
Total	**$ 27.4**	**$ 214.0**	**$ 266.4**	**$ 1,139.1**	**$ 2,607.4**	**$ 10,136.8**	**$ 6,739.0**	**$ 26,038.0**	**$ 20,800.0**	**$ 67,968.0**
Ann.	**$ 2.4**	**$ 18.4**	**$ 22.9**	**$ 97.7**	**$ 223.7**	**$ 869.8**	**$ 578.3**	**$ 2,234.3**	**$ 1,784.9**	**$ 5,832.4**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and E.42d.

Section F.11
Model Outputs - Alternative 3
TTHM as Indicator
Bronchitis for Non-Fatal Cases

Exhibit F.11a Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases (Smoking/Lung Cancer Cessation Lag Model)

TTHM - Alternative 3

Year	Surface Water Systems			Ground Water Systems			All Systems		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 293.1	$ 64.5	$ 644.6	$ 30.1	$ 6.6	$ 66.2	$ 323.2	$ 71.2	$ 710.8
2011	$ 781.2	$ 171.8	$ 1,720.7	$ 80.3	$ 17.6	$ 176.8	$ 861.4	$ 189.5	$ 1,897.5
2012	$ 1,426.1	$ 313.2	$ 3,139.0	$ 146.5	$ 32.2	$ 322.5	$ 1,572.6	$ 345.4	$ 3,461.4
2013	$ 2,204.0	$ 483.9	$ 4,849.2	$ 226.4	$ 49.7	$ 498.2	$ 2,430.4	$ 533.6	$ 5,347.3
2014	$ 2,849.2	$ 624.4	$ 6,272.1	$ 304.2	$ 66.7	$ 669.6	$ 3,153.4	$ 691.0	$ 6,941.7
2015	$ 3,401.6	$ 744.1	$ 7,500.7	$ 376.7	$ 82.4	$ 830.7	$ 3,778.3	$ 826.5	$ 8,331.4
2016	$ 3,867.1	$ 845.2	$ 8,525.1	$ 435.9	$ 95.3	$ 961.0	$ 4,303.0	$ 940.5	$ 9,486.1
2017	$ 4,271.6	$ 932.4	$ 9,434.0	$ 486.7	$ 106.2	$ 1,074.9	$ 4,758.3	$ 1,038.7	$ 10,508.9
2018	$ 4,629.1	$ 1,008.1	$ 10,226.9	$ 531.2	$ 115.7	$ 1,173.6	$ 5,160.3	$ 1,123.7	$ 11,400.6
2019	$ 4,949.3	$ 1,076.0	$ 10,959.7	$ 570.9	$ 124.1	$ 1,264.1	$ 5,520.2	$ 1,200.1	$ 12,223.8
2020	$ 5,239.2	$ 1,137.1	$ 11,610.8	$ 606.6	$ 131.7	$ 1,344.2	$ 5,845.7	$ 1,268.8	$ 12,955.0
2021	$ 5,503.9	$ 1,193.1	$ 12,212.1	$ 639.0	$ 138.5	$ 1,417.9	$ 6,143.0	$ 1,331.6	$ 13,630.0
2022	$ 5,747.6	$ 1,243.5	$ 12,778.0	$ 668.8	$ 144.7	$ 1,486.9	$ 6,416.4	$ 1,388.1	$ 14,264.9
2023	$ 5,973.3	$ 1,288.8	$ 13,281.6	$ 696.3	$ 150.2	$ 1,548.3	$ 6,669.7	$ 1,439.0	$ 14,829.9
2024	$ 6,183.9	$ 1,333.1	$ 13,756.6	$ 721.9	$ 155.6	$ 1,606.0	$ 6,905.8	$ 1,488.7	$ 15,362.5
2025	$ 6,381.4	$ 1,372.8	$ 14,205.0	$ 745.9	$ 160.4	$ 1,660.3	$ 7,127.3	$ 1,533.2	$ 15,865.3
2026	$ 6,567.8	$ 1,411.0	$ 14,624.0	$ 768.4	$ 165.1	$ 1,711.0	$ 7,336.2	$ 1,576.1	$ 16,335.0
2027	$ 6,744.4	$ 1,446.5	$ 15,055.0	$ 789.7	$ 169.4	$ 1,762.8	$ 7,534.2	$ 1,615.9	$ 16,817.9
2028	$ 6,815.0	$ 1,462.5	$ 15,199.0	$ 798.6	$ 171.4	$ 1,781.0	$ 7,613.6	$ 1,633.9	$ 16,980.0
2029	$ 6,955.4	$ 1,490.8	$ 15,539.4	$ 815.5	$ 174.8	$ 1,821.9	$ 7,770.9	$ 1,665.5	$ 17,361.4
Total	**$ 90,784.2**	**$ 19,642.7**	**$ 201,533.3**	**$ 10,439.6**	**$ 2,258.3**	**$ 23,177.8**	**$ 101,223.9**	**$ 21,901.0**	**$ 224,711.2**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.42b, and E.42c.

Exhibit F.11b Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, Smoking/Lung Cancer Cessation Lag Model
(All Water Systems)

TTHM - Alternative 3

	3% Discount Rate			7% Discount Rate		
		90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 278.8	$ 61.4	$ 613.1	$ 230.5	$ 50.7	$ 506.8
2011	$ 721.4	$ 158.7	$ 1,589.1	$ 574.0	$ 126.2	$ 1,264.4
2012	$ 1,278.7	$ 280.8	$ 2,814.5	$ 979.3	$ 215.1	$ 2,155.6
2013	$ 1,918.6	$ 421.2	$ 4,221.2	$ 1,414.5	$ 310.5	$ 3,112.2
2014	$ 2,416.8	$ 529.6	$ 5,320.2	$ 1,715.2	$ 375.9	$ 3,775.8
2015	$ 2,811.4	$ 615.0	$ 6,199.3	$ 1,920.7	$ 420.1	$ 4,235.3
2016	$ 3,108.6	$ 679.4	$ 6,853.0	$ 2,044.3	$ 446.8	$ 4,506.8
2017	$ 3,337.4	$ 728.5	$ 7,370.7	$ 2,112.7	$ 461.2	$ 4,666.1
2018	$ 3,513.9	$ 765.2	$ 7,763.2	$ 2,141.4	$ 466.3	$ 4,730.8
2019	$ 3,649.5	$ 793.4	$ 8,081.4	$ 2,140.8	$ 465.4	$ 4,740.6
2020	$ 3,752.2	$ 814.4	$ 8,315.3	$ 2,118.8	$ 459.9	$ 4,695.5
2021	$ 3,828.1	$ 829.8	$ 8,493.8	$ 2,080.8	$ 451.1	$ 4,617.0
2022	$ 3,882.0	$ 839.9	$ 8,630.5	$ 2,031.3	$ 439.5	$ 4,515.9
2023	$ 3,917.7	$ 845.3	$ 8,711.0	$ 1,973.3	$ 425.8	$ 4,387.6
2024	$ 3,938.3	$ 849.0	$ 8,761.0	$ 1,909.5	$ 411.6	$ 4,247.9
2025	$ 3,946.2	$ 848.9	$ 8,784.2	$ 1,841.8	$ 396.2	$ 4,099.9
2026	$ 3,943.6	$ 847.2	$ 8,780.9	$ 1,771.8	$ 380.7	$ 3,945.1
2027	$ 3,932.0	$ 843.3	$ 8,777.1	$ 1,700.6	$ 364.7	$ 3,796.0
2028	$ 3,857.7	$ 827.9	$ 8,603.6	$ 1,606.1	$ 344.7	$ 3,581.9
2029	$ 3,822.8	$ 819.3	$ 8,540.6	$ 1,532.0	$ 328.4	$ 3,422.7
Total	**$ 61,855.7**	**$ 13,398.2**	**$ 137,223.8**	**$ 33,839.4**	**$ 7,340.8**	**$ 75,003.7**
Ann.	**$ 3,552.2**	**$ 769.4**	**$ 7,880.5**	**$ 2,903.8**	**$ 629.9**	**$ 6,436.1**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibit F.11a.

Exhibit F.11c Mean Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, at 3% Discount Rate, by System Size
(All Systems)

TTHM - Alternative 3

Smoking/Lung Cancer Cessation Lag Model										
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.1	$ 0.7	$ 0.9	$ 3.6	$ 8.3	$ 34.6	$ 26.8	$ 113.3	$ 90.5	$ 278.8
2011	$ 0.2	$ 1.8	$ 2.2	$ 9.4	$ 21.6	$ 89.5	$ 69.3	$ 293.2	$ 234.2	$ 721.4
2012	$ 0.4	$ 3.1	$ 3.9	$ 16.7	$ 38.3	$ 158.7	$ 122.8	$ 519.6	$ 415.1	$ 1,278.7
2013	$ 0.6	$ 4.7	$ 5.9	$ 25.1	$ 57.4	$ 238.1	$ 184.3	$ 779.7	$ 622.8	$ 1,918.6
2014	$ 0.8	$ 6.4	$ 8.0	$ 34.2	$ 78.4	$ 324.9	$ 239.0	$ 958.9	$ 766.0	$ 2,416.8
2015	$ 1.1	$ 8.3	$ 10.3	$ 43.9	$ 100.6	$ 401.3	$ 278.4	$ 1,093.8	$ 873.8	$ 2,811.4
2016	$ 1.2	$ 9.5	$ 11.9	$ 50.8	$ 116.2	$ 456.6	$ 308.4	$ 1,197.4	$ 956.5	$ 3,108.6
2017	$ 1.3	$ 10.5	$ 13.1	$ 55.9	$ 128.1	$ 498.7	$ 331.5	$ 1,277.6	$ 1,020.6	$ 3,337.4
2018	$ 1.4	$ 11.3	$ 14.0	$ 59.9	$ 137.2	$ 531.2	$ 349.3	$ 1,339.6	$ 1,070.1	$ 3,513.9
2019	$ 1.5	$ 11.8	$ 14.7	$ 63.0	$ 144.2	$ 556.1	$ 363.0	$ 1,387.1	$ 1,108.0	$ 3,649.5
2020	$ 1.6	$ 12.3	$ 15.3	$ 65.3	$ 149.5	$ 575.2	$ 373.4	$ 1,422.9	$ 1,136.7	$ 3,752.2
2021	$ 1.6	$ 12.6	$ 15.7	$ 67.1	$ 153.6	$ 589.5	$ 381.1	$ 1,449.2	$ 1,157.7	$ 3,828.1
2022	$ 1.6	$ 12.8	$ 16.0	$ 68.4	$ 156.5	$ 599.9	$ 386.6	$ 1,467.7	$ 1,172.4	$ 3,882.0
2023	$ 1.7	$ 13.0	$ 16.2	$ 69.3	$ 158.6	$ 607.2	$ 390.3	$ 1,479.6	$ 1,181.9	$ 3,917.7
2024	$ 1.7	$ 13.1	$ 16.3	$ 69.9	$ 160.0	$ 611.8	$ 392.4	$ 1,486.0	$ 1,187.1	$ 3,938.3
2025	$ 1.7	$ 13.2	$ 16.4	$ 70.2	$ 160.7	$ 614.2	$ 393.3	$ 1,487.9	$ 1,188.6	$ 3,946.2
2026	$ 1.7	$ 13.2	$ 16.4	$ 70.3	$ 161.0	$ 614.7	$ 393.1	$ 1,486.0	$ 1,187.1	$ 3,943.6
2027	$ 1.7	$ 13.2	$ 16.4	$ 70.3	$ 160.8	$ 613.7	$ 391.9	$ 1,480.9	$ 1,183.0	$ 3,932.0
2028	$ 1.7	$ 13.0	$ 16.1	$ 69.0	$ 158.0	$ 602.8	$ 384.6	$ 1,452.3	$ 1,160.2	$ 3,857.7
2029	$ 1.6	$ 12.9	$ 16.0	$ 68.5	$ 156.8	$ 597.9	$ 381.1	$ 1,438.7	$ 1,149.2	$ 3,822.8
Total	**$ 25.3**	**$ 197.4**	**$ 245.8**	**$ 1,051.0**	**$ 2,405.8**	**$ 9,316.5**	**$ 6,140.7**	**$ 23,611.5**	**$ 18,861.6**	**$ 61,855.7**
Ann.	**$ 1.5**	**$ 11.3**	**$ 14.1**	**$ 60.4**	**$ 138.2**	**$ 535.0**	**$ 352.6**	**$ 1,356.0**	**$ 1,083.2**	**$ 3,552.2**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and E.42d.

Exhibit F.11d Mean Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, at 7% Discount Rate, by System Size
(All Systems)

TTHM - Alternative 3

Smoking/Lung Cancer Cessation Lag Model										
Year	**<100**	**100-499**	**500-999**	**1,000-3,299**	**3,300-9,999**	**10,000-49,999**	**50,000-99,999**	**100,000-999,999**	**≥1,000,000**	**Total**
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.1	$ 0.6	$ 0.7	$ 3.0	$ 6.9	$ 28.6	$ 22.1	$ 93.7	$ 74.8	$ 230.5
2011	$ 0.2	$ 1.4	$ 1.8	$ 7.5	$ 17.2	$ 71.2	$ 55.1	$ 233.3	$ 186.3	$ 574.0
2012	$ 0.3	$ 2.4	$ 3.0	$ 12.8	$ 29.3	$ 121.5	$ 94.1	$ 398.0	$ 317.9	$ 979.3
2013	$ 0.4	$ 3.5	$ 4.3	$ 18.5	$ 42.3	$ 175.5	$ 135.9	$ 574.8	$ 459.2	$ 1,414.5
2014	$ 0.6	$ 4.6	$ 5.7	$ 24.3	$ 55.6	$ 230.6	$ 169.7	$ 680.6	$ 543.7	$ 1,715.2
2015	$ 0.7	$ 5.6	$ 7.0	$ 30.0	$ 68.7	$ 274.1	$ 190.2	$ 747.3	$ 596.9	$ 1,920.7
2016	$ 0.8	$ 6.3	$ 7.8	$ 33.4	$ 76.4	$ 300.3	$ 202.8	$ 787.5	$ 629.1	$ 2,044.3
2017	$ 0.9	$ 6.7	$ 8.3	$ 35.4	$ 81.1	$ 315.7	$ 209.9	$ 808.8	$ 646.1	$ 2,112.7
2018	$ 0.9	$ 6.9	$ 8.5	$ 36.5	$ 83.6	$ 323.7	$ 212.9	$ 816.3	$ 652.1	$ 2,141.4
2019	$ 0.9	$ 6.9	$ 8.6	$ 36.9	$ 84.6	$ 326.2	$ 213.0	$ 813.7	$ 650.0	$ 2,140.8
2020	$ 0.9	$ 6.9	$ 8.6	$ 36.9	$ 84.4	$ 324.8	$ 210.9	$ 803.5	$ 641.9	$ 2,118.8
2021	$ 0.9	$ 6.8	$ 8.5	$ 36.5	$ 83.5	$ 320.4	$ 207.2	$ 787.8	$ 629.3	$ 2,080.8
2022	$ 0.9	$ 6.7	$ 8.4	$ 35.8	$ 81.9	$ 313.9	$ 202.3	$ 767.9	$ 613.5	$ 2,031.3
2023	$ 0.8	$ 6.6	$ 8.2	$ 34.9	$ 79.9	$ 305.8	$ 196.6	$ 745.2	$ 595.3	$ 1,973.3
2024	$ 0.8	$ 6.4	$ 7.9	$ 33.9	$ 77.6	$ 296.6	$ 190.3	$ 720.5	$ 575.6	$ 1,909.5
2025	$ 0.8	$ 6.2	$ 7.7	$ 32.8	$ 75.0	$ 286.6	$ 183.5	$ 694.5	$ 554.8	$ 1,841.8
2026	$ 0.8	$ 5.9	$ 7.4	$ 31.6	$ 72.3	$ 276.2	$ 176.6	$ 667.7	$ 533.3	$ 1,771.8
2027	$ 0.7	$ 5.7	$ 7.1	$ 30.4	$ 69.6	$ 265.4	$ 169.5	$ 640.5	$ 511.6	$ 1,700.6
2028	$ 0.7	$ 5.4	$ 6.7	$ 28.7	$ 65.8	$ 250.9	$ 160.1	$ 604.6	$ 483.0	$ 1,606.1
2029	$ 0.7	$ 5.2	$ 6.4	$ 27.5	$ 62.8	$ 239.6	$ 152.7	$ 576.6	$ 460.6	$ 1,532.0
Total	**$ 13.7**	**$ 106.6**	**$ 132.7**	**$ 567.3**	**$ 1,298.5**	**$ 5,047.9**	**$ 3,355.2**	**$ 12,962.6**	**$ 10,354.9**	**$ 33,839.4**
Ann.	**$ 1.2**	**$ 9.1**	**$ 11.4**	**$ 48.7**	**$ 111.4**	**$ 433.2**	**$ 287.9**	**$ 1,112.3**	**$ 888.6**	**$ 2,903.8**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and E.42d.

Section F.12
Model Outputs - Colon Cancer Sensitivity Analysis
TTHM as Indicator
Lymphoma for Non-Fatal Cases

Exhibit F.12a Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Smoking/Lung Cancer Cessation Lag Model)

TTHM - Colon Cancer Sensitivity Analysis

Year	Surface Water Systems			Ground Water Systems			All Systems		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 247.4	$ 37.9	$ 568.8	$ 119.5	$ 18.3	$ 274.6	$ 366.9	$ 56.2	$ 843.4
2011	$ 552.0	$ 84.5	$ 1,269.6	$ 266.5	$ 40.8	$ 613.0	$ 818.5	$ 125.3	$ 1,882.7
2012	$ 914.0	$ 139.9	$ 2,099.8	$ 441.3	$ 67.5	$ 1,013.8	$ 1,355.3	$ 207.4	$ 3,113.6
2013	$ 1,331.0	$ 203.7	$ 3,057.2	$ 642.6	$ 98.4	$ 1,476.1	$ 1,973.6	$ 302.1	$ 4,533.3
2014	$ 1,584.8	$ 242.3	$ 3,643.0	$ 813.3	$ 124.3	$ 1,869.6	$ 2,398.1	$ 366.6	$ 5,512.6
2015	$ 1,804.4	$ 275.9	$ 4,149.9	$ 966.6	$ 147.8	$ 2,222.9	$ 2,771.0	$ 423.7	$ 6,372.8
2016	$ 1,982.9	$ 302.9	$ 4,560.0	$ 1,071.3	$ 163.7	$ 2,463.8	$ 3,054.2	$ 466.6	$ 7,023.8
2017	$ 2,136.4	$ 326.2	$ 4,917.7	$ 1,163.5	$ 177.7	$ 2,678.2	$ 3,299.8	$ 503.9	$ 7,595.9
2018	$ 2,270.0	$ 346.1	$ 5,229.7	$ 1,243.7	$ 189.6	$ 2,865.4	$ 3,513.8	$ 535.8	$ 8,095.1
2019	$ 2,387.9	$ 363.8	$ 5,510.7	$ 1,313.8	$ 200.1	$ 3,031.9	$ 3,701.8	$ 563.9	$ 8,542.6
2020	$ 2,493.5	$ 379.7	$ 5,756.9	$ 1,376.1	$ 209.5	$ 3,177.1	$ 3,869.6	$ 589.2	$ 8,934.0
2021	$ 2,589.2	$ 393.8	$ 5,978.1	$ 1,432.2	$ 217.8	$ 3,306.8	$ 4,021.4	$ 611.6	$ 9,285.0
2022	$ 2,676.7	$ 407.0	$ 6,190.6	$ 1,483.3	$ 225.6	$ 3,430.6	$ 4,160.0	$ 632.6	$ 9,621.2
2023	$ 2,757.5	$ 419.4	$ 6,379.2	$ 1,530.3	$ 232.7	$ 3,540.1	$ 4,287.8	$ 652.1	$ 9,919.3
2024	$ 2,832.9	$ 430.6	$ 6,555.9	$ 1,573.9	$ 239.3	$ 3,642.3	$ 4,406.7	$ 669.9	$ 10,198.3
2025	$ 2,903.5	$ 440.7	$ 6,719.9	$ 1,614.6	$ 245.1	$ 3,736.9	$ 4,518.2	$ 685.8	$ 10,456.8
2026	$ 2,970.3	$ 450.3	$ 6,880.5	$ 1,653.1	$ 250.6	$ 3,829.1	$ 4,623.4	$ 700.8	$ 10,709.6
2027	$ 3,033.8	$ 459.3	$ 7,038.3	$ 1,689.5	$ 255.8	$ 3,919.5	$ 4,723.3	$ 715.1	$ 10,957.8
2028	$ 3,054.4	$ 462.9	$ 7,082.2	$ 1,701.8	$ 257.9	$ 3,946.0	$ 4,756.3	$ 720.8	$ 11,028.1
2029	$ 3,104.5	$ 469.8	$ 7,205.0	$ 1,730.5	$ 261.9	$ 4,016.3	$ 4,835.0	$ 731.7	$ 11,221.3
Total	**$ 43,627.2**	**$ 6,636.8**	**$ 100,793.1**	**$ 23,827.5**	**$ 3,624.4**	**$ 55,054.0**	**$ 67,454.7**	**$ 10,261.2**	**$ 155,847.0**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.43b, and E.43c.

Exhibit F.12b Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, Smoking/Lung Cancer Cessation Lag Model (All Water Systems)

TTHM - Colon Cancer Sensitivity Analysis

Year	3% Discount Rate			7% Discount Rate		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 316.5	$ 48.4	$ 727.5	$ 261.6	$ 40.0	$ 601.3
2011	$ 685.5	$ 105.0	$ 1,576.7	$ 545.4	$ 83.5	$ 1,254.5
2012	$ 1,102.0	$ 168.6	$ 2,531.6	$ 844.0	$ 129.2	$ 1,939.0
2013	$ 1,558.0	$ 238.5	$ 3,578.6	$ 1,148.7	$ 175.8	$ 2,638.4
2014	$ 1,837.9	$ 281.0	$ 4,225.0	$ 1,304.4	$ 199.4	$ 2,998.5
2015	$ 2,061.9	$ 315.3	$ 4,742.0	$ 1,408.6	$ 215.4	$ 3,239.6
2016	$ 2,206.4	$ 337.1	$ 5,074.1	$ 1,451.0	$ 221.7	$ 3,337.0
2017	$ 2,314.4	$ 353.4	$ 5,327.6	$ 1,465.2	$ 223.7	$ 3,372.6
2018	$ 2,392.7	$ 364.8	$ 5,512.4	$ 1,458.1	$ 222.3	$ 3,359.2
2019	$ 2,447.3	$ 372.8	$ 5,647.7	$ 1,435.6	$ 218.7	$ 3,313.0
2020	$ 2,483.8	$ 378.2	$ 5,734.4	$ 1,402.5	$ 213.6	$ 3,238.1
2021	$ 2,506.0	$ 381.1	$ 5,786.1	$ 1,362.2	$ 207.2	$ 3,145.1
2022	$ 2,516.9	$ 382.7	$ 5,821.0	$ 1,316.9	$ 200.3	$ 3,045.8
2023	$ 2,518.6	$ 383.1	$ 5,826.5	$ 1,268.6	$ 192.9	$ 2,934.8
2024	$ 2,513.1	$ 382.0	$ 5,815.9	$ 1,218.5	$ 185.2	$ 2,819.9
2025	$ 2,501.6	$ 379.7	$ 5,789.7	$ 1,167.6	$ 177.2	$ 2,702.2
2026	$ 2,485.3	$ 376.7	$ 5,756.9	$ 1,116.6	$ 169.3	$ 2,586.5
2027	$ 2,465.0	$ 373.2	$ 5,718.8	$ 1,066.1	$ 161.4	$ 2,473.3
2028	$ 2,410.0	$ 365.2	$ 5,587.9	$ 1,003.3	$ 152.0	$ 2,326.3
2029	$ 2,378.5	$ 359.9	$ 5,520.1	$ 953.2	$ 144.3	$ 2,212.2
Total	**$ 41,701.5**	**$ 6,346.9**	**$ 96,300.5**	**$ 23,198.2**	**$ 3,533.1**	**$ 53,537.5**
Ann.	**$ 2,394.8**	**$ 364.5**	**$ 5,530.3**	**$ 1,990.7**	**$ 303.2**	**$ 4,594.1**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibit F.12a.

Exhibit F.12c Mean Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 3% Discount Rate, by System Size
(All Systems)

TTHM - Colon Cancer Sensitivity Analysis

Smoking/Lung Cancer Cessation Lag Model										
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.3	$ 2.5	$ 2.8	$ 9.5	$ 16.8	$ 51.0	$ 32.4	$ 120.7	$ 80.5	$ 316.5
2011	$ 0.7	$ 5.4	$ 6.0	$ 20.5	$ 36.4	$ 110.5	$ 70.1	$ 261.5	$ 174.4	$ 685.5
2012	$ 1.2	$ 8.7	$ 9.6	$ 33.0	$ 58.5	$ 177.6	$ 112.7	$ 420.4	$ 280.3	$ 1,102.0
2013	$ 1.7	$ 12.3	$ 13.6	$ 46.6	$ 82.7	$ 251.1	$ 159.3	$ 594.4	$ 396.3	$ 1,558.0
2014	$ 2.2	$ 16.1	$ 17.8	$ 61.0	$ 108.2	$ 328.6	$ 193.5	$ 666.2	$ 444.2	$ 1,837.9
2015	$ 2.7	$ 20.0	$ 22.2	$ 75.9	$ 134.6	$ 385.4	$ 212.1	$ 725.4	$ 483.6	$ 2,061.9
2016	$ 2.9	$ 21.8	$ 24.1	$ 82.5	$ 146.4	$ 417.0	$ 226.9	$ 770.8	$ 513.9	$ 2,206.4
2017	$ 3.1	$ 23.2	$ 25.7	$ 87.9	$ 155.9	$ 441.9	$ 237.8	$ 803.3	$ 535.6	$ 2,314.4
2018	$ 3.3	$ 24.3	$ 26.9	$ 91.9	$ 163.1	$ 460.1	$ 245.6	$ 826.5	$ 551.0	$ 2,392.7
2019	$ 3.4	$ 25.0	$ 27.7	$ 94.8	$ 168.1	$ 473.0	$ 251.1	$ 842.5	$ 561.7	$ 2,447.3
2020	$ 3.4	$ 25.5	$ 28.3	$ 96.8	$ 171.6	$ 481.9	$ 254.7	$ 852.9	$ 568.7	$ 2,483.8
2021	$ 3.5	$ 25.9	$ 28.7	$ 98.1	$ 173.9	$ 487.5	$ 256.9	$ 858.9	$ 572.7	$ 2,506.0
2022	$ 3.5	$ 26.1	$ 28.9	$ 98.8	$ 175.2	$ 490.7	$ 257.9	$ 861.4	$ 574.3	$ 2,516.9
2023	$ 3.5	$ 26.2	$ 29.0	$ 99.1	$ 175.8	$ 491.9	$ 258.1	$ 861.0	$ 574.0	$ 2,518.6
2024	$ 3.5	$ 26.2	$ 29.0	$ 99.1	$ 175.8	$ 491.5	$ 257.5	$ 858.3	$ 572.2	$ 2,513.1
2025	$ 3.5	$ 26.1	$ 28.9	$ 98.9	$ 175.3	$ 489.8	$ 256.3	$ 853.7	$ 569.2	$ 2,501.6
2026	$ 3.5	$ 25.9	$ 28.8	$ 98.4	$ 174.4	$ 487.0	$ 254.6	$ 847.6	$ 565.1	$ 2,485.3
2027	$ 3.5	$ 25.8	$ 28.6	$ 97.7	$ 173.2	$ 483.4	$ 252.5	$ 840.2	$ 560.2	$ 2,465.0
2028	$ 3.4	$ 25.2	$ 27.9	$ 95.6	$ 169.5	$ 472.9	$ 246.8	$ 821.1	$ 547.5	$ 2,410.0
2029	$ 3.4	$ 24.9	$ 27.6	$ 94.4	$ 167.4	$ 467.0	$ 243.6	$ 810.1	$ 540.1	$ 2,378.5
Total	**$ 56.3**	**$ 417.0**	**$ 462.1**	**$ 1,580.5**	**$ 2,803.0**	**$ 7,940.0**	**$ 4,280.0**	**$ 14,497.0**	**$ 9,665.6**	**$ 41,701.5**
Ann.	**$ 3.2**	**$ 23.9**	**$ 26.5**	**$ 90.8**	**$ 161.0**	**$ 456.0**	**$ 245.8**	**$ 832.5**	**$ 555.1**	**$ 2,394.8**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and E.43d.

Exhibit F.12d Mean Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 7% Discount Rate, by System Size
(All Systems)

TTHM - Colon Cancer Sensitivity Analysis

Smoking/Lung Cancer Cessation Lag Model										
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.3	$ 2.1	$ 2.3	$ 7.8	$ 13.9	$ 42.2	$ 26.7	$ 99.8	$ 66.5	$ 261.6
2011	$ 0.6	$ 4.3	$ 4.8	$ 16.3	$ 29.0	$ 87.9	$ 55.8	$ 208.1	$ 138.7	$ 545.4
2012	$ 0.9	$ 6.7	$ 7.4	$ 25.3	$ 44.8	$ 136.0	$ 86.3	$ 322.0	$ 214.7	$ 844.0
2013	$ 1.2	$ 9.1	$ 10.1	$ 34.4	$ 61.0	$ 185.1	$ 117.4	$ 438.2	$ 292.2	$ 1,148.7
2014	$ 1.5	$ 11.4	$ 12.7	$ 43.3	$ 76.8	$ 233.2	$ 137.3	$ 472.8	$ 315.3	$ 1,304.4
2015	$ 1.8	$ 13.7	$ 15.2	$ 51.8	$ 91.9	$ 263.3	$ 144.9	$ 495.6	$ 330.4	$ 1,408.6
2016	$ 1.9	$ 14.3	$ 15.9	$ 54.3	$ 96.3	$ 274.3	$ 149.2	$ 506.9	$ 338.0	$ 1,451.0
2017	$ 2.0	$ 14.7	$ 16.3	$ 55.6	$ 98.7	$ 279.7	$ 150.6	$ 508.6	$ 339.1	$ 1,465.2
2018	$ 2.0	$ 14.8	$ 16.4	$ 56.0	$ 99.4	$ 280.4	$ 149.7	$ 503.7	$ 335.8	$ 1,458.1
2019	$ 2.0	$ 14.7	$ 16.3	$ 55.6	$ 98.6	$ 277.5	$ 147.3	$ 494.2	$ 329.5	$ 1,435.6
2020	$ 1.9	$ 14.4	$ 16.0	$ 54.6	$ 96.9	$ 272.1	$ 143.8	$ 481.6	$ 321.1	$ 1,402.5
2021	$ 1.9	$ 14.1	$ 15.6	$ 53.3	$ 94.5	$ 265.0	$ 139.6	$ 466.9	$ 311.3	$ 1,362.2
2022	$ 1.8	$ 13.6	$ 15.1	$ 51.7	$ 91.7	$ 256.8	$ 135.0	$ 450.7	$ 300.5	$ 1,316.9
2023	$ 1.8	$ 13.2	$ 14.6	$ 49.9	$ 88.6	$ 247.8	$ 130.0	$ 433.7	$ 289.1	$ 1,268.6
2024	$ 1.7	$ 12.7	$ 14.1	$ 48.1	$ 85.3	$ 238.3	$ 124.8	$ 416.1	$ 277.5	$ 1,218.5
2025	$ 1.6	$ 12.2	$ 13.5	$ 46.1	$ 81.8	$ 228.6	$ 119.6	$ 398.4	$ 265.7	$ 1,167.6
2026	$ 1.6	$ 11.7	$ 12.9	$ 44.2	$ 78.4	$ 218.8	$ 114.4	$ 380.8	$ 253.9	$ 1,116.6
2027	$ 1.5	$ 11.1	$ 12.4	$ 42.2	$ 74.9	$ 209.1	$ 109.2	$ 363.4	$ 242.3	$ 1,066.1
2028	$ 1.4	$ 10.5	$ 11.6	$ 39.8	$ 70.6	$ 196.9	$ 102.8	$ 341.8	$ 227.9	$ 1,003.3
2029	$ 1.3	$ 10.0	$ 11.1	$ 37.8	$ 67.1	$ 187.2	$ 97.6	$ 324.6	$ 216.5	$ 953.2
Total	**$ 30.9**	**$ 229.1**	**$ 253.9**	**$ 868.4**	**$ 1,540.0**	**$ 4,380.1**	**$ 2,381.9**	**$ 8,108.0**	**$ 5,405.9**	**$ 23,198.2**
Ann.	**$ 2.7**	**$ 19.7**	**$ 21.8**	**$ 74.5**	**$ 132.2**	**$ 375.9**	**$ 204.4**	**$ 695.8**	**$ 463.9**	**$ 1,990.7**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and E.43d.

Section F.13
Model Outputs - Colon Cancer Sensitivity Analysis
TTHM as Indicator
Bronchitis for Non-Fatal Cases

Exhibit F.13a Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases (Smoking/Lung Cancer Cessation Lag Model)

TTHM - Colon Cancer Sensitivity Analysis

	Surface Water Systems			Ground Water Systems			All Systems		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 122.2	$ 26.9	$ 268.8	$ 59.0	$ 13.0	$ 129.8	$ 181.2	$ 39.9	$ 398.5
2011	$ 272.9	$ 60.0	$ 601.0	$ 131.7	$ 29.0	$ 290.2	$ 404.6	$ 89.0	$ 891.2
2012	$ 452.2	$ 99.3	$ 995.2	$ 218.3	$ 47.9	$ 480.5	$ 670.5	$ 147.3	$ 1,475.7
2013	$ 658.9	$ 144.7	$ 1,449.7	$ 318.1	$ 69.8	$ 699.9	$ 977.0	$ 214.5	$ 2,149.6
2014	$ 785.1	$ 172.0	$ 1,728.3	$ 402.9	$ 88.3	$ 886.9	$ 1,188.0	$ 260.3	$ 2,615.2
2015	$ 894.6	$ 195.7	$ 1,972.7	$ 479.2	$ 104.8	$ 1,056.7	$ 1,373.8	$ 300.5	$ 3,029.3
2016	$ 983.8	$ 215.0	$ 2,168.8	$ 531.6	$ 116.2	$ 1,171.8	$ 1,515.4	$ 331.2	$ 3,340.6
2017	$ 1,060.8	$ 231.6	$ 2,342.8	$ 577.7	$ 126.1	$ 1,275.9	$ 1,638.5	$ 357.7	$ 3,618.7
2018	$ 1,128.0	$ 245.6	$ 2,492.2	$ 618.1	$ 134.6	$ 1,365.5	$ 1,746.1	$ 380.2	$ 3,857.6
2019	$ 1,187.6	$ 258.2	$ 2,629.8	$ 653.4	$ 142.1	$ 1,446.9	$ 1,841.0	$ 400.2	$ 4,076.7
2020	$ 1,241.1	$ 269.4	$ 2,750.4	$ 684.9	$ 148.7	$ 1,517.9	$ 1,926.0	$ 418.0	$ 4,268.4
2021	$ 1,289.8	$ 279.6	$ 2,861.7	$ 713.4	$ 154.6	$ 1,583.0	$ 2,003.2	$ 434.2	$ 4,444.7
2022	$ 1,334.5	$ 288.7	$ 2,966.8	$ 739.5	$ 160.0	$ 1,644.1	$ 2,074.0	$ 448.7	$ 4,610.8
2023	$ 1,375.9	$ 296.9	$ 3,059.3	$ 763.6	$ 164.7	$ 1,697.8	$ 2,139.5	$ 461.6	$ 4,757.1
2024	$ 1,414.7	$ 305.0	$ 3,147.1	$ 786.0	$ 169.4	$ 1,748.5	$ 2,200.7	$ 474.4	$ 4,895.5
2025	$ 1,451.2	$ 312.2	$ 3,230.4	$ 807.0	$ 173.6	$ 1,796.4	$ 2,258.3	$ 485.8	$ 5,026.9
2026	$ 1,485.9	$ 319.2	$ 3,308.6	$ 826.9	$ 177.7	$ 1,841.3	$ 2,312.9	$ 496.9	$ 5,149.9
2027	$ 1,519.0	$ 325.8	$ 3,390.7	$ 845.9	$ 181.4	$ 1,888.2	$ 2,364.9	$ 507.2	$ 5,279.0
2028	$ 1,528.8	$ 328.1	$ 3,409.6	$ 851.8	$ 182.8	$ 1,899.8	$ 2,380.7	$ 510.9	$ 5,309.4
2029	$ 1,554.9	$ 333.3	$ 3,473.9	$ 866.7	$ 185.8	$ 1,936.4	$ 2,421.7	$ 519.0	$ 5,410.3
Total	**$ 21,741.9**	**$ 4,707.1**	**$ 48,247.8**	**$ 11,875.9**	**$ 2,570.5**	**$ 26,357.3**	**$ 33,617.7**	**$ 7,277.6**	**$ 74,605.2**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.43b, and E.43c.

Exhibit F.13b Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, Smoking/Lung Cancer Cessation Lag Model
(All Water Systems)

TTHM - Colon Cancer Sensitivity Analysis

	3% Discount Rate			7% Discount Rate		
		90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 156.3	$ 34.4	$ 343.8	$ 129.2	$ 28.4	$ 284.1
2011	$ 338.9	$ 74.5	$ 746.4	$ 269.6	$ 59.3	$ 593.9
2012	$ 545.1	$ 119.7	$ 1,199.9	$ 417.5	$ 91.7	$ 919.0
2013	$ 771.3	$ 169.3	$ 1,696.9	$ 568.6	$ 124.8	$ 1,251.1
2014	$ 910.5	$ 199.5	$ 2,004.4	$ 646.2	$ 141.6	$ 1,422.5
2015	$ 1,022.2	$ 223.6	$ 2,254.1	$ 698.4	$ 152.8	$ 1,540.0
2016	$ 1,094.7	$ 239.3	$ 2,413.4	$ 719.9	$ 157.3	$ 1,587.1
2017	$ 1,149.2	$ 250.9	$ 2,538.1	$ 727.5	$ 158.8	$ 1,606.7
2018	$ 1,189.0	$ 258.9	$ 2,626.8	$ 724.6	$ 157.8	$ 1,600.8
2019	$ 1,217.1	$ 264.6	$ 2,695.1	$ 714.0	$ 155.2	$ 1,581.0
2020	$ 1,236.2	$ 268.3	$ 2,739.7	$ 698.1	$ 151.5	$ 1,547.0
2021	$ 1,248.3	$ 270.6	$ 2,769.8	$ 678.6	$ 147.1	$ 1,505.6
2022	$ 1,254.8	$ 271.5	$ 2,789.6	$ 656.6	$ 142.0	$ 1,459.7
2023	$ 1,256.7	$ 271.1	$ 2,794.3	$ 633.0	$ 136.6	$ 1,407.4
2024	$ 1,255.0	$ 270.5	$ 2,791.9	$ 608.5	$ 131.2	$ 1,353.7
2025	$ 1,250.3	$ 269.0	$ 2,783.2	$ 583.6	$ 125.5	$ 1,299.0
2026	$ 1,243.3	$ 267.1	$ 2,768.3	$ 558.6	$ 120.0	$ 1,243.8
2027	$ 1,234.2	$ 264.7	$ 2,755.0	$ 533.8	$ 114.5	$ 1,191.5
2028	$ 1,206.3	$ 258.9	$ 2,690.2	$ 502.2	$ 107.8	$ 1,120.0
2029	$ 1,191.3	$ 255.3	$ 2,661.5	$ 477.4	$ 102.3	$ 1,066.6
Total	**$ 20,770.9**	**$ 4,501.9**	**$ 46,062.5**	**$ 11,545.8**	**$ 2,506.3**	**$ 25,580.6**
Ann.	**$ 1,192.8**	**$ 258.5**	**$ 2,645.3**	**$ 990.8**	**$ 215.1**	**$ 2,195.1**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibit F.13a.

Exhibit F.13c Mean Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, at 3% Discount Rate, by System Size
(All Systems)

TTHM - Colon Cancer Sensitivity Analysis

Smoking/Lung Cancer Cessation Lag Model										
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.2	$ 1.2	$ 1.4	$ 4.7	$ 8.3	$ 25.2	$ 16.0	$ 59.6	$ 39.8	$ 156.3
2011	$ 0.4	$ 2.7	$ 3.0	$ 10.1	$ 18.0	$ 54.6	$ 34.6	$ 129.3	$ 86.2	$ 338.9
2012	$ 0.6	$ 4.3	$ 4.8	$ 16.3	$ 28.9	$ 87.9	$ 55.7	$ 208.0	$ 138.7	$ 545.1
2013	$ 0.8	$ 6.1	$ 6.7	$ 23.1	$ 40.9	$ 124.3	$ 78.8	$ 294.3	$ 196.2	$ 771.3
2014	$ 1.1	$ 8.0	$ 8.8	$ 30.2	$ 53.6	$ 162.8	$ 95.9	$ 330.1	$ 220.1	$ 910.5
2015	$ 1.3	$ 9.9	$ 11.0	$ 37.6	$ 66.7	$ 191.1	$ 105.2	$ 359.6	$ 239.8	$ 1,022.2
2016	$ 1.5	$ 10.8	$ 12.0	$ 41.0	$ 72.6	$ 206.9	$ 112.6	$ 382.4	$ 255.0	$ 1,094.7
2017	$ 1.6	$ 11.5	$ 12.8	$ 43.6	$ 77.4	$ 219.4	$ 118.1	$ 398.9	$ 266.0	$ 1,149.2
2018	$ 1.6	$ 12.1	$ 13.4	$ 45.7	$ 81.0	$ 228.7	$ 122.1	$ 410.7	$ 273.8	$ 1,189.0
2019	$ 1.7	$ 12.4	$ 13.8	$ 47.1	$ 83.6	$ 235.3	$ 124.9	$ 419.0	$ 279.4	$ 1,217.1
2020	$ 1.7	$ 12.7	$ 14.1	$ 48.2	$ 85.4	$ 239.8	$ 126.8	$ 424.5	$ 283.0	$ 1,236.2
2021	$ 1.7	$ 12.9	$ 14.3	$ 48.8	$ 86.6	$ 242.9	$ 128.0	$ 427.9	$ 285.3	$ 1,248.3
2022	$ 1.8	$ 13.0	$ 14.4	$ 49.3	$ 87.4	$ 244.6	$ 128.6	$ 429.4	$ 286.3	$ 1,254.8
2023	$ 1.8	$ 13.1	$ 14.5	$ 49.5	$ 87.7	$ 245.4	$ 128.8	$ 429.6	$ 286.4	$ 1,256.7
2024	$ 1.8	$ 13.1	$ 14.5	$ 49.5	$ 87.8	$ 245.4	$ 128.6	$ 428.6	$ 285.8	$ 1,255.0
2025	$ 1.8	$ 13.0	$ 14.4	$ 49.4	$ 87.6	$ 244.8	$ 128.1	$ 426.7	$ 284.5	$ 1,250.3
2026	$ 1.8	$ 13.0	$ 14.4	$ 49.2	$ 87.3	$ 243.6	$ 127.3	$ 424.0	$ 282.7	$ 1,243.3
2027	$ 1.7	$ 12.9	$ 14.3	$ 48.9	$ 86.7	$ 242.1	$ 126.4	$ 420.7	$ 280.5	$ 1,234.2
2028	$ 1.7	$ 12.6	$ 14.0	$ 47.8	$ 84.8	$ 236.7	$ 123.5	$ 411.0	$ 274.0	$ 1,206.3
2029	$ 1.7	$ 12.5	$ 13.8	$ 47.3	$ 83.9	$ 233.9	$ 122.0	$ 405.7	$ 270.5	$ 1,191.3
Total	**$ 28.0**	**$ 207.7**	**$ 230.2**	**$ 787.4**	**$ 1,396.4**	**$ 3,955.4**	**$ 2,131.8**	**$ 7,220.0**	**$ 4,813.8**	**$ 20,770.9**
Ann.	**$ 1.6**	**$ 11.9**	**$ 13.2**	**$ 45.2**	**$ 80.2**	**$ 227.2**	**$ 122.4**	**$ 414.6**	**$ 276.4**	**$ 1,192.8**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and E.43d.

Exhibit F.13d Mean Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, at 7% Discount Rate, by System Size
(All Systems)

TTHM - Colon Cancer Sensitivity Analysis

Smoking/Lung Cancer Cessation Lag Model										
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.1	$ 1.0	$ 1.1	$ 3.9	$ 6.9	$ 20.8	$ 13.2	$ 49.3	$ 32.9	$ 129.2
2011	$ 0.3	$ 2.1	$ 2.4	$ 8.1	$ 14.3	$ 43.4	$ 27.6	$ 102.9	$ 68.6	$ 269.6
2012	$ 0.4	$ 3.3	$ 3.7	$ 12.5	$ 22.2	$ 67.3	$ 42.7	$ 159.3	$ 106.2	$ 417.5
2013	$ 0.6	$ 4.5	$ 5.0	$ 17.0	$ 30.2	$ 91.6	$ 58.1	$ 216.9	$ 144.6	$ 568.6
2014	$ 0.8	$ 5.7	$ 6.3	$ 21.5	$ 38.1	$ 115.5	$ 68.0	$ 234.2	$ 156.2	$ 646.2
2015	$ 0.9	$ 6.8	$ 7.5	$ 25.7	$ 45.6	$ 130.5	$ 71.8	$ 245.7	$ 163.8	$ 698.4
2016	$ 1.0	$ 7.1	$ 7.9	$ 26.9	$ 47.8	$ 136.1	$ 74.0	$ 251.5	$ 167.7	$ 719.9
2017	$ 1.0	$ 7.3	$ 8.1	$ 27.6	$ 49.0	$ 138.9	$ 74.8	$ 252.5	$ 168.4	$ 727.5
2018	$ 1.0	$ 7.3	$ 8.1	$ 27.8	$ 49.4	$ 139.3	$ 74.4	$ 250.3	$ 166.9	$ 724.6
2019	$ 1.0	$ 7.3	$ 8.1	$ 27.7	$ 49.0	$ 138.0	$ 73.2	$ 245.8	$ 163.9	$ 714.0
2020	$ 1.0	$ 7.2	$ 8.0	$ 27.2	$ 48.2	$ 135.4	$ 71.6	$ 239.7	$ 159.8	$ 698.1
2021	$ 0.9	$ 7.0	$ 7.8	$ 26.6	$ 47.1	$ 132.0	$ 69.6	$ 232.6	$ 155.1	$ 678.6
2022	$ 0.9	$ 6.8	$ 7.5	$ 25.8	$ 45.7	$ 128.0	$ 67.3	$ 224.7	$ 149.8	$ 656.6
2023	$ 0.9	$ 6.6	$ 7.3	$ 24.9	$ 44.2	$ 123.6	$ 64.9	$ 216.4	$ 144.3	$ 633.0
2024	$ 0.9	$ 6.3	$ 7.0	$ 24.0	$ 42.6	$ 119.0	$ 62.3	$ 207.8	$ 138.6	$ 608.5
2025	$ 0.8	$ 6.1	$ 6.7	$ 23.1	$ 40.9	$ 114.3	$ 59.8	$ 199.2	$ 132.8	$ 583.6
2026	$ 0.8	$ 5.8	$ 6.5	$ 22.1	$ 39.2	$ 109.5	$ 57.2	$ 190.5	$ 127.0	$ 558.6
2027	$ 0.8	$ 5.6	$ 6.2	$ 21.1	$ 37.5	$ 104.7	$ 54.7	$ 181.9	$ 121.3	$ 533.8
2028	$ 0.7	$ 5.3	$ 5.8	$ 19.9	$ 35.3	$ 98.6	$ 51.4	$ 171.1	$ 114.1	$ 502.2
2029	$ 0.7	$ 5.0	$ 5.5	$ 19.0	$ 33.6	$ 93.7	$ 48.9	$ 162.6	$ 108.4	$ 477.4
Total	**$ 15.4**	**$ 114.1**	**$ 126.4**	**$ 432.3**	**$ 766.7**	**$ 2,180.4**	**$ 1,185.5**	**$ 4,034.9**	**$ 2,690.2**	**$ 11,545.8**
Ann.	**$ 1.3**	**$ 9.8**	**$ 10.8**	**$ 37.1**	**$ 65.8**	**$ 187.1**	**$ 101.7**	**$ 346.2**	**$ 230.8**	**$ 990.8**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and E.43d.

Section F.14
Model Outputs - Rectal Cancer Sensitivity Analysis
TTHM as Indicator
Lymphoma for Non-Fatal Cases

Exhibit F.14a Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Smoking/Lung Cancer Cessation Lag Model)

TTHM - Rectal Cancer Sensitivity Analysis

Year	Surface Water Systems			Ground Water Systems			All Systems		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 84.6	$ 12.9	$ 194.4	$ 40.8	$ 6.3	$ 93.9	$ 125.4	$ 19.2	$ 288.3
2011	$ 188.7	$ 28.9	$ 434.0	$ 91.1	$ 13.9	$ 209.5	$ 279.8	$ 42.8	$ 643.5
2012	$ 312.4	$ 47.8	$ 717.7	$ 150.8	$ 23.1	$ 346.5	$ 463.2	$ 70.9	$ 1,064.2
2013	$ 454.9	$ 69.6	$ 1,044.9	$ 219.6	$ 33.6	$ 504.5	$ 674.6	$ 103.3	$ 1,549.4
2014	$ 541.7	$ 82.8	$ 1,245.2	$ 278.0	$ 42.5	$ 639.0	$ 819.6	$ 125.3	$ 1,884.2
2015	$ 616.7	$ 94.3	$ 1,418.4	$ 330.4	$ 50.5	$ 759.8	$ 947.1	$ 144.8	$ 2,178.2
2016	$ 677.7	$ 103.5	$ 1,558.6	$ 366.2	$ 55.9	$ 842.1	$ 1,043.9	$ 159.5	$ 2,400.7
2017	$ 730.2	$ 111.5	$ 1,680.8	$ 397.7	$ 60.7	$ 915.4	$ 1,127.9	$ 172.2	$ 2,596.2
2018	$ 775.9	$ 118.3	$ 1,787.5	$ 425.1	$ 64.8	$ 979.4	$ 1,201.0	$ 183.1	$ 2,766.8
2019	$ 816.2	$ 124.3	$ 1,883.5	$ 449.1	$ 68.4	$ 1,036.3	$ 1,265.2	$ 192.7	$ 2,919.8
2020	$ 852.3	$ 129.8	$ 1,967.7	$ 470.3	$ 71.6	$ 1,085.9	$ 1,322.6	$ 201.4	$ 3,053.6
2021	$ 885.0	$ 134.6	$ 2,043.3	$ 489.5	$ 74.5	$ 1,130.3	$ 1,374.5	$ 209.1	$ 3,173.5
2022	$ 914.9	$ 139.1	$ 2,115.9	$ 507.0	$ 77.1	$ 1,172.5	$ 1,421.9	$ 216.2	$ 3,288.5
2023	$ 942.5	$ 143.3	$ 2,180.4	$ 523.0	$ 79.6	$ 1,210.0	$ 1,465.5	$ 222.9	$ 3,390.3
2024	$ 968.2	$ 147.2	$ 2,240.8	$ 537.9	$ 81.8	$ 1,244.9	$ 1,506.2	$ 229.0	$ 3,485.7
2025	$ 992.4	$ 150.6	$ 2,296.8	$ 551.9	$ 83.8	$ 1,277.3	$ 1,544.3	$ 234.4	$ 3,574.1
2026	$ 1,015.2	$ 153.9	$ 2,351.7	$ 565.0	$ 85.6	$ 1,308.8	$ 1,580.2	$ 239.5	$ 3,660.5
2027	$ 1,036.9	$ 157.0	$ 2,405.7	$ 577.4	$ 87.4	$ 1,339.6	$ 1,614.4	$ 244.4	$ 3,745.3
2028	$ 1,044.0	$ 158.2	$ 2,420.6	$ 581.7	$ 88.1	$ 1,348.7	$ 1,625.7	$ 246.4	$ 3,769.3
2029	$ 1,061.1	$ 160.6	$ 2,462.6	$ 591.5	$ 89.5	$ 1,372.7	$ 1,652.6	$ 250.1	$ 3,835.4
Total	**$ 14,911.5**	**$ 2,268.4**	**$ 34,450.4**	**$ 8,144.1**	**$ 1,238.8**	**$ 18,817.1**	**$ 23,055.6**	**$ 3,507.2**	**$ 53,267.5**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.44b, and E.44c.

Exhibit F.14b Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, Smoking/Lung Cancer Cessation Lag Model
(All Water Systems)

TTHM - Rectal Cancer Sensitivity Analysis

	3% Discount Rate			7% Discount Rate		
		90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 108.2	$ 16.6	$ 248.7	$ 89.4	$ 13.7	$ 205.5
2011	$ 234.3	$ 35.9	$ 538.9	$ 186.4	$ 28.5	$ 428.8
2012	$ 376.7	$ 57.6	$ 865.3	$ 288.5	$ 44.1	$ 662.7
2013	$ 532.5	$ 81.5	$ 1,223.1	$ 392.6	$ 60.1	$ 901.8
2014	$ 628.2	$ 96.0	$ 1,444.1	$ 445.8	$ 68.2	$ 1,024.9
2015	$ 704.7	$ 107.8	$ 1,620.8	$ 481.5	$ 73.6	$ 1,107.3
2016	$ 754.1	$ 115.2	$ 1,734.3	$ 496.0	$ 75.8	$ 1,140.5
2017	$ 791.1	$ 120.8	$ 1,820.9	$ 500.8	$ 76.5	$ 1,152.7
2018	$ 817.8	$ 124.7	$ 1,884.1	$ 498.4	$ 76.0	$ 1,148.1
2019	$ 836.5	$ 127.4	$ 1,930.3	$ 490.7	$ 74.7	$ 1,132.3
2020	$ 848.9	$ 129.3	$ 1,960.0	$ 479.4	$ 73.0	$ 1,106.8
2021	$ 856.5	$ 130.3	$ 1,977.6	$ 465.6	$ 70.8	$ 1,075.0
2022	$ 860.2	$ 130.8	$ 1,989.6	$ 450.1	$ 68.4	$ 1,041.0
2023	$ 860.9	$ 130.9	$ 1,991.5	$ 433.6	$ 65.9	$ 1,003.1
2024	$ 859.0	$ 130.6	$ 1,987.8	$ 416.5	$ 63.3	$ 963.8
2025	$ 855.0	$ 129.8	$ 1,978.9	$ 399.1	$ 60.6	$ 923.6
2026	$ 849.5	$ 128.8	$ 1,967.7	$ 381.7	$ 57.9	$ 884.0
2027	$ 842.5	$ 127.6	$ 1,954.6	$ 364.4	$ 55.2	$ 845.4
2028	$ 823.7	$ 124.8	$ 1,909.9	$ 342.9	$ 52.0	$ 795.1
2029	$ 813.0	$ 123.0	$ 1,886.7	$ 325.8	$ 49.3	$ 756.1
Total	**$ 14,253.3**	**$ 2,169.3**	**$ 32,914.9**	**$ 7,929.0**	**$ 1,207.6**	**$ 18,298.7**
Ann.	**$ 818.5**	**$ 124.6**	**$ 1,890.2**	**$ 680.4**	**$ 103.6**	**$ 1,570.2**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibit F.14a.

Exhibit F.14c Mean Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 3% Discount Rate, by System Size
(All Systems)

TTHM - Rectal Cancer Sensitivity Analysis

Smoking/Lung Cancer Cessation Lag Model										
Year	**<100**	**100-499**	**500-999**	**1,000-3,299**	**3,300-9,999**	**10,000-49,999**	**50,000-99,999**	**100,000-999,999**	**≥1,000,000**	**Total**
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.1	$ 0.9	$ 0.9	$ 3.2	$ 5.7	$ 17.4	$ 11.1	$ 41.3	$ 27.5	$ 108.2
2011	$ 0.2	$ 1.9	$ 2.1	$ 7.0	$ 12.4	$ 37.8	$ 24.0	$ 89.4	$ 59.6	$ 234.3
2012	$ 0.4	$ 3.0	$ 3.3	$ 11.3	$ 20.0	$ 60.7	$ 38.5	$ 143.7	$ 95.8	$ 376.7
2013	$ 0.6	$ 4.2	$ 4.7	$ 15.9	$ 28.3	$ 85.8	$ 54.4	$ 203.2	$ 135.5	$ 532.5
2014	$ 0.7	$ 5.5	$ 6.1	$ 20.9	$ 37.0	$ 112.3	$ 66.1	$ 227.7	$ 151.8	$ 628.2
2015	$ 0.9	$ 6.8	$ 7.6	$ 25.9	$ 46.0	$ 131.7	$ 72.5	$ 247.9	$ 165.3	$ 704.7
2016	$ 1.0	$ 7.4	$ 8.2	$ 28.2	$ 50.0	$ 142.5	$ 77.5	$ 263.5	$ 175.7	$ 754.1
2017	$ 1.1	$ 7.9	$ 8.8	$ 30.0	$ 53.3	$ 151.0	$ 81.3	$ 274.6	$ 183.1	$ 791.1
2018	$ 1.1	$ 8.3	$ 9.2	$ 31.4	$ 55.7	$ 157.3	$ 84.0	$ 282.5	$ 188.3	$ 817.8
2019	$ 1.2	$ 8.5	$ 9.5	$ 32.4	$ 57.5	$ 161.7	$ 85.8	$ 288.0	$ 192.0	$ 836.5
2020	$ 1.2	$ 8.7	$ 9.7	$ 33.1	$ 58.7	$ 164.7	$ 87.1	$ 291.5	$ 194.4	$ 848.9
2021	$ 1.2	$ 8.8	$ 9.8	$ 33.5	$ 59.4	$ 166.6	$ 87.8	$ 293.6	$ 195.7	$ 856.5
2022	$ 1.2	$ 8.9	$ 9.9	$ 33.8	$ 59.9	$ 167.7	$ 88.2	$ 294.4	$ 196.3	$ 860.2
2023	$ 1.2	$ 8.9	$ 9.9	$ 33.9	$ 60.1	$ 168.1	$ 88.2	$ 294.3	$ 196.2	$ 860.9
2024	$ 1.2	$ 8.9	$ 9.9	$ 33.9	$ 60.1	$ 168.0	$ 88.0	$ 293.3	$ 195.6	$ 859.0
2025	$ 1.2	$ 8.9	$ 9.9	$ 33.8	$ 59.9	$ 167.4	$ 87.6	$ 291.8	$ 194.5	$ 855.0
2026	$ 1.2	$ 8.9	$ 9.8	$ 33.6	$ 59.6	$ 166.5	$ 87.0	$ 289.7	$ 193.2	$ 849.5
2027	$ 1.2	$ 8.8	$ 9.8	$ 33.4	$ 59.2	$ 165.2	$ 86.3	$ 287.2	$ 191.5	$ 842.5
2028	$ 1.2	$ 8.6	$ 9.6	$ 32.7	$ 57.9	$ 161.7	$ 84.4	$ 280.6	$ 187.1	$ 823.7
2029	$ 1.1	$ 8.5	$ 9.4	$ 32.3	$ 57.2	$ 159.6	$ 83.2	$ 276.9	$ 184.6	$ 813.0
Total	**$ 19.2**	**$ 142.5**	**$ 157.9**	**$ 540.2**	**$ 958.0**	**$ 2,713.8**	**$ 1,462.9**	**$ 4,955.0**	**$ 3,303.6**	**$ 14,253.3**
Ann.	**$ 1.1**	**$ 8.2**	**$ 9.1**	**$ 31.0**	**$ 55.0**	**$ 155.9**	**$ 84.0**	**$ 284.6**	**$ 189.7**	**$ 818.5**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and E.44d.

Exhibit F.14d Mean Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 7% Discount Rate, by System Size
(All Systems)

TTHM - Rectal Cancer Sensitivity Analysis

Smoking/Lung Cancer Cessation Lag Model										
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.1	$ 0.7	$ 0.8	$ 2.7	$ 4.7	$ 14.4	$ 9.1	$ 34.1	$ 22.7	$ 89.4
2011	$ 0.2	$ 1.5	$ 1.6	$ 5.6	$ 9.9	$ 30.0	$ 19.1	$ 71.1	$ 47.4	$ 186.4
2012	$ 0.3	$ 2.3	$ 2.5	$ 8.6	$ 15.3	$ 46.5	$ 29.5	$ 110.1	$ 73.4	$ 288.5
2013	$ 0.4	$ 3.1	$ 3.4	$ 11.8	$ 20.8	$ 63.3	$ 40.1	$ 149.8	$ 99.9	$ 392.6
2014	$ 0.5	$ 3.9	$ 4.3	$ 14.8	$ 26.3	$ 79.7	$ 46.9	$ 161.6	$ 107.8	$ 445.8
2015	$ 0.6	$ 4.7	$ 5.2	$ 17.7	$ 31.4	$ 90.0	$ 49.5	$ 169.4	$ 112.9	$ 481.5
2016	$ 0.7	$ 4.9	$ 5.4	$ 18.6	$ 32.9	$ 93.7	$ 51.0	$ 173.3	$ 115.5	$ 496.0
2017	$ 0.7	$ 5.0	$ 5.6	$ 19.0	$ 33.7	$ 95.6	$ 51.5	$ 173.8	$ 115.9	$ 500.8
2018	$ 0.7	$ 5.1	$ 5.6	$ 19.1	$ 34.0	$ 95.8	$ 51.2	$ 172.1	$ 114.8	$ 498.4
2019	$ 0.7	$ 5.0	$ 5.6	$ 19.0	$ 33.7	$ 94.8	$ 50.3	$ 168.9	$ 112.6	$ 490.7
2020	$ 0.7	$ 4.9	$ 5.5	$ 18.7	$ 33.1	$ 93.0	$ 49.2	$ 164.6	$ 109.8	$ 479.4
2021	$ 0.6	$ 4.8	$ 5.3	$ 18.2	$ 32.3	$ 90.6	$ 47.7	$ 159.6	$ 106.4	$ 465.6
2022	$ 0.6	$ 4.7	$ 5.2	$ 17.7	$ 31.3	$ 87.8	$ 46.1	$ 154.0	$ 102.7	$ 450.1
2023	$ 0.6	$ 4.5	$ 5.0	$ 17.1	$ 30.3	$ 84.7	$ 44.4	$ 148.2	$ 98.8	$ 433.6
2024	$ 0.6	$ 4.3	$ 4.8	$ 16.4	$ 29.1	$ 81.5	$ 42.7	$ 142.2	$ 94.8	$ 416.5
2025	$ 0.6	$ 4.2	$ 4.6	$ 15.8	$ 28.0	$ 78.1	$ 40.9	$ 136.2	$ 90.8	$ 399.1
2026	$ 0.5	$ 4.0	$ 4.4	$ 15.1	$ 26.8	$ 74.8	$ 39.1	$ 130.2	$ 86.8	$ 381.7
2027	$ 0.5	$ 3.8	$ 4.2	$ 14.4	$ 25.6	$ 71.5	$ 37.3	$ 124.2	$ 82.8	$ 364.4
2028	$ 0.5	$ 3.6	$ 4.0	$ 13.6	$ 24.1	$ 67.3	$ 35.1	$ 116.8	$ 77.9	$ 342.9
2029	$ 0.5	$ 3.4	$ 3.8	$ 12.9	$ 22.9	$ 64.0	$ 33.4	$ 111.0	$ 74.0	$ 325.8
Total	**$ 10.6**	**$ 78.3**	**$ 86.8**	**$ 296.8**	**$ 526.4**	**$ 1,497.1**	**$ 814.1**	**$ 2,771.3**	**$ 1,847.7**	**$ 7,929.0**
Ann.	**$ 0.9**	**$ 6.7**	**$ 7.4**	**$ 25.5**	**$ 45.2**	**$ 128.5**	**$ 69.9**	**$ 237.8**	**$ 158.6**	**$ 680.4**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and E.44d.

Section F.15
Model Outputs - Rectal Cancer Sensitivity Analysis
TTHM as Indicator
Bronchitis for Non-Fatal Cases

Exhibit F.15a Projections of Yearly Benefits, WTP for Bronchitis as Basis for Non-Fatal Cases (Smoking/Lung Cancer Cessation Lag Model)

TTHM - Rectal Cancer Sensitivity Analysis

Year	Surface Water Systems			Ground Water Systems			All Systems		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 41.8	$ 9.2	$ 91.9	$ 20.2	$ 4.4	$ 44.4	$ 61.9	$ 13.6	$ 136.2
2011	$ 93.3	$ 20.5	$ 205.4	$ 45.0	$ 9.9	$ 99.2	$ 138.3	$ 30.4	$ 304.6
2012	$ 154.5	$ 33.9	$ 340.2	$ 74.6	$ 16.4	$ 164.2	$ 229.2	$ 50.3	$ 504.4
2013	$ 225.2	$ 49.4	$ 495.5	$ 108.7	$ 23.9	$ 239.2	$ 333.9	$ 73.3	$ 734.7
2014	$ 268.3	$ 58.8	$ 590.7	$ 137.7	$ 30.2	$ 303.2	$ 406.1	$ 89.0	$ 893.9
2015	$ 305.8	$ 66.9	$ 674.2	$ 163.8	$ 35.8	$ 361.2	$ 469.6	$ 102.7	$ 1,035.4
2016	$ 336.3	$ 73.5	$ 741.3	$ 181.7	$ 39.7	$ 400.5	$ 517.9	$ 113.2	$ 1,141.8
2017	$ 362.6	$ 79.1	$ 800.8	$ 197.5	$ 43.1	$ 436.1	$ 560.0	$ 122.2	$ 1,236.8
2018	$ 385.6	$ 84.0	$ 851.8	$ 211.2	$ 46.0	$ 466.7	$ 596.8	$ 130.0	$ 1,318.5
2019	$ 405.9	$ 88.2	$ 898.8	$ 223.3	$ 48.6	$ 494.5	$ 629.2	$ 136.8	$ 1,393.4
2020	$ 424.2	$ 92.1	$ 940.1	$ 234.1	$ 50.8	$ 518.8	$ 658.3	$ 142.9	$ 1,458.9
2021	$ 440.8	$ 95.6	$ 978.1	$ 243.8	$ 52.9	$ 541.1	$ 684.7	$ 148.4	$ 1,519.2
2022	$ 456.1	$ 98.7	$ 1,014.0	$ 252.8	$ 54.7	$ 561.9	$ 708.9	$ 153.4	$ 1,575.9
2023	$ 470.3	$ 101.5	$ 1,045.7	$ 261.0	$ 56.3	$ 580.3	$ 731.3	$ 157.8	$ 1,625.9
2024	$ 483.5	$ 104.2	$ 1,075.7	$ 268.6	$ 57.9	$ 597.6	$ 752.2	$ 162.1	$ 1,673.3
2025	$ 496.0	$ 106.7	$ 1,104.1	$ 275.8	$ 59.3	$ 614.0	$ 771.9	$ 166.0	$ 1,718.1
2026	$ 507.9	$ 109.1	$ 1,130.9	$ 282.6	$ 60.7	$ 629.3	$ 790.5	$ 169.8	$ 1,760.2
2027	$ 519.2	$ 111.4	$ 1,158.9	$ 289.1	$ 62.0	$ 645.4	$ 808.3	$ 173.4	$ 1,804.3
2028	$ 522.5	$ 112.1	$ 1,165.4	$ 291.1	$ 62.5	$ 649.3	$ 813.7	$ 174.6	$ 1,814.7
2029	$ 531.5	$ 113.9	$ 1,187.4	$ 296.2	$ 63.5	$ 661.9	$ 827.7	$ 177.4	$ 1,849.2
Total	**$ 7,431.2**	**$ 1,608.9**	**$ 16,490.8**	**$ 4,059.1**	**$ 878.6**	**$ 9,008.8**	**$ 11,490.3**	**$ 2,487.4**	**$ 25,499.6**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f, E.44b, and E.44c.

Exhibit F.15b Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, Smoking/Lung Cancer Cessation Lag Model
(All Water Systems)

TTHM - Rectal Cancer Sensitivity Analysis

	3% Discount Rate			7% Discount Rate		
		90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 53.4	$ 11.8	$ 117.5	$ 44.2	$ 9.7	$ 97.1
2011	$ 115.8	$ 25.5	$ 255.1	$ 92.2	$ 20.3	$ 203.0
2012	$ 186.3	$ 40.9	$ 410.1	$ 142.7	$ 31.3	$ 314.1
2013	$ 263.6	$ 57.9	$ 580.0	$ 194.4	$ 42.7	$ 427.6
2014	$ 311.2	$ 68.2	$ 685.1	$ 220.9	$ 48.4	$ 486.2
2015	$ 349.4	$ 76.4	$ 770.4	$ 238.7	$ 52.2	$ 526.3
2016	$ 374.2	$ 81.8	$ 824.9	$ 246.1	$ 53.8	$ 542.5
2017	$ 392.8	$ 85.7	$ 867.5	$ 248.7	$ 54.3	$ 549.2
2018	$ 406.4	$ 88.5	$ 897.8	$ 247.7	$ 53.9	$ 547.1
2019	$ 416.0	$ 90.4	$ 921.2	$ 244.0	$ 53.1	$ 540.4
2020	$ 422.5	$ 91.7	$ 936.4	$ 238.6	$ 51.8	$ 528.8
2021	$ 426.7	$ 92.5	$ 946.7	$ 231.9	$ 50.3	$ 514.6
2022	$ 428.9	$ 92.8	$ 953.5	$ 224.4	$ 48.5	$ 498.9
2023	$ 429.5	$ 92.7	$ 955.1	$ 216.4	$ 46.7	$ 481.1
2024	$ 429.0	$ 92.5	$ 954.2	$ 208.0	$ 44.8	$ 462.7
2025	$ 427.4	$ 91.9	$ 951.3	$ 199.5	$ 42.9	$ 444.0
2026	$ 424.9	$ 91.3	$ 946.2	$ 190.9	$ 41.0	$ 425.1
2027	$ 421.8	$ 90.5	$ 941.7	$ 182.4	$ 39.1	$ 407.3
2028	$ 412.3	$ 88.5	$ 919.5	$ 171.6	$ 36.8	$ 382.8
2029	$ 407.2	$ 87.3	$ 909.7	$ 163.2	$ 35.0	$ 364.6
Total	**$ 7,099.3**	**$ 1,538.7**	**$ 15,743.9**	**$ 3,946.3**	**$ 856.7**	**$ 8,743.3**
Ann.	**$ 407.7**	**$ 88.4**	**$ 904.1**	**$ 338.6**	**$ 73.5**	**$ 750.3**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibit F.15a.

Exhibit F.15c Mean Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, at 3% Discount Rate, by System Size
(All Systems)

TTHM - Rectal Cancer Sensitivity Analysis

Smoking/Lung Cancer Cessation Lag Model										
Year	**<100**	**100-499**	**500-999**	**1,000-3,299**	**3,300-9,999**	**10,000-49,999**	**50,000-99,999**	**100,000-999,999**	**≥1,000,000**	**Total**
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.1	$ 0.4	$ 0.5	$ 1.6	$ 2.8	$ 8.6	$ 5.5	$ 20.4	$ 13.6	$ 53.4
2011	$ 0.1	$ 0.9	$ 1.0	$ 3.5	$ 6.1	$ 18.7	$ 11.8	$ 44.2	$ 29.5	$ 115.8
2012	$ 0.2	$ 1.5	$ 1.6	$ 5.6	$ 9.9	$ 30.0	$ 19.0	$ 71.1	$ 47.4	$ 186.3
2013	$ 0.3	$ 2.1	$ 2.3	$ 7.9	$ 14.0	$ 42.5	$ 26.9	$ 100.6	$ 67.1	$ 263.6
2014	$ 0.4	$ 2.7	$ 3.0	$ 10.3	$ 18.3	$ 55.6	$ 32.8	$ 112.8	$ 75.2	$ 311.2
2015	$ 0.5	$ 3.4	$ 3.8	$ 12.9	$ 22.8	$ 65.3	$ 35.9	$ 122.9	$ 82.0	$ 349.4
2016	$ 0.5	$ 3.7	$ 4.1	$ 14.0	$ 24.8	$ 70.7	$ 38.5	$ 130.7	$ 87.2	$ 374.2
2017	$ 0.5	$ 3.9	$ 4.4	$ 14.9	$ 26.5	$ 75.0	$ 40.4	$ 136.3	$ 90.9	$ 392.8
2018	$ 0.6	$ 4.1	$ 4.6	$ 15.6	$ 27.7	$ 78.2	$ 41.7	$ 140.4	$ 93.6	$ 406.4
2019	$ 0.6	$ 4.3	$ 4.7	$ 16.1	$ 28.6	$ 80.4	$ 42.7	$ 143.2	$ 95.5	$ 416.0
2020	$ 0.6	$ 4.3	$ 4.8	$ 16.5	$ 29.2	$ 82.0	$ 43.3	$ 145.1	$ 96.7	$ 422.5
2021	$ 0.6	$ 4.4	$ 4.9	$ 16.7	$ 29.6	$ 83.0	$ 43.7	$ 146.2	$ 97.5	$ 426.7
2022	$ 0.6	$ 4.4	$ 4.9	$ 16.8	$ 29.9	$ 83.6	$ 44.0	$ 146.8	$ 97.9	$ 428.9
2023	$ 0.6	$ 4.5	$ 4.9	$ 16.9	$ 30.0	$ 83.9	$ 44.0	$ 146.8	$ 97.9	$ 429.5
2024	$ 0.6	$ 4.5	$ 4.9	$ 16.9	$ 30.0	$ 83.9	$ 43.9	$ 146.5	$ 97.7	$ 429.0
2025	$ 0.6	$ 4.5	$ 4.9	$ 16.9	$ 30.0	$ 83.7	$ 43.8	$ 145.8	$ 97.2	$ 427.4
2026	$ 0.6	$ 4.4	$ 4.9	$ 16.8	$ 29.8	$ 83.3	$ 43.5	$ 144.9	$ 96.6	$ 424.9
2027	$ 0.6	$ 4.4	$ 4.9	$ 16.7	$ 29.6	$ 82.7	$ 43.2	$ 143.8	$ 95.9	$ 421.8
2028	$ 0.6	$ 4.3	$ 4.8	$ 16.4	$ 29.0	$ 80.9	$ 42.2	$ 140.5	$ 93.7	$ 412.3
2029	$ 0.6	$ 4.3	$ 4.7	$ 16.2	$ 28.7	$ 80.0	$ 41.7	$ 138.7	$ 92.5	$ 407.2
Total	**$ 9.6**	**$ 71.0**	**$ 78.7**	**$ 269.1**	**$ 477.3**	**$ 1,351.9**	**$ 728.6**	**$ 2,467.8**	**$ 1,645.3**	**$ 7,099.3**
Ann.	**$ 0.6**	**$ 4.1**	**$ 4.5**	**$ 15.5**	**$ 27.4**	**$ 77.6**	**$ 41.8**	**$ 141.7**	**$ 94.5**	**$ 407.7**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and E.44d.

Exhibit F.15d Mean Present Value of Benefits Yearly Projections, WTP for Bronchitis as Basis for Non-Fatal Cases, at 7% Discount Rate, by System Size
(All Systems)

TTHM - Rectal Cancer Sensitivity Analysis

Smoking/Lung Cancer Cessation Lag Model										
Year	**<100**	**100-499**	**500-999**	**1,000-3,299**	**3,300-9,999**	**10,000-49,999**	**50,000-99,999**	**100,000-999,999**	**≥1,000,000**	**Total**
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.3	$ 0.4	$ 1.3	$ 2.3	$ 7.1	$ 4.5	$ 16.8	$ 11.2	$ 44.2
2011	$ 0.1	$ 0.7	$ 0.8	$ 2.8	$ 4.9	$ 14.9	$ 9.4	$ 35.2	$ 23.4	$ 92.2
2012	$ 0.2	$ 1.1	$ 1.2	$ 4.3	$ 7.6	$ 23.0	$ 14.6	$ 54.4	$ 36.3	$ 142.7
2013	$ 0.2	$ 1.5	$ 1.7	$ 5.8	$ 10.3	$ 31.3	$ 19.9	$ 74.2	$ 49.4	$ 194.4
2014	$ 0.3	$ 1.9	$ 2.1	$ 7.3	$ 13.0	$ 39.5	$ 23.3	$ 80.1	$ 53.4	$ 220.9
2015	$ 0.3	$ 2.3	$ 2.6	$ 8.8	$ 15.6	$ 44.6	$ 24.6	$ 84.0	$ 56.0	$ 238.7
2016	$ 0.3	$ 2.4	$ 2.7	$ 9.2	$ 16.3	$ 46.5	$ 25.3	$ 86.0	$ 57.3	$ 246.1
2017	$ 0.3	$ 2.5	$ 2.8	$ 9.4	$ 16.7	$ 47.5	$ 25.6	$ 86.3	$ 57.5	$ 248.7
2018	$ 0.3	$ 2.5	$ 2.8	$ 9.5	$ 16.9	$ 47.6	$ 25.4	$ 85.5	$ 57.0	$ 247.7
2019	$ 0.3	$ 2.5	$ 2.8	$ 9.5	$ 16.8	$ 47.2	$ 25.0	$ 84.0	$ 56.0	$ 244.0
2020	$ 0.3	$ 2.5	$ 2.7	$ 9.3	$ 16.5	$ 46.3	$ 24.5	$ 81.9	$ 54.6	$ 238.6
2021	$ 0.3	$ 2.4	$ 2.7	$ 9.1	$ 16.1	$ 45.1	$ 23.8	$ 79.5	$ 53.0	$ 231.9
2022	$ 0.3	$ 2.3	$ 2.6	$ 8.8	$ 15.6	$ 43.8	$ 23.0	$ 76.8	$ 51.2	$ 224.4
2023	$ 0.3	$ 2.2	$ 2.5	$ 8.5	$ 15.1	$ 42.3	$ 22.2	$ 74.0	$ 49.3	$ 216.4
2024	$ 0.3	$ 2.2	$ 2.4	$ 8.2	$ 14.6	$ 40.7	$ 21.3	$ 71.0	$ 47.4	$ 208.0
2025	$ 0.3	$ 2.1	$ 2.3	$ 7.9	$ 14.0	$ 39.1	$ 20.4	$ 68.1	$ 45.4	$ 199.5
2026	$ 0.3	$ 2.0	$ 2.2	$ 7.6	$ 13.4	$ 37.4	$ 19.6	$ 65.1	$ 43.4	$ 190.9
2027	$ 0.3	$ 1.9	$ 2.1	$ 7.2	$ 12.8	$ 35.8	$ 18.7	$ 62.2	$ 41.5	$ 182.4
2028	$ 0.2	$ 1.8	$ 2.0	$ 6.8	$ 12.1	$ 33.7	$ 17.6	$ 58.5	$ 39.0	$ 171.6
2029	$ 0.2	$ 1.7	$ 1.9	$ 6.5	$ 11.5	$ 32.0	$ 16.7	$ 55.6	$ 37.1	$ 163.2
Total	**$ 5.3**	**$ 39.0**	**$ 43.2**	**$ 147.8**	**$ 262.0**	**$ 745.2**	**$ 405.2**	**$ 1,379.1**	**$ 919.5**	**$ 3,946.3**
Ann.	**$ 0.5**	**$ 3.3**	**$ 3.7**	**$ 12.7**	**$ 22.5**	**$ 63.9**	**$ 34.8**	**$ 118.3**	**$ 78.9**	**$ 338.6**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and E.44d.

Section F.20
Model Outputs - Preferred Alternative, ICR
Matrix Method Only
TTHM as Indicator
Lymphoma for Non-Fatal Cases

Exhibit F.20a Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving <100 People)

TTHM - Preferred Alternative, ICR Matrix Method

	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
2011	$ 0.0	$ 0.0	$ 0.1	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.1
2012	$ 0.0	$ 0.0	$ 0.1	$ 0.0	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.2
2013	$ 0.1	$ 0.0	$ 0.2	$ 0.0	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.2
2014	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.3
2015	$ 0.1	$ 0.0	$ 0.3	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.4
2016	$ 0.2	$ 0.0	$ 0.4	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.5
2017	$ 0.2	$ 0.0	$ 0.4	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.5
2018	$ 0.2	$ 0.0	$ 0.5	$ 0.1	$ 0.0	$ 0.3	$ 0.3	$ 0.0	$ 0.6
2019	$ 0.2	$ 0.0	$ 0.5	$ 0.1	$ 0.0	$ 0.3	$ 0.3	$ 0.0	$ 0.6
2020	$ 0.2	$ 0.0	$ 0.5	$ 0.1	$ 0.0	$ 0.3	$ 0.3	$ 0.0	$ 0.7
2021	$ 0.2	$ 0.0	$ 0.6	$ 0.1	$ 0.0	$ 0.3	$ 0.3	$ 0.0	$ 0.7
2022	$ 0.3	$ 0.0	$ 0.6	$ 0.2	$ 0.0	$ 0.4	$ 0.3	$ 0.0	$ 0.7
2023	$ 0.3	$ 0.0	$ 0.6	$ 0.2	$ 0.0	$ 0.4	$ 0.3	$ 0.0	$ 0.7
2024	$ 0.3	$ 0.0	$ 0.6	$ 0.2	$ 0.0	$ 0.4	$ 0.3	$ 0.0	$ 0.7
2025	$ 0.3	$ 0.0	$ 0.7	$ 0.2	$ 0.0	$ 0.4	$ 0.3	$ 0.0	$ 0.8
2026	$ 0.3	$ 0.0	$ 0.7	$ 0.2	$ 0.0	$ 0.4	$ 0.3	$ 0.1	$ 0.8
2027	$ 0.3	$ 0.0	$ 0.7	$ 0.2	$ 0.0	$ 0.5	$ 0.3	$ 0.1	$ 0.8
2028	$ 0.3	$ 0.0	$ 0.7	$ 0.2	$ 0.0	$ 0.5	$ 0.3	$ 0.1	$ 0.8
2029	$ 0.3	$ 0.0	$ 0.7	$ 0.2	$ 0.0	$ 0.5	$ 0.3	$ 0.1	$ 0.8
Total	**$ 3.9**	**$ 0.6**	**$ 9.0**	**$ 2.5**	**$ 0.4**	**$ 5.7**	**$ 4.7**	**$ 0.7**	**$ 10.9**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.20b Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving 100-499 People)

TTHM - Preferred Alternative, ICR Matrix Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.3
2011	$ 0.2	$ 0.0	$ 0.5	$ 0.1	$ 0.0	$ 0.3	$ 0.4	$ 0.1	$ 0.8
2012	$ 0.4	$ 0.1	$ 0.9	$ 0.3	$ 0.0	$ 0.6	$ 0.6	$ 0.1	$ 1.5
2013	$ 0.6	$ 0.1	$ 1.4	$ 0.4	$ 0.1	$ 0.9	$ 1.0	$ 0.1	$ 2.2
2014	$ 0.9	$ 0.1	$ 2.0	$ 0.5	$ 0.1	$ 1.3	$ 1.3	$ 0.2	$ 3.0
2015	$ 1.2	$ 0.2	$ 2.7	$ 0.7	$ 0.1	$ 1.7	$ 1.7	$ 0.3	$ 3.9
2016	$ 1.4	$ 0.2	$ 3.3	$ 0.9	$ 0.1	$ 2.0	$ 2.0	$ 0.3	$ 4.5
2017	$ 1.6	$ 0.2	$ 3.8	$ 1.0	$ 0.1	$ 2.2	$ 2.2	$ 0.3	$ 5.0
2018	$ 1.8	$ 0.3	$ 4.2	$ 1.1	$ 0.2	$ 2.5	$ 2.4	$ 0.4	$ 5.4
2019	$ 2.0	$ 0.3	$ 4.6	$ 1.2	$ 0.2	$ 2.7	$ 2.5	$ 0.4	$ 5.8
2020	$ 2.1	$ 0.3	$ 4.9	$ 1.3	$ 0.2	$ 2.9	$ 2.6	$ 0.4	$ 6.1
2021	$ 2.3	$ 0.3	$ 5.2	$ 1.4	$ 0.2	$ 3.2	$ 2.7	$ 0.4	$ 6.3
2022	$ 2.4	$ 0.4	$ 5.5	$ 1.5	$ 0.2	$ 3.4	$ 2.8	$ 0.4	$ 6.5
2023	$ 2.5	$ 0.4	$ 5.7	$ 1.6	$ 0.2	$ 3.6	$ 2.9	$ 0.4	$ 6.7
2024	$ 2.6	$ 0.4	$ 6.0	$ 1.6	$ 0.2	$ 3.8	$ 3.0	$ 0.5	$ 6.9
2025	$ 2.7	$ 0.4	$ 6.2	$ 1.7	$ 0.3	$ 4.0	$ 3.0	$ 0.5	$ 7.0
2026	$ 2.7	$ 0.4	$ 6.3	$ 1.8	$ 0.3	$ 4.2	$ 3.1	$ 0.5	$ 7.2
2027	$ 2.8	$ 0.4	$ 6.5	$ 1.9	$ 0.3	$ 4.4	$ 3.2	$ 0.5	$ 7.3
2028	$ 2.8	$ 0.4	$ 6.6	$ 1.9	$ 0.3	$ 4.5	$ 3.2	$ 0.5	$ 7.3
2029	$ 2.9	$ 0.4	$ 6.7	$ 2.0	$ 0.3	$ 4.6	$ 3.2	$ 0.5	$ 7.4
Total	**$ 36.1**	**$ 5.5**	**$ 83.4**	**$ 22.9**	**$ 3.5**	**$ 52.8**	**$ 43.9**	**$ 6.7**	**$ 101.4**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.20c Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving 500-999 People)

TTHM - Preferred Alternative, ICR Matrix Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.2	$ 0.0	$ 0.3	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.6
2011	$ 0.4	$ 0.1	$ 0.9	$ 0.3	$ 0.0	$ 0.6	$ 0.6	$ 0.1	$ 1.5
2012	$ 0.7	$ 0.1	$ 1.6	$ 0.5	$ 0.1	$ 1.1	$ 1.1	$ 0.2	$ 2.6
2013	$ 1.1	$ 0.2	$ 2.5	$ 0.7	$ 0.1	$ 1.6	$ 1.7	$ 0.3	$ 3.9
2014	$ 1.6	$ 0.2	$ 3.6	$ 1.0	$ 0.1	$ 2.2	$ 2.3	$ 0.4	$ 5.3
2015	$ 2.1	$ 0.3	$ 4.8	$ 1.3	$ 0.2	$ 2.9	$ 3.0	$ 0.5	$ 6.9
2016	$ 2.5	$ 0.4	$ 5.8	$ 1.5	$ 0.2	$ 3.4	$ 3.5	$ 0.5	$ 8.0
2017	$ 2.9	$ 0.4	$ 6.6	$ 1.7	$ 0.3	$ 3.9	$ 3.9	$ 0.6	$ 8.9
2018	$ 3.2	$ 0.5	$ 7.4	$ 1.9	$ 0.3	$ 4.4	$ 4.2	$ 0.6	$ 9.6
2019	$ 3.5	$ 0.5	$ 8.1	$ 2.1	$ 0.3	$ 4.8	$ 4.4	$ 0.7	$ 10.2
2020	$ 3.8	$ 0.6	$ 8.7	$ 2.2	$ 0.3	$ 5.2	$ 4.6	$ 0.7	$ 10.7
2021	$ 4.0	$ 0.6	$ 9.2	$ 2.4	$ 0.4	$ 5.6	$ 4.8	$ 0.7	$ 11.1
2022	$ 4.2	$ 0.6	$ 9.7	$ 2.6	$ 0.4	$ 6.0	$ 5.0	$ 0.8	$ 11.5
2023	$ 4.4	$ 0.7	$ 10.1	$ 2.7	$ 0.4	$ 6.3	$ 5.1	$ 0.8	$ 11.8
2024	$ 4.5	$ 0.7	$ 10.5	$ 2.9	$ 0.4	$ 6.7	$ 5.2	$ 0.8	$ 12.1
2025	$ 4.7	$ 0.7	$ 10.8	$ 3.0	$ 0.5	$ 7.0	$ 5.4	$ 0.8	$ 12.4
2026	$ 4.8	$ 0.7	$ 11.2	$ 3.2	$ 0.5	$ 7.4	$ 5.5	$ 0.8	$ 12.6
2027	$ 5.0	$ 0.8	$ 11.5	$ 3.3	$ 0.5	$ 7.7	$ 5.6	$ 0.8	$ 12.9
2028	$ 5.0	$ 0.8	$ 11.6	$ 3.4	$ 0.5	$ 7.9	$ 5.6	$ 0.8	$ 12.9
2029	$ 5.1	$ 0.8	$ 11.9	$ 3.5	$ 0.5	$ 8.2	$ 5.6	$ 0.9	$ 13.1
Total	**$ 63.6**	**$ 9.7**	**$ 146.9**	**$ 40.3**	**$ 6.1**	**$ 93.1**	**$ 77.3**	**$ 11.8**	**$ 178.6**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.20d Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving 1,000-3,299 People)

TTHM - Preferred Alternative, ICR Matrix Method

	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 1.0	$ 0.1	$ 2.2	$ 0.7	$ 0.1	$ 1.6	$ 1.6	$ 0.2	$ 3.7
2011	$ 2.6	$ 0.4	$ 5.9	$ 1.7	$ 0.3	$ 3.9	$ 4.1	$ 0.6	$ 9.4
2012	$ 4.6	$ 0.7	$ 10.6	$ 3.0	$ 0.5	$ 6.8	$ 7.2	$ 1.1	$ 16.5
2013	$ 7.2	$ 1.1	$ 16.4	$ 4.5	$ 0.7	$ 10.3	$ 10.8	$ 1.7	$ 24.9
2014	$ 10.1	$ 1.5	$ 23.3	$ 6.2	$ 1.0	$ 14.4	$ 14.9	$ 2.3	$ 34.3
2015	$ 13.5	$ 2.1	$ 31.0	$ 8.2	$ 1.3	$ 18.9	$ 19.4	$ 3.0	$ 44.6
2016	$ 16.2	$ 2.5	$ 37.2	$ 9.7	$ 1.5	$ 22.2	$ 22.5	$ 3.4	$ 51.6
2017	$ 18.6	$ 2.8	$ 42.7	$ 11.0	$ 1.7	$ 25.3	$ 24.9	$ 3.8	$ 57.3
2018	$ 20.7	$ 3.2	$ 47.7	$ 12.2	$ 1.9	$ 28.1	$ 26.9	$ 4.1	$ 61.9
2019	$ 22.6	$ 3.4	$ 52.1	$ 13.4	$ 2.0	$ 30.9	$ 28.5	$ 4.3	$ 65.7
2020	$ 24.3	$ 3.7	$ 56.0	$ 14.5	$ 2.2	$ 33.5	$ 29.9	$ 4.5	$ 69.0
2021	$ 25.7	$ 3.9	$ 59.4	$ 15.6	$ 2.4	$ 36.0	$ 31.1	$ 4.7	$ 71.7
2022	$ 27.0	$ 4.1	$ 62.4	$ 16.6	$ 2.5	$ 38.5	$ 32.1	$ 4.9	$ 74.2
2023	$ 28.2	$ 4.3	$ 65.2	$ 17.6	$ 2.7	$ 40.8	$ 33.0	$ 5.0	$ 76.3
2024	$ 29.2	$ 4.4	$ 67.6	$ 18.6	$ 2.8	$ 43.1	$ 33.8	$ 5.1	$ 78.2
2025	$ 30.2	$ 4.6	$ 69.9	$ 19.6	$ 3.0	$ 45.2	$ 34.5	$ 5.2	$ 79.9
2026	$ 31.1	$ 4.7	$ 72.1	$ 20.5	$ 3.1	$ 47.4	$ 35.2	$ 5.3	$ 81.6
2027	$ 32.0	$ 4.8	$ 74.1	$ 21.4	$ 3.2	$ 49.6	$ 35.8	$ 5.4	$ 83.1
2028	$ 32.3	$ 4.9	$ 75.0	$ 22.0	$ 3.3	$ 50.9	$ 36.0	$ 5.4	$ 83.4
2029	$ 33.0	$ 5.0	$ 76.6	$ 22.7	$ 3.4	$ 52.8	$ 36.4	$ 5.5	$ 84.5
Total	**$ 409.9**	**$ 62.3**	**$ 947.4**	**$ 259.6**	**$ 39.5**	**$ 600.1**	**$ 498.5**	**$ 75.8**	**$ 1,151.9**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.20e Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving 3,300-9,999 People)

TTHM - Preferred Alternative, ICR Matrix Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 2.8	$ 0.4	$ 6.4	$ 2.0	$ 0.3	$ 4.6	$ 4.6	$ 0.7	$ 10.6
2011	$ 7.3	$ 1.1	$ 16.8	$ 4.9	$ 0.7	$ 11.2	$ 11.7	$ 1.8	$ 26.8
2012	$ 13.2	$ 2.0	$ 30.4	$ 8.5	$ 1.3	$ 19.6	$ 20.6	$ 3.2	$ 47.3
2013	$ 20.5	$ 3.1	$ 47.0	$ 12.9	$ 2.0	$ 29.5	$ 31.0	$ 4.8	$ 71.3
2014	$ 28.9	$ 4.4	$ 66.5	$ 17.9	$ 2.7	$ 41.1	$ 42.7	$ 6.5	$ 98.2
2015	$ 38.6	$ 5.9	$ 88.8	$ 23.5	$ 3.6	$ 54.0	$ 55.5	$ 8.5	$ 127.5
2016	$ 46.3	$ 7.1	$ 106.5	$ 27.6	$ 4.2	$ 63.5	$ 64.2	$ 9.8	$ 147.7
2017	$ 53.1	$ 8.1	$ 122.2	$ 31.4	$ 4.8	$ 72.3	$ 71.2	$ 10.9	$ 163.8
2018	$ 59.2	$ 9.0	$ 136.3	$ 34.9	$ 5.3	$ 80.5	$ 76.8	$ 11.7	$ 177.0
2019	$ 64.6	$ 9.8	$ 149.1	$ 38.3	$ 5.8	$ 88.4	$ 81.5	$ 12.4	$ 188.1
2020	$ 69.4	$ 10.6	$ 160.2	$ 41.5	$ 6.3	$ 95.8	$ 85.5	$ 13.0	$ 197.3
2021	$ 73.5	$ 11.2	$ 169.8	$ 44.6	$ 6.8	$ 102.9	$ 88.8	$ 13.5	$ 205.1
2022	$ 77.2	$ 11.7	$ 178.6	$ 47.6	$ 7.2	$ 110.0	$ 91.8	$ 14.0	$ 212.3
2023	$ 80.6	$ 12.3	$ 186.4	$ 50.4	$ 7.7	$ 116.7	$ 94.4	$ 14.4	$ 218.3
2024	$ 83.6	$ 12.7	$ 193.5	$ 53.2	$ 8.1	$ 123.2	$ 96.7	$ 14.7	$ 223.8
2025	$ 86.4	$ 13.1	$ 200.0	$ 55.9	$ 8.5	$ 129.4	$ 98.8	$ 15.0	$ 228.6
2026	$ 89.0	$ 13.5	$ 206.1	$ 58.6	$ 8.9	$ 135.6	$ 100.7	$ 15.3	$ 233.3
2027	$ 91.4	$ 13.8	$ 212.1	$ 61.1	$ 9.3	$ 141.8	$ 102.5	$ 15.5	$ 237.8
2028	$ 92.5	$ 14.0	$ 214.4	$ 62.8	$ 9.5	$ 145.6	$ 102.8	$ 15.6	$ 238.4
2029	$ 94.4	$ 14.3	$ 219.0	$ 65.1	$ 9.8	$ 151.0	$ 104.2	$ 15.8	$ 241.7
Total	**$ 1,172.5**	**$ 178.3**	**$ 2,710.1**	**$ 742.6**	**$ 112.9**	**$ 1,716.7**	**$ 1,425.9**	**$ 216.9**	**$ 3,294.9**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.20f Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving 10,000-49,999 People)

TTHM - Preferred Alternative, ICR Matrix Method

	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 17.6	$ 2.7	$ 40.4	$ 15.1	$ 2.3	$ 34.7	$ 31.4	$ 4.8	$ 72.2
2011	$ 45.6	$ 7.0	$ 104.9	$ 36.1	$ 5.5	$ 83.1	$ 77.8	$ 11.9	$ 178.9
2012	$ 82.6	$ 12.6	$ 189.7	$ 62.1	$ 9.5	$ 142.6	$ 135.4	$ 20.7	$ 311.0
2013	$ 127.8	$ 19.6	$ 293.5	$ 92.4	$ 14.1	$ 212.3	$ 201.9	$ 30.9	$ 463.7
2014	$ 181.3	$ 27.7	$ 416.7	$ 126.9	$ 19.4	$ 291.7	$ 275.8	$ 42.2	$ 634.0
2015	$ 233.4	$ 35.7	$ 536.8	$ 157.3	$ 24.1	$ 361.8	$ 339.5	$ 51.9	$ 780.7
2016	$ 277.3	$ 42.4	$ 637.7	$ 180.3	$ 27.5	$ 414.7	$ 384.0	$ 58.7	$ 883.1
2017	$ 316.7	$ 48.4	$ 729.1	$ 201.2	$ 30.7	$ 463.2	$ 419.5	$ 64.1	$ 965.7
2018	$ 352.3	$ 53.7	$ 811.6	$ 220.7	$ 33.7	$ 508.4	$ 448.8	$ 68.4	$ 1,033.9
2019	$ 383.8	$ 58.5	$ 885.8	$ 239.1	$ 36.4	$ 551.7	$ 473.3	$ 72.1	$ 1,092.3
2020	$ 411.2	$ 62.6	$ 949.4	$ 256.6	$ 39.1	$ 592.4	$ 494.4	$ 75.3	$ 1,141.4
2021	$ 435.0	$ 66.2	$ 1,004.5	$ 273.4	$ 41.6	$ 631.2	$ 512.6	$ 78.0	$ 1,183.6
2022	$ 456.2	$ 69.4	$ 1,055.1	$ 289.5	$ 44.0	$ 669.6	$ 528.8	$ 80.4	$ 1,222.9
2023	$ 475.2	$ 72.3	$ 1,099.3	$ 305.1	$ 46.4	$ 705.8	$ 543.2	$ 82.6	$ 1,256.6
2024	$ 492.5	$ 74.9	$ 1,139.8	$ 320.2	$ 48.7	$ 740.9	$ 556.3	$ 84.6	$ 1,287.3
2025	$ 508.4	$ 77.2	$ 1,176.7	$ 334.8	$ 50.8	$ 774.8	$ 568.3	$ 86.3	$ 1,315.2
2026	$ 523.2	$ 79.3	$ 1,211.9	$ 349.0	$ 52.9	$ 808.5	$ 579.4	$ 87.8	$ 1,342.1
2027	$ 537.0	$ 81.3	$ 1,245.8	$ 362.9	$ 54.9	$ 841.9	$ 589.8	$ 89.3	$ 1,368.4
2028	$ 542.9	$ 82.3	$ 1,258.7	$ 371.5	$ 56.3	$ 861.5	$ 591.9	$ 89.7	$ 1,372.5
2029	$ 553.7	$ 83.8	$ 1,285.0	$ 383.7	$ 58.1	$ 890.4	$ 599.8	$ 90.8	$ 1,392.1
Total	**$ 6,953.7**	**$ 1,057.3**	**$ 16,072.5**	**$ 4,577.9**	**$ 696.1**	**$ 10,581.2**	**$ 8,351.7**	**$ 1,270.3**	**$ 19,297.5**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.20g Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving 50,000-99,999 People)

TTHM - Preferred Alternative, ICR Matrix Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 15.3	$ 2.3	$ 35.2	$ 13.2	$ 2.0	$ 30.3	$ 27.4	$ 4.2	$ 62.9
2011	$ 39.7	$ 6.1	$ 91.4	$ 31.5	$ 4.8	$ 72.4	$ 67.8	$ 10.4	$ 155.9
2012	$ 71.9	$ 11.0	$ 165.3	$ 54.1	$ 8.3	$ 124.3	$ 118.0	$ 18.1	$ 271.0
2013	$ 111.4	$ 17.0	$ 255.8	$ 80.5	$ 12.3	$ 185.0	$ 175.9	$ 26.9	$ 404.1
2014	$ 150.0	$ 22.9	$ 344.8	$ 103.7	$ 15.9	$ 238.5	$ 226.1	$ 34.6	$ 519.7
2015	$ 182.7	$ 27.9	$ 420.2	$ 120.7	$ 18.5	$ 277.6	$ 260.5	$ 39.8	$ 599.2
2016	$ 212.3	$ 32.4	$ 488.3	$ 136.0	$ 20.8	$ 312.7	$ 287.8	$ 44.0	$ 661.8
2017	$ 239.2	$ 36.5	$ 550.5	$ 150.2	$ 22.9	$ 345.6	$ 310.0	$ 47.3	$ 713.7
2018	$ 263.0	$ 40.1	$ 605.9	$ 163.5	$ 24.9	$ 376.6	$ 328.6	$ 50.1	$ 757.1
2019	$ 283.6	$ 43.2	$ 654.4	$ 176.2	$ 26.8	$ 406.5	$ 344.5	$ 52.5	$ 794.9
2020	$ 301.4	$ 45.9	$ 695.8	$ 188.3	$ 28.7	$ 434.7	$ 358.2	$ 54.5	$ 826.9
2021	$ 317.1	$ 48.2	$ 732.1	$ 199.9	$ 30.4	$ 461.6	$ 370.2	$ 56.3	$ 854.7
2022	$ 331.2	$ 50.4	$ 765.9	$ 211.2	$ 32.1	$ 488.4	$ 380.9	$ 57.9	$ 880.8
2023	$ 343.9	$ 52.3	$ 795.6	$ 222.0	$ 33.8	$ 513.6	$ 390.5	$ 59.4	$ 903.4
2024	$ 355.6	$ 54.1	$ 823.0	$ 232.5	$ 35.3	$ 538.2	$ 399.3	$ 60.7	$ 924.1
2025	$ 366.4	$ 55.6	$ 848.0	$ 242.8	$ 36.9	$ 561.9	$ 407.5	$ 61.8	$ 943.0
2026	$ 376.5	$ 57.1	$ 872.1	$ 252.7	$ 38.3	$ 585.4	$ 415.1	$ 62.9	$ 961.4
2027	$ 385.9	$ 58.4	$ 895.4	$ 262.4	$ 39.7	$ 608.8	$ 422.2	$ 63.9	$ 979.5
2028	$ 389.8	$ 59.1	$ 903.7	$ 268.4	$ 40.7	$ 622.3	$ 423.5	$ 64.2	$ 981.9
2029	$ 397.2	$ 60.1	$ 921.8	$ 276.9	$ 41.9	$ 642.6	$ 428.9	$ 64.9	$ 995.5
Total	**$ 5,134.0**	**$ 780.7**	**$ 11,865.1**	**$ 3,386.6**	**$ 515.0**	**$ 7,827.0**	**$ 6,142.6**	**$ 934.4**	**$ 14,191.4**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.20h Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving 100,000-999,999 People)

TTHM - Preferred Alternative, ICR Matrix Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 67.8	$ 10.4	$ 155.7	$ 58.2	$ 8.9	$ 133.9	$ 121.0	$ 18.5	$ 278.2
2011	$ 175.8	$ 26.9	$ 404.4	$ 139.3	$ 21.3	$ 320.3	$ 299.9	$ 45.9	$ 689.7
2012	$ 318.3	$ 48.7	$ 731.1	$ 239.3	$ 36.6	$ 549.7	$ 521.8	$ 79.9	$ 1,198.8
2013	$ 492.6	$ 75.4	$ 1,131.5	$ 356.3	$ 54.5	$ 818.4	$ 778.2	$ 119.1	$ 1,787.6
2014	$ 628.3	$ 96.0	$ 1,444.2	$ 428.6	$ 65.5	$ 985.2	$ 937.1	$ 143.3	$ 2,154.3
2015	$ 752.4	$ 115.0	$ 1,730.3	$ 492.1	$ 75.2	$ 1,131.7	$ 1,060.1	$ 162.1	$ 2,437.9
2016	$ 866.1	$ 132.3	$ 1,991.9	$ 550.3	$ 84.1	$ 1,265.4	$ 1,159.1	$ 177.1	$ 2,665.6
2017	$ 969.0	$ 148.0	$ 2,230.5	$ 604.6	$ 92.3	$ 1,391.7	$ 1,240.9	$ 189.5	$ 2,856.3
2018	$ 1,058.7	$ 161.4	$ 2,439.0	$ 656.0	$ 100.0	$ 1,511.2	$ 1,309.7	$ 199.7	$ 3,017.2
2019	$ 1,135.0	$ 172.9	$ 2,619.3	$ 704.9	$ 107.4	$ 1,626.7	$ 1,368.6	$ 208.5	$ 3,158.3
2020	$ 1,201.7	$ 183.0	$ 2,774.4	$ 751.8	$ 114.5	$ 1,735.8	$ 1,419.8	$ 216.2	$ 3,278.0
2021	$ 1,261.0	$ 191.8	$ 2,911.6	$ 797.0	$ 121.2	$ 1,840.1	$ 1,465.1	$ 222.8	$ 3,382.7
2022	$ 1,314.4	$ 199.9	$ 3,040.0	$ 840.5	$ 127.8	$ 1,944.0	$ 1,505.5	$ 228.9	$ 3,481.9
2023	$ 1,363.0	$ 207.3	$ 3,153.1	$ 882.7	$ 134.3	$ 2,042.1	$ 1,542.1	$ 234.6	$ 3,567.6
2024	$ 1,407.6	$ 214.0	$ 3,257.6	$ 923.6	$ 140.4	$ 2,137.5	$ 1,575.8	$ 239.5	$ 3,646.7
2025	$ 1,449.0	$ 219.9	$ 3,353.6	$ 963.4	$ 146.2	$ 2,229.8	$ 1,607.0	$ 243.9	$ 3,719.1
2026	$ 1,487.7	$ 225.5	$ 3,446.1	$ 1,002.2	$ 151.9	$ 2,321.4	$ 1,636.2	$ 248.0	$ 3,790.0
2027	$ 1,524.1	$ 230.8	$ 3,535.8	$ 1,040.0	$ 157.5	$ 2,412.7	$ 1,663.8	$ 251.9	$ 3,860.0
2028	$ 1,538.4	$ 233.1	$ 3,566.9	$ 1,063.0	$ 161.1	$ 2,464.7	$ 1,668.3	$ 252.8	$ 3,868.2
2029	$ 1,567.0	$ 237.1	$ 3,636.8	$ 1,096.0	$ 165.9	$ 2,543.7	$ 1,689.3	$ 255.6	$ 3,920.5
Total	**$ 20,577.9**	**$ 3,129.5**	**$ 47,553.9**	**$ 13,589.8**	**$ 2,066.7**	**$ 31,406.1**	**$ 24,569.2**	**$ 3,737.9**	**$ 56,758.7**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.20i Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving ≥1,000,000 People)

TTHM - Preferred Alternative, ICR Matrix Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 57.7	$ 8.8	$ 132.6	$ 49.6	$ 7.6	$ 113.9	$ 103.0	$ 15.8	$ 236.8
2011	$ 149.6	$ 22.9	$ 344.1	$ 118.5	$ 18.1	$ 272.6	$ 255.2	$ 39.1	$ 587.0
2012	$ 270.9	$ 41.4	$ 622.2	$ 203.6	$ 31.2	$ 467.8	$ 444.1	$ 68.0	$ 1,020.3
2013	$ 419.2	$ 64.2	$ 963.0	$ 303.2	$ 46.4	$ 696.5	$ 662.3	$ 101.4	$ 1,521.3
2014	$ 534.7	$ 81.7	$ 1,229.1	$ 364.7	$ 55.8	$ 838.5	$ 797.6	$ 121.9	$ 1,833.4
2015	$ 640.3	$ 97.9	$ 1,472.6	$ 418.8	$ 64.0	$ 963.2	$ 902.2	$ 138.0	$ 2,074.8
2016	$ 737.1	$ 112.6	$ 1,695.2	$ 468.3	$ 71.5	$ 1,077.0	$ 986.5	$ 150.7	$ 2,268.6
2017	$ 824.7	$ 125.9	$ 1,898.3	$ 514.6	$ 78.6	$ 1,184.4	$ 1,056.0	$ 161.3	$ 2,430.9
2018	$ 901.0	$ 137.4	$ 2,075.8	$ 558.3	$ 85.1	$ 1,286.1	$ 1,114.6	$ 170.0	$ 2,567.9
2019	$ 966.0	$ 147.1	$ 2,229.1	$ 599.9	$ 91.4	$ 1,384.4	$ 1,164.8	$ 177.4	$ 2,687.9
2020	$ 1,022.7	$ 155.7	$ 2,361.2	$ 639.8	$ 97.4	$ 1,477.2	$ 1,208.4	$ 184.0	$ 2,789.8
2021	$ 1,073.2	$ 163.2	$ 2,477.9	$ 678.3	$ 103.2	$ 1,566.0	$ 1,246.8	$ 189.6	$ 2,878.8
2022	$ 1,118.6	$ 170.1	$ 2,587.2	$ 715.3	$ 108.8	$ 1,654.4	$ 1,281.3	$ 194.8	$ 2,963.3
2023	$ 1,160.0	$ 176.4	$ 2,683.5	$ 751.2	$ 114.3	$ 1,737.9	$ 1,312.5	$ 199.6	$ 3,036.2
2024	$ 1,198.0	$ 182.1	$ 2,772.4	$ 786.1	$ 119.5	$ 1,819.2	$ 1,341.1	$ 203.9	$ 3,103.6
2025	$ 1,233.2	$ 187.2	$ 2,854.1	$ 819.9	$ 124.5	$ 1,897.7	$ 1,367.6	$ 207.6	$ 3,165.2
2026	$ 1,266.1	$ 191.9	$ 2,932.8	$ 852.9	$ 129.3	$ 1,975.7	$ 1,392.5	$ 211.1	$ 3,225.5
2027	$ 1,297.1	$ 196.4	$ 3,009.2	$ 885.1	$ 134.0	$ 2,053.4	$ 1,416.0	$ 214.4	$ 3,285.1
2028	$ 1,309.2	$ 198.4	$ 3,035.7	$ 904.7	$ 137.1	$ 2,097.6	$ 1,419.8	$ 215.2	$ 3,292.1
2029	$ 1,333.6	$ 201.8	$ 3,095.1	$ 932.8	$ 141.2	$ 2,164.8	$ 1,437.7	$ 217.6	$ 3,336.6
Total	**$ 17,513.0**	**$ 2,663.4**	**$ 40,471.2**	**$ 11,565.7**	**$ 1,758.9**	**$ 26,728.4**	**$ 20,909.9**	**$ 3,181.1**	**$ 48,305.0**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.20j Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (All Surface Water Systems)

TTHM - Preferred Alternative, ICR Matrix Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 162.3	$ 24.8	$ 373.1	$ 138.9	$ 21.3	$ 319.3	$ 289.4	$ 44.3	$ 665.2
2011	$ 421.3	$ 64.5	$ 968.9	$ 332.4	$ 50.9	$ 764.6	$ 717.4	$ 109.8	$ 1,650.1
2012	$ 762.6	$ 116.7	$ 1,751.9	$ 571.3	$ 87.4	$ 1,312.5	$ 1,248.9	$ 191.1	$ 2,869.0
2013	$ 1,180.4	$ 180.7	$ 2,711.3	$ 851.0	$ 130.3	$ 1,954.7	$ 1,863.0	$ 285.2	$ 4,279.2
2014	$ 1,535.8	$ 234.8	$ 3,530.5	$ 1,049.6	$ 160.5	$ 2,412.8	$ 2,298.0	$ 351.3	$ 5,282.6
2015	$ 1,864.3	$ 285.1	$ 4,287.5	$ 1,222.7	$ 187.0	$ 2,811.9	$ 2,641.9	$ 404.0	$ 6,076.0
2016	$ 2,159.5	$ 329.9	$ 4,966.3	$ 1,374.6	$ 210.0	$ 3,161.2	$ 2,909.7	$ 444.5	$ 6,691.4
2017	$ 2,425.9	$ 370.4	$ 5,584.2	$ 1,515.7	$ 231.4	$ 3,488.9	$ 3,128.8	$ 477.8	$ 7,202.1
2018	$ 2,660.1	$ 405.6	$ 6,128.3	$ 1,648.6	$ 251.4	$ 3,798.2	$ 3,312.1	$ 505.0	$ 7,630.5
2019	$ 2,861.2	$ 435.9	$ 6,602.9	$ 1,775.1	$ 270.4	$ 4,096.5	$ 3,468.3	$ 528.3	$ 8,003.9
2020	$ 3,036.8	$ 462.4	$ 7,011.1	$ 1,896.2	$ 288.7	$ 4,377.8	$ 3,603.6	$ 548.7	$ 8,319.7
2021	$ 3,192.1	$ 485.5	$ 7,370.1	$ 2,012.6	$ 306.1	$ 4,646.9	$ 3,722.4	$ 566.2	$ 8,594.7
2022	$ 3,331.5	$ 506.6	$ 7,705.0	$ 2,124.9	$ 323.1	$ 4,914.5	$ 3,828.4	$ 582.1	$ 8,854.2
2023	$ 3,458.0	$ 525.9	$ 7,999.6	$ 2,233.6	$ 339.7	$ 5,167.1	$ 3,924.0	$ 596.8	$ 9,077.6
2024	$ 3,574.0	$ 543.3	$ 8,271.1	$ 2,338.9	$ 355.6	$ 5,412.9	$ 4,011.4	$ 609.8	$ 9,283.5
2025	$ 3,681.3	$ 558.8	$ 8,520.0	$ 2,441.4	$ 370.6	$ 5,650.2	$ 4,092.3	$ 621.2	$ 9,471.2
2026	$ 3,781.5	$ 573.2	$ 8,759.3	$ 2,541.1	$ 385.2	$ 5,886.1	$ 4,167.9	$ 631.8	$ 9,654.5
2027	$ 3,875.6	$ 586.8	$ 8,991.1	$ 2,638.3	$ 399.5	$ 6,120.8	$ 4,239.3	$ 641.9	$ 9,834.9
2028	$ 3,913.2	$ 593.0	$ 9,073.4	$ 2,697.9	$ 408.8	$ 6,255.5	$ 4,251.4	$ 644.3	$ 9,857.6
2029	$ 3,987.2	$ 603.4	$ 9,253.6	$ 2,782.9	$ 421.1	$ 6,458.7	$ 4,305.4	$ 651.6	$ 9,992.3
Total	**$ 51,864.5**	**$ 7,887.3**	**$ 119,859.5**	**$ 34,187.8**	**$ 5,198.9**	**$ 79,011.1**	**$ 62,023.7**	**$ 9,435.6**	**$ 143,290.4**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.20k Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving <100 People)

TTHM - Preferred Alternative, ICR Matrix Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.0	$ 0.1	$ 0.0	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.1
2011	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.4
2012	$ 0.2	$ 0.0	$ 0.4	$ 0.1	$ 0.0	$ 0.3	$ 0.3	$ 0.0	$ 0.7
2013	$ 0.3	$ 0.0	$ 0.6	$ 0.2	$ 0.0	$ 0.4	$ 0.4	$ 0.1	$ 1.0
2014	$ 0.4	$ 0.1	$ 0.9	$ 0.2	$ 0.0	$ 0.6	$ 0.6	$ 0.1	$ 1.4
2015	$ 0.5	$ 0.1	$ 1.2	$ 0.3	$ 0.0	$ 0.7	$ 0.8	$ 0.1	$ 1.8
2016	$ 0.6	$ 0.1	$ 1.5	$ 0.4	$ 0.1	$ 0.9	$ 0.9	$ 0.1	$ 2.0
2017	$ 0.7	$ 0.1	$ 1.7	$ 0.4	$ 0.1	$ 1.0	$ 1.0	$ 0.1	$ 2.3
2018	$ 0.8	$ 0.1	$ 1.9	$ 0.5	$ 0.1	$ 1.1	$ 1.1	$ 0.2	$ 2.4
2019	$ 0.9	$ 0.1	$ 2.1	$ 0.5	$ 0.1	$ 1.2	$ 1.1	$ 0.2	$ 2.6
2020	$ 1.0	$ 0.1	$ 2.2	$ 0.6	$ 0.1	$ 1.3	$ 1.2	$ 0.2	$ 2.7
2021	$ 1.0	$ 0.2	$ 2.3	$ 0.6	$ 0.1	$ 1.4	$ 1.2	$ 0.2	$ 2.8
2022	$ 1.1	$ 0.2	$ 2.5	$ 0.7	$ 0.1	$ 1.5	$ 1.3	$ 0.2	$ 2.9
2023	$ 1.1	$ 0.2	$ 2.6	$ 0.7	$ 0.1	$ 1.6	$ 1.3	$ 0.2	$ 3.0
2024	$ 1.2	$ 0.2	$ 2.7	$ 0.7	$ 0.1	$ 1.7	$ 1.3	$ 0.2	$ 3.1
2025	$ 1.2	$ 0.2	$ 2.8	$ 0.8	$ 0.1	$ 1.8	$ 1.4	$ 0.2	$ 3.2
2026	$ 1.2	$ 0.2	$ 2.8	$ 0.8	$ 0.1	$ 1.9	$ 1.4	$ 0.2	$ 3.2
2027	$ 1.3	$ 0.2	$ 2.9	$ 0.8	$ 0.1	$ 2.0	$ 1.4	$ 0.2	$ 3.3
2028	$ 1.3	$ 0.2	$ 3.0	$ 0.9	$ 0.1	$ 2.0	$ 1.4	$ 0.2	$ 3.3
2029	$ 1.3	$ 0.2	$ 3.0	$ 0.9	$ 0.1	$ 2.1	$ 1.4	$ 0.2	$ 3.3
Total	**$ 16.2**	**$ 2.5**	**$ 37.4**	**$ 10.2**	**$ 1.6**	**$ 23.7**	**$ 19.7**	**$ 3.0**	**$ 45.5**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.20l Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving 100-499 People)

TTHM - Preferred Alternative, ICR Matrix Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.3	$ 0.0	$ 0.7	$ 0.2	$ 0.0	$ 0.5	$ 0.5	$ 0.1	$ 1.1
2011	$ 0.7	$ 0.1	$ 1.7	$ 0.5	$ 0.1	$ 1.1	$ 1.2	$ 0.2	$ 2.7
2012	$ 1.3	$ 0.2	$ 3.1	$ 0.9	$ 0.1	$ 2.0	$ 2.1	$ 0.3	$ 4.8
2013	$ 2.1	$ 0.3	$ 4.8	$ 1.3	$ 0.2	$ 3.0	$ 3.2	$ 0.5	$ 7.3
2014	$ 3.0	$ 0.5	$ 6.8	$ 1.8	$ 0.3	$ 4.2	$ 4.4	$ 0.7	$ 10.0
2015	$ 3.9	$ 0.6	$ 9.1	$ 2.4	$ 0.4	$ 5.5	$ 5.7	$ 0.9	$ 13.0
2016	$ 4.7	$ 0.7	$ 10.9	$ 2.8	$ 0.4	$ 6.5	$ 6.5	$ 1.0	$ 15.1
2017	$ 5.4	$ 0.8	$ 12.5	$ 3.2	$ 0.5	$ 7.4	$ 7.3	$ 1.1	$ 16.7
2018	$ 6.0	$ 0.9	$ 13.9	$ 3.6	$ 0.5	$ 8.2	$ 7.8	$ 1.2	$ 18.0
2019	$ 6.6	$ 1.0	$ 15.2	$ 3.9	$ 0.6	$ 9.0	$ 8.3	$ 1.3	$ 19.2
2020	$ 7.1	$ 1.1	$ 16.3	$ 4.2	$ 0.6	$ 9.8	$ 8.7	$ 1.3	$ 20.1
2021	$ 7.5	$ 1.1	$ 17.3	$ 4.5	$ 0.7	$ 10.5	$ 9.1	$ 1.4	$ 20.9
2022	$ 7.9	$ 1.2	$ 18.2	$ 4.8	$ 0.7	$ 11.2	$ 9.4	$ 1.4	$ 21.6
2023	$ 8.2	$ 1.2	$ 19.0	$ 5.1	$ 0.8	$ 11.9	$ 9.6	$ 1.5	$ 22.3
2024	$ 8.5	$ 1.3	$ 19.7	$ 5.4	$ 0.8	$ 12.6	$ 9.9	$ 1.5	$ 22.8
2025	$ 8.8	$ 1.3	$ 20.4	$ 5.7	$ 0.9	$ 13.2	$ 10.1	$ 1.5	$ 23.3
2026	$ 9.1	$ 1.4	$ 21.0	$ 6.0	$ 0.9	$ 13.8	$ 10.3	$ 1.6	$ 23.8
2027	$ 9.3	$ 1.4	$ 21.6	$ 6.2	$ 0.9	$ 14.5	$ 10.5	$ 1.6	$ 24.2
2028	$ 9.4	$ 1.4	$ 21.9	$ 6.4	$ 1.0	$ 14.8	$ 10.5	$ 1.6	$ 24.3
2029	$ 9.6	$ 1.5	$ 22.3	$ 6.6	$ 1.0	$ 15.4	$ 10.6	$ 1.6	$ 24.6
Total	**$ 119.5**	**$ 18.2**	**$ 276.3**	**$ 75.7**	**$ 11.5**	**$ 175.0**	**$ 145.4**	**$ 22.1**	**$ 335.9**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.20m Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving 500-999 People)

TTHM - Preferred Alternative, ICR Matrix Method

	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.3	$ 0.0	$ 0.7	$ 0.2	$ 0.0	$ 0.5	$ 0.5	$ 0.1	$ 1.1
2011	$ 0.8	$ 0.1	$ 1.8	$ 0.5	$ 0.1	$ 1.2	$ 1.3	$ 0.2	$ 2.9
2012	$ 1.4	$ 0.2	$ 3.3	$ 0.9	$ 0.1	$ 2.1	$ 2.2	$ 0.3	$ 5.1
2013	$ 2.2	$ 0.3	$ 5.1	$ 1.4	$ 0.2	$ 3.2	$ 3.4	$ 0.5	$ 7.7
2014	$ 3.1	$ 0.5	$ 7.2	$ 1.9	$ 0.3	$ 4.5	$ 4.6	$ 0.7	$ 10.7
2015	$ 4.2	$ 0.6	$ 9.6	$ 2.5	$ 0.4	$ 5.9	$ 6.0	$ 0.9	$ 13.8
2016	$ 5.0	$ 0.8	$ 11.6	$ 3.0	$ 0.5	$ 6.9	$ 7.0	$ 1.1	$ 16.0
2017	$ 5.8	$ 0.9	$ 13.3	$ 3.4	$ 0.5	$ 7.8	$ 7.7	$ 1.2	$ 17.8
2018	$ 6.4	$ 1.0	$ 14.8	$ 3.8	$ 0.6	$ 8.7	$ 8.3	$ 1.3	$ 19.2
2019	$ 7.0	$ 1.1	$ 16.2	$ 4.2	$ 0.6	$ 9.6	$ 8.8	$ 1.3	$ 20.4
2020	$ 7.5	$ 1.1	$ 17.4	$ 4.5	$ 0.7	$ 10.4	$ 9.3	$ 1.4	$ 21.4
2021	$ 8.0	$ 1.2	$ 18.4	$ 4.8	$ 0.7	$ 11.2	$ 9.6	$ 1.5	$ 22.3
2022	$ 8.4	$ 1.3	$ 19.4	$ 5.2	$ 0.8	$ 11.9	$ 10.0	$ 1.5	$ 23.0
2023	$ 8.7	$ 1.3	$ 20.2	$ 5.5	$ 0.8	$ 12.7	$ 10.2	$ 1.6	$ 23.7
2024	$ 9.1	$ 1.4	$ 21.0	$ 5.8	$ 0.9	$ 13.4	$ 10.5	$ 1.6	$ 24.3
2025	$ 9.4	$ 1.4	$ 21.7	$ 6.1	$ 0.9	$ 14.0	$ 10.7	$ 1.6	$ 24.8
2026	$ 9.7	$ 1.5	$ 22.4	$ 6.4	$ 1.0	$ 14.7	$ 10.9	$ 1.7	$ 25.3
2027	$ 9.9	$ 1.5	$ 23.0	$ 6.6	$ 1.0	$ 15.4	$ 11.1	$ 1.7	$ 25.8
2028	$ 10.0	$ 1.5	$ 23.3	$ 6.8	$ 1.0	$ 15.8	$ 11.2	$ 1.7	$ 25.9
2029	$ 10.2	$ 1.5	$ 23.8	$ 7.1	$ 1.1	$ 16.4	$ 11.3	$ 1.7	$ 26.2
Total	**$ 127.2**	**$ 19.3**	**$ 294.0**	**$ 80.6**	**$ 12.2**	**$ 186.2**	**$ 154.7**	**$ 23.5**	**$ 357.4**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.20n Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving 1,000-3,299 People)

TTHM - Preferred Alternative, ICR Matrix Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.8	$ 0.1	$ 1.8	$ 0.5	$ 0.1	$ 1.3	$ 1.3	$ 0.2	$ 2.9
2011	$ 2.0	$ 0.3	$ 4.6	$ 1.3	$ 0.2	$ 3.1	$ 3.2	$ 0.5	$ 7.3
2012	$ 3.6	$ 0.6	$ 8.3	$ 2.3	$ 0.4	$ 5.4	$ 5.6	$ 0.9	$ 13.0
2013	$ 5.6	$ 0.9	$ 12.9	$ 3.5	$ 0.5	$ 8.1	$ 8.5	$ 1.3	$ 19.5
2014	$ 7.9	$ 1.2	$ 18.2	$ 4.9	$ 0.7	$ 11.3	$ 11.7	$ 1.8	$ 26.9
2015	$ 10.6	$ 1.6	$ 24.3	$ 6.4	$ 1.0	$ 14.8	$ 15.2	$ 2.3	$ 34.9
2016	$ 12.7	$ 1.9	$ 29.2	$ 7.6	$ 1.2	$ 17.4	$ 17.6	$ 2.7	$ 40.5
2017	$ 14.5	$ 2.2	$ 33.5	$ 8.6	$ 1.3	$ 19.8	$ 19.5	$ 3.0	$ 44.9
2018	$ 16.2	$ 2.5	$ 37.3	$ 9.6	$ 1.5	$ 22.1	$ 21.0	$ 3.2	$ 48.5
2019	$ 17.7	$ 2.7	$ 40.8	$ 10.5	$ 1.6	$ 24.2	$ 22.3	$ 3.4	$ 51.5
2020	$ 19.0	$ 2.9	$ 43.9	$ 11.4	$ 1.7	$ 26.3	$ 23.4	$ 3.6	$ 54.1
2021	$ 20.1	$ 3.1	$ 46.5	$ 12.2	$ 1.9	$ 28.2	$ 24.3	$ 3.7	$ 56.2
2022	$ 21.2	$ 3.2	$ 48.9	$ 13.0	$ 2.0	$ 30.1	$ 25.1	$ 3.8	$ 58.2
2023	$ 22.1	$ 3.4	$ 51.1	$ 13.8	$ 2.1	$ 32.0	$ 25.9	$ 3.9	$ 59.8
2024	$ 22.9	$ 3.5	$ 53.0	$ 14.6	$ 2.2	$ 33.7	$ 26.5	$ 4.0	$ 61.3
2025	$ 23.7	$ 3.6	$ 54.8	$ 15.3	$ 2.3	$ 35.5	$ 27.1	$ 4.1	$ 62.6
2026	$ 24.4	$ 3.7	$ 56.5	$ 16.0	$ 2.4	$ 37.2	$ 27.6	$ 4.2	$ 63.9
2027	$ 25.0	$ 3.8	$ 58.1	$ 16.7	$ 2.5	$ 38.9	$ 28.1	$ 4.3	$ 65.2
2028	$ 25.3	$ 3.8	$ 58.7	$ 17.2	$ 2.6	$ 39.9	$ 28.2	$ 4.3	$ 65.3
2029	$ 25.9	$ 3.9	$ 60.0	$ 17.8	$ 2.7	$ 41.4	$ 28.5	$ 4.3	$ 66.2
Total	**$ 321.2**	**$ 48.8**	**$ 742.5**	**$ 203.5**	**$ 30.9**	**$ 470.4**	**$ 390.7**	**$ 59.4**	**$ 902.7**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.20o Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving 3,300-9,999 People)

TTHM - Preferred Alternative, ICR Matrix Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 1.4	$ 0.2	$ 3.3	$ 1.0	$ 0.2	$ 2.4	$ 2.4	$ 0.4	$ 5.5
2011	$ 3.8	$ 0.6	$ 8.7	$ 2.5	$ 0.4	$ 5.8	$ 6.0	$ 0.9	$ 13.9
2012	$ 6.9	$ 1.0	$ 15.7	$ 4.4	$ 0.7	$ 10.1	$ 10.7	$ 1.6	$ 24.5
2013	$ 10.6	$ 1.6	$ 24.3	$ 6.7	$ 1.0	$ 15.3	$ 16.1	$ 2.5	$ 36.9
2014	$ 15.0	$ 2.3	$ 34.5	$ 9.3	$ 1.4	$ 21.3	$ 22.1	$ 3.4	$ 50.9
2015	$ 20.0	$ 3.1	$ 46.0	$ 12.2	$ 1.9	$ 28.0	$ 28.7	$ 4.4	$ 66.1
2016	$ 24.0	$ 3.7	$ 55.2	$ 14.3	$ 2.2	$ 32.9	$ 33.3	$ 5.1	$ 76.5
2017	$ 27.5	$ 4.2	$ 63.3	$ 16.3	$ 2.5	$ 37.4	$ 36.9	$ 5.6	$ 84.9
2018	$ 30.7	$ 4.7	$ 70.6	$ 18.1	$ 2.8	$ 41.7	$ 39.8	$ 6.1	$ 91.7
2019	$ 33.5	$ 5.1	$ 77.2	$ 19.8	$ 3.0	$ 45.8	$ 42.2	$ 6.4	$ 97.4
2020	$ 35.9	$ 5.5	$ 83.0	$ 21.5	$ 3.3	$ 49.6	$ 44.3	$ 6.7	$ 102.2
2021	$ 38.1	$ 5.8	$ 87.9	$ 23.1	$ 3.5	$ 53.3	$ 46.0	$ 7.0	$ 106.3
2022	$ 40.0	$ 6.1	$ 92.5	$ 24.6	$ 3.7	$ 57.0	$ 47.5	$ 7.2	$ 110.0
2023	$ 41.7	$ 6.3	$ 96.5	$ 26.1	$ 4.0	$ 60.4	$ 48.9	$ 7.4	$ 113.1
2024	$ 43.3	$ 6.6	$ 100.2	$ 27.6	$ 4.2	$ 63.8	$ 50.1	$ 7.6	$ 115.9
2025	$ 44.8	$ 6.8	$ 103.6	$ 29.0	$ 4.4	$ 67.1	$ 51.2	$ 7.8	$ 118.4
2026	$ 46.1	$ 7.0	$ 106.8	$ 30.3	$ 4.6	$ 70.3	$ 52.2	$ 7.9	$ 120.8
2027	$ 47.4	$ 7.2	$ 109.9	$ 31.7	$ 4.8	$ 73.5	$ 53.1	$ 8.0	$ 123.2
2028	$ 47.9	$ 7.3	$ 111.1	$ 32.5	$ 4.9	$ 75.4	$ 53.3	$ 8.1	$ 123.5
2029	$ 48.9	$ 7.4	$ 113.5	$ 33.7	$ 5.1	$ 78.2	$ 54.0	$ 8.2	$ 125.2
Total	**$ 607.4**	**$ 92.3**	**$ 1,403.9**	**$ 384.7**	**$ 58.5**	**$ 889.3**	**$ 738.6**	**$ 112.3**	**$ 1,706.8**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.20p Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving 10,000-49,999 People)

TTHM - Preferred Alternative, ICR Matrix Method

	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 1.8	$ 0.3	$ 4.1	$ 1.3	$ 0.2	$ 2.9	$ 2.9	$ 0.5	$ 6.8
2011	$ 4.7	$ 0.7	$ 10.8	$ 3.1	$ 0.5	$ 7.2	$ 7.5	$ 1.1	$ 17.2
2012	$ 8.5	$ 1.3	$ 19.5	$ 5.5	$ 0.8	$ 12.5	$ 13.2	$ 2.0	$ 30.3
2013	$ 13.1	$ 2.0	$ 30.1	$ 8.2	$ 1.3	$ 18.9	$ 19.9	$ 3.0	$ 45.7
2014	$ 18.5	$ 2.8	$ 42.6	$ 11.4	$ 1.7	$ 26.3	$ 27.4	$ 4.2	$ 62.9
2015	$ 23.8	$ 3.6	$ 54.7	$ 14.4	$ 2.2	$ 33.1	$ 34.0	$ 5.2	$ 78.2
2016	$ 28.2	$ 4.3	$ 64.8	$ 16.7	$ 2.6	$ 38.5	$ 38.8	$ 5.9	$ 89.2
2017	$ 32.1	$ 4.9	$ 73.8	$ 18.9	$ 2.9	$ 43.5	$ 42.6	$ 6.5	$ 98.1
2018	$ 35.5	$ 5.4	$ 81.8	$ 20.9	$ 3.2	$ 48.2	$ 45.8	$ 7.0	$ 105.4
2019	$ 38.6	$ 5.9	$ 89.1	$ 22.9	$ 3.5	$ 52.8	$ 48.4	$ 7.4	$ 111.7
2020	$ 41.3	$ 6.3	$ 95.3	$ 24.7	$ 3.8	$ 57.1	$ 50.6	$ 7.7	$ 116.8
2021	$ 43.6	$ 6.6	$ 100.8	$ 26.5	$ 4.0	$ 61.3	$ 52.5	$ 8.0	$ 121.3
2022	$ 45.8	$ 7.0	$ 105.8	$ 28.3	$ 4.3	$ 65.4	$ 54.2	$ 8.2	$ 125.3
2023	$ 47.7	$ 7.2	$ 110.3	$ 29.9	$ 4.6	$ 69.3	$ 55.7	$ 8.5	$ 128.8
2024	$ 49.4	$ 7.5	$ 114.3	$ 31.6	$ 4.8	$ 73.0	$ 57.0	$ 8.7	$ 131.9
2025	$ 51.0	$ 7.7	$ 118.1	$ 33.1	$ 5.0	$ 76.7	$ 58.2	$ 8.8	$ 134.7
2026	$ 52.5	$ 8.0	$ 121.6	$ 34.7	$ 5.3	$ 80.3	$ 59.3	$ 9.0	$ 137.3
2027	$ 53.9	$ 8.2	$ 125.0	$ 36.2	$ 5.5	$ 83.9	$ 60.3	$ 9.1	$ 139.9
2028	$ 54.5	$ 8.3	$ 126.4	$ 37.1	$ 5.6	$ 86.1	$ 60.5	$ 9.2	$ 140.3
2029	$ 55.6	$ 8.4	$ 129.0	$ 38.4	$ 5.8	$ 89.2	$ 61.3	$ 9.3	$ 142.2
Total	**$ 700.0**	**$ 106.4**	**$ 1,617.9**	**$ 444.0**	**$ 67.5**	**$ 1,026.3**	**$ 849.9**	**$ 129.3**	**$ 1,963.8**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.20q Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving 50,000-99,999 People)

TTHM - Preferred Alternative, ICR Matrix Method

	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.7	$ 0.1	$ 1.7	$ 0.5	$ 0.1	$ 1.2	$ 1.2	$ 0.2	$ 2.8
2011	$ 2.0	$ 0.3	$ 4.5	$ 1.3	$ 0.2	$ 3.0	$ 3.1	$ 0.5	$ 7.2
2012	$ 3.5	$ 0.5	$ 8.2	$ 2.3	$ 0.3	$ 5.2	$ 5.5	$ 0.8	$ 12.7
2013	$ 5.5	$ 0.8	$ 12.6	$ 3.4	$ 0.5	$ 7.9	$ 8.3	$ 1.3	$ 19.1
2014	$ 7.4	$ 1.1	$ 17.0	$ 4.5	$ 0.7	$ 10.4	$ 10.8	$ 1.7	$ 24.9
2015	$ 8.9	$ 1.4	$ 20.6	$ 5.3	$ 0.8	$ 12.3	$ 12.6	$ 1.9	$ 29.0
2016	$ 10.3	$ 1.6	$ 23.8	$ 6.1	$ 0.9	$ 14.0	$ 14.0	$ 2.1	$ 32.2
2017	$ 11.6	$ 1.8	$ 26.7	$ 6.8	$ 1.0	$ 15.7	$ 15.2	$ 2.3	$ 34.9
2018	$ 12.7	$ 1.9	$ 29.3	$ 7.5	$ 1.1	$ 17.3	$ 16.1	$ 2.5	$ 37.2
2019	$ 13.7	$ 2.1	$ 31.6	$ 8.1	$ 1.2	$ 18.8	$ 16.9	$ 2.6	$ 39.1
2020	$ 14.5	$ 2.2	$ 33.5	$ 8.8	$ 1.3	$ 20.2	$ 17.6	$ 2.7	$ 40.7
2021	$ 15.3	$ 2.3	$ 35.3	$ 9.4	$ 1.4	$ 21.6	$ 18.2	$ 2.8	$ 42.1
2022	$ 16.0	$ 2.4	$ 36.9	$ 9.9	$ 1.5	$ 23.0	$ 18.8	$ 2.9	$ 43.4
2023	$ 16.6	$ 2.5	$ 38.3	$ 10.5	$ 1.6	$ 24.3	$ 19.2	$ 2.9	$ 44.5
2024	$ 17.1	$ 2.6	$ 39.7	$ 11.0	$ 1.7	$ 25.5	$ 19.7	$ 3.0	$ 45.5
2025	$ 17.7	$ 2.7	$ 40.9	$ 11.6	$ 1.8	$ 26.8	$ 20.0	$ 3.0	$ 46.4
2026	$ 18.2	$ 2.8	$ 42.1	$ 12.1	$ 1.8	$ 28.0	$ 20.4	$ 3.1	$ 47.3
2027	$ 18.6	$ 2.8	$ 43.2	$ 12.6	$ 1.9	$ 29.2	$ 20.7	$ 3.1	$ 48.1
2028	$ 18.8	$ 2.8	$ 43.6	$ 12.9	$ 2.0	$ 29.9	$ 20.8	$ 3.2	$ 48.2
2029	$ 19.2	$ 2.9	$ 44.5	$ 13.4	$ 2.0	$ 31.0	$ 21.0	$ 3.2	$ 48.8
Total	**$ 248.3**	**$ 37.8**	**$ 573.9**	**$ 158.0**	**$ 24.0**	**$ 365.3**	**$ 300.4**	**$ 45.7**	**$ 694.1**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.20r Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving 100,000-999,999 People)

TTHM - Preferred Alternative, ICR Matrix Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 2.1	$ 0.3	$ 4.8	$ 1.5	$ 0.2	$ 3.4	$ 3.4	$ 0.5	$ 7.9
2011	$ 5.4	$ 0.8	$ 12.5	$ 3.6	$ 0.6	$ 8.3	$ 8.7	$ 1.3	$ 19.9
2012	$ 9.8	$ 1.5	$ 22.6	$ 6.3	$ 1.0	$ 14.5	$ 15.3	$ 2.3	$ 35.2
2013	$ 15.2	$ 2.3	$ 34.9	$ 9.6	$ 1.5	$ 22.0	$ 23.1	$ 3.5	$ 53.0
2014	$ 19.4	$ 3.0	$ 44.5	$ 11.7	$ 1.8	$ 27.0	$ 28.2	$ 4.3	$ 64.9
2015	$ 23.1	$ 3.5	$ 53.1	$ 13.7	$ 2.1	$ 31.5	$ 32.2	$ 4.9	$ 74.1
2016	$ 26.4	$ 4.0	$ 60.8	$ 15.5	$ 2.4	$ 35.7	$ 35.5	$ 5.4	$ 81.5
2017	$ 29.4	$ 4.5	$ 67.7	$ 17.2	$ 2.6	$ 39.7	$ 38.1	$ 5.8	$ 87.7
2018	$ 32.0	$ 4.9	$ 73.8	$ 18.9	$ 2.9	$ 43.5	$ 40.3	$ 6.1	$ 92.9
2019	$ 34.3	$ 5.2	$ 79.2	$ 20.4	$ 3.1	$ 47.2	$ 42.2	$ 6.4	$ 97.4
2020	$ 36.3	$ 5.5	$ 83.8	$ 21.9	$ 3.3	$ 50.7	$ 43.8	$ 6.7	$ 101.1
2021	$ 38.1	$ 5.8	$ 87.9	$ 23.4	$ 3.6	$ 54.0	$ 45.2	$ 6.9	$ 104.4
2022	$ 39.7	$ 6.0	$ 91.8	$ 24.8	$ 3.8	$ 57.4	$ 46.5	$ 7.1	$ 107.4
2023	$ 41.2	$ 6.3	$ 95.2	$ 26.2	$ 4.0	$ 60.6	$ 47.6	$ 7.2	$ 110.1
2024	$ 42.5	$ 6.5	$ 98.4	$ 27.5	$ 4.2	$ 63.7	$ 48.6	$ 7.4	$ 112.4
2025	$ 43.8	$ 6.6	$ 101.3	$ 28.8	$ 4.4	$ 66.6	$ 49.5	$ 7.5	$ 114.6
2026	$ 45.0	$ 6.8	$ 104.1	$ 30.1	$ 4.6	$ 69.6	$ 50.4	$ 7.6	$ 116.7
2027	$ 46.1	$ 7.0	$ 106.9	$ 31.3	$ 4.7	$ 72.6	$ 51.2	$ 7.8	$ 118.8
2028	$ 46.5	$ 7.0	$ 107.8	$ 32.1	$ 4.9	$ 74.3	$ 51.3	$ 7.8	$ 119.0
2029	$ 47.4	$ 7.2	$ 110.0	$ 33.1	$ 5.0	$ 76.9	$ 51.9	$ 7.9	$ 120.5
Total	**$ 623.6**	**$ 94.8**	**$ 1,441.1**	**$ 397.7**	**$ 60.5**	**$ 919.1**	**$ 753.0**	**$ 114.5**	**$ 1,739.5**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.20s Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving ≥1,000,000 People)

TTHM - Preferred Alternative, ICR Matrix Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.3	$ 0.1	$ 0.8	$ 0.2	$ 0.0	$ 0.6	$ 0.6	$ 0.1	$ 1.3
2011	$ 0.9	$ 0.1	$ 2.1	$ 0.6	$ 0.1	$ 1.4	$ 1.4	$ 0.2	$ 3.3
2012	$ 1.6	$ 0.3	$ 3.8	$ 1.1	$ 0.2	$ 2.4	$ 2.5	$ 0.4	$ 5.9
2013	$ 2.5	$ 0.4	$ 5.8	$ 1.6	$ 0.2	$ 3.7	$ 3.8	$ 0.6	$ 8.8
2014	$ 3.2	$ 0.5	$ 7.4	$ 2.0	$ 0.3	$ 4.5	$ 4.7	$ 0.7	$ 10.8
2015	$ 3.8	$ 0.6	$ 8.8	$ 2.3	$ 0.3	$ 5.2	$ 5.4	$ 0.8	$ 12.3
2016	$ 4.4	$ 0.7	$ 10.1	$ 2.6	$ 0.4	$ 5.9	$ 5.9	$ 0.9	$ 13.6
2017	$ 4.9	$ 0.7	$ 11.3	$ 2.9	$ 0.4	$ 6.6	$ 6.3	$ 1.0	$ 14.6
2018	$ 5.3	$ 0.8	$ 12.3	$ 3.1	$ 0.5	$ 7.2	$ 6.7	$ 1.0	$ 15.5
2019	$ 5.7	$ 0.9	$ 13.2	$ 3.4	$ 0.5	$ 7.9	$ 7.0	$ 1.1	$ 16.2
2020	$ 6.0	$ 0.9	$ 14.0	$ 3.7	$ 0.6	$ 8.4	$ 7.3	$ 1.1	$ 16.8
2021	$ 6.3	$ 1.0	$ 14.6	$ 3.9	$ 0.6	$ 9.0	$ 7.5	$ 1.1	$ 17.4
2022	$ 6.6	$ 1.0	$ 15.3	$ 4.1	$ 0.6	$ 9.6	$ 7.7	$ 1.2	$ 17.9
2023	$ 6.9	$ 1.0	$ 15.9	$ 4.4	$ 0.7	$ 10.1	$ 7.9	$ 1.2	$ 18.3
2024	$ 7.1	$ 1.1	$ 16.4	$ 4.6	$ 0.7	$ 10.6	$ 8.1	$ 1.2	$ 18.7
2025	$ 7.3	$ 1.1	$ 16.9	$ 4.8	$ 0.7	$ 11.1	$ 8.2	$ 1.3	$ 19.1
2026	$ 7.5	$ 1.1	$ 17.3	$ 5.0	$ 0.8	$ 11.6	$ 8.4	$ 1.3	$ 19.4
2027	$ 7.7	$ 1.2	$ 17.8	$ 5.2	$ 0.8	$ 12.1	$ 8.5	$ 1.3	$ 19.8
2028	$ 7.7	$ 1.2	$ 18.0	$ 5.3	$ 0.8	$ 12.4	$ 8.5	$ 1.3	$ 19.8
2029	$ 7.9	$ 1.2	$ 18.3	$ 5.5	$ 0.8	$ 12.8	$ 8.6	$ 1.3	$ 20.1
Total	**$ 103.9**	**$ 15.8**	**$ 240.0**	**$ 66.2**	**$ 10.1**	**$ 153.1**	**$ 125.4**	**$ 19.1**	**$ 289.7**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.20t Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (All Ground Water Systems)

TTHM - Preferred Alternative, ICR Matrix Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 7.8	$ 1.2	$ 17.9	$ 5.6	$ 0.9	$ 12.8	$ 12.8	$ 2.0	$ 29.5
2011	$ 20.4	$ 3.1	$ 46.9	$ 13.6	$ 2.1	$ 31.3	$ 32.5	$ 5.0	$ 74.8
2012	$ 36.9	$ 5.7	$ 84.9	$ 23.8	$ 3.6	$ 54.6	$ 57.5	$ 8.8	$ 132.1
2013	$ 57.1	$ 8.7	$ 131.2	$ 35.9	$ 5.5	$ 82.5	$ 86.7	$ 13.3	$ 199.1
2014	$ 77.9	$ 11.9	$ 179.1	$ 47.8	$ 7.3	$ 109.9	$ 114.5	$ 17.5	$ 263.3
2015	$ 98.9	$ 15.1	$ 227.5	$ 59.6	$ 9.1	$ 137.0	$ 140.5	$ 21.5	$ 323.2
2016	$ 116.4	$ 17.8	$ 267.7	$ 69.0	$ 10.5	$ 158.7	$ 159.4	$ 24.4	$ 366.7
2017	$ 131.9	$ 20.1	$ 303.7	$ 77.7	$ 11.9	$ 178.9	$ 174.6	$ 26.7	$ 401.8
2018	$ 145.8	$ 22.2	$ 335.8	$ 86.0	$ 13.1	$ 198.0	$ 187.0	$ 28.5	$ 430.8
2019	$ 158.0	$ 24.1	$ 364.5	$ 93.8	$ 14.3	$ 216.4	$ 197.4	$ 30.1	$ 455.5
2020	$ 168.7	$ 25.7	$ 389.4	$ 101.3	$ 15.4	$ 233.8	$ 206.2	$ 31.4	$ 476.0
2021	$ 178.1	$ 27.1	$ 411.2	$ 108.5	$ 16.5	$ 250.5	$ 213.8	$ 32.5	$ 493.6
2022	$ 186.5	$ 28.4	$ 431.3	$ 115.5	$ 17.6	$ 267.1	$ 220.4	$ 33.5	$ 509.7
2023	$ 194.1	$ 29.5	$ 449.1	$ 122.2	$ 18.6	$ 282.8	$ 226.3	$ 34.4	$ 523.5
2024	$ 201.1	$ 30.6	$ 465.4	$ 128.8	$ 19.6	$ 298.0	$ 231.6	$ 35.2	$ 535.9
2025	$ 207.5	$ 31.5	$ 480.3	$ 135.1	$ 20.5	$ 312.8	$ 236.4	$ 35.9	$ 547.1
2026	$ 213.5	$ 32.4	$ 494.6	$ 141.3	$ 21.4	$ 327.4	$ 240.8	$ 36.5	$ 557.8
2027	$ 219.1	$ 33.2	$ 508.4	$ 147.4	$ 22.3	$ 341.9	$ 245.0	$ 37.1	$ 568.3
2028	$ 221.5	$ 33.6	$ 513.7	$ 151.3	$ 22.9	$ 350.7	$ 245.6	$ 37.2	$ 569.6
2029	$ 226.0	$ 34.2	$ 524.4	$ 156.6	$ 23.7	$ 363.4	$ 248.7	$ 37.6	$ 577.2
Total	**$ 2,867.3**	**$ 436.0**	**$ 6,627.1**	**$ 1,820.6**	**$ 276.8**	**$ 4,208.5**	**$ 3,477.7**	**$ 529.0**	**$ 8,035.4**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.20u Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (All Water Systems)

TTHM - Preferred Alternative, ICR Matrix Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 170.1	$ 26.0	$ 391.1	$ 144.5	$ 22.1	$ 332.1	$ 302.2	$ 46.3	$ 694.7
2011	$ 441.6	$ 67.6	$ 1,015.8	$ 346.0	$ 53.0	$ 795.9	$ 749.9	$ 114.8	$ 1,724.9
2012	$ 799.6	$ 122.4	$ 1,836.8	$ 595.1	$ 91.1	$ 1,367.1	$ 1,306.4	$ 199.9	$ 3,001.1
2013	$ 1,237.5	$ 189.4	$ 2,842.6	$ 886.9	$ 135.8	$ 2,037.2	$ 1,949.7	$ 298.4	$ 4,478.2
2014	$ 1,613.7	$ 246.7	$ 3,709.7	$ 1,097.4	$ 167.8	$ 2,522.7	$ 2,412.5	$ 368.8	$ 5,545.9
2015	$ 1,963.2	$ 300.2	$ 4,515.0	$ 1,282.3	$ 196.1	$ 2,949.0	$ 2,782.5	$ 425.5	$ 6,399.2
2016	$ 2,276.0	$ 347.7	$ 5,234.0	$ 1,443.6	$ 220.5	$ 3,319.9	$ 3,069.1	$ 468.8	$ 7,058.1
2017	$ 2,557.9	$ 390.6	$ 5,888.0	$ 1,593.4	$ 243.3	$ 3,667.8	$ 3,303.4	$ 504.4	$ 7,604.0
2018	$ 2,805.8	$ 427.8	$ 6,464.1	$ 1,734.6	$ 264.5	$ 3,996.2	$ 3,499.1	$ 533.5	$ 8,061.4
2019	$ 3,019.2	$ 459.9	$ 6,967.4	$ 1,868.9	$ 284.7	$ 4,312.9	$ 3,665.7	$ 558.4	$ 8,459.4
2020	$ 3,205.4	$ 488.1	$ 7,400.5	$ 1,997.5	$ 304.2	$ 4,611.7	$ 3,809.8	$ 580.1	$ 8,795.7
2021	$ 3,370.1	$ 512.6	$ 7,781.3	$ 2,121.1	$ 322.6	$ 4,897.5	$ 3,936.2	$ 598.7	$ 9,088.3
2022	$ 3,518.0	$ 534.9	$ 8,136.3	$ 2,240.4	$ 340.7	$ 5,181.6	$ 4,048.8	$ 615.7	$ 9,363.9
2023	$ 3,652.1	$ 555.5	$ 8,448.7	$ 2,355.8	$ 358.3	$ 5,449.9	$ 4,150.3	$ 631.2	$ 9,601.1
2024	$ 3,775.1	$ 573.9	$ 8,736.5	$ 2,467.7	$ 375.1	$ 5,710.9	$ 4,243.0	$ 645.0	$ 9,819.3
2025	$ 3,888.9	$ 590.3	$ 9,000.4	$ 2,576.5	$ 391.1	$ 5,963.0	$ 4,328.7	$ 657.0	$ 10,018.3
2026	$ 3,995.0	$ 605.6	$ 9,253.9	$ 2,682.4	$ 406.6	$ 6,213.4	$ 4,408.7	$ 668.3	$ 10,212.3
2027	$ 4,094.7	$ 620.0	$ 9,499.5	$ 2,785.7	$ 421.8	$ 6,462.6	$ 4,484.2	$ 679.0	$ 10,403.2
2028	$ 4,134.7	$ 626.6	$ 9,587.0	$ 2,849.2	$ 431.8	$ 6,606.2	$ 4,497.1	$ 681.5	$ 10,427.2
2029	$ 4,213.1	$ 637.6	$ 9,778.0	$ 2,939.5	$ 444.8	$ 6,822.1	$ 4,554.2	$ 689.2	$ 10,569.5
Total	**$ 54,731.8**	**$ 8,323.3**	**$ 126,486.6**	**$ 36,008.4**	**$ 5,475.7**	**$ 83,219.6**	**$ 65,501.4**	**$ 9,964.6**	**$ 151,325.7**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.20j and F.20t.

Exhibit F.20v Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 3% Discount Rate
(All Water Systems)

TTHM - Preferred Alternative, ICR Matrix Method

	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 146.8	$ 22.5	$ 337.4	$ 124.6	$ 19.1	$ 286.5	$ 260.7	$ 39.9	$ 599.2
2011	$ 369.9	$ 56.6	$ 850.7	$ 289.8	$ 44.4	$ 666.5	$ 628.1	$ 96.2	$ 1,444.6
2012	$ 650.1	$ 99.5	$ 1,493.5	$ 483.9	$ 74.0	$ 1,111.6	$ 1,062.2	$ 162.6	$ 2,440.2
2013	$ 976.9	$ 149.5	$ 2,243.9	$ 700.1	$ 107.2	$ 1,608.2	$ 1,539.1	$ 235.6	$ 3,535.2
2014	$ 1,236.8	$ 189.1	$ 2,843.2	$ 841.1	$ 128.6	$ 1,933.5	$ 1,849.0	$ 282.7	$ 4,250.4
2015	$ 1,460.8	$ 223.4	$ 3,359.6	$ 954.1	$ 145.9	$ 2,194.3	$ 2,070.4	$ 316.6	$ 4,761.6
2016	$ 1,644.2	$ 251.2	$ 3,781.2	$ 1,042.9	$ 159.3	$ 2,398.3	$ 2,217.2	$ 338.7	$ 5,098.9
2017	$ 1,794.0	$ 273.9	$ 4,129.7	$ 1,117.6	$ 170.6	$ 2,572.5	$ 2,316.9	$ 353.8	$ 5,333.3
2018	$ 1,910.6	$ 291.3	$ 4,401.7	$ 1,181.2	$ 180.1	$ 2,721.2	$ 2,382.7	$ 363.3	$ 5,489.4
2019	$ 1,996.0	$ 304.1	$ 4,606.3	$ 1,235.6	$ 188.2	$ 2,851.3	$ 2,423.5	$ 369.2	$ 5,592.6
2020	$ 2,057.4	$ 313.3	$ 4,750.1	$ 1,282.1	$ 195.2	$ 2,960.1	$ 2,445.3	$ 372.3	$ 5,645.7
2021	$ 2,100.2	$ 319.4	$ 4,849.1	$ 1,321.8	$ 201.0	$ 3,051.9	$ 2,452.9	$ 373.1	$ 5,663.5
2022	$ 2,128.4	$ 323.7	$ 4,922.6	$ 1,355.5	$ 206.1	$ 3,135.0	$ 2,449.6	$ 372.5	$ 5,665.3
2023	$ 2,145.2	$ 326.3	$ 4,962.7	$ 1,383.8	$ 210.5	$ 3,201.2	$ 2,437.8	$ 370.8	$ 5,639.6
2024	$ 2,152.9	$ 327.3	$ 4,982.3	$ 1,407.3	$ 213.9	$ 3,256.9	$ 2,419.7	$ 367.8	$ 5,599.8
2025	$ 2,153.2	$ 326.8	$ 4,983.3	$ 1,426.5	$ 216.5	$ 3,301.6	$ 2,396.7	$ 363.8	$ 5,546.9
2026	$ 2,147.5	$ 325.5	$ 4,974.4	$ 1,441.9	$ 218.6	$ 3,340.0	$ 2,369.9	$ 359.2	$ 5,489.6
2027	$ 2,137.0	$ 323.6	$ 4,957.7	$ 1,453.8	$ 220.1	$ 3,372.8	$ 2,340.3	$ 354.3	$ 5,429.4
2028	$ 2,095.0	$ 317.5	$ 4,857.7	$ 1,443.6	$ 218.8	$ 3,347.3	$ 2,278.6	$ 345.3	$ 5,283.4
2029	$ 2,072.6	$ 313.7	$ 4,810.2	$ 1,446.0	$ 218.8	$ 3,356.0	$ 2,240.3	$ 339.0	$ 5,199.5
Total	**$ 33,375.6**	**$ 5,078.0**	**$ 77,097.1**	**$ 21,933.3**	**$ 3,337.0**	**$ 50,666.7**	**$ 40,581.0**	**$ 6,176.7**	**$ 93,708.1**
Ann.	**$ 1,916.7**	**$ 291.6**	**$ 4,427.5**	**$ 1,259.6**	**$ 191.6**	**$ 2,909.7**	**$ 2,330.5**	**$ 354.7**	**$ 5,381.5**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibit F.20u.

Exhibit F.20w Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 7% Discount Rate
(All Water Systems)

TTHM - Preferred Alternative, ICR Matrix Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 121.3	$ 18.6	$ 278.8	$ 103.0	$ 15.8	$ 236.8	$ 215.5	$ 33.0	$ 495.3
2011	$ 294.3	$ 45.1	$ 676.9	$ 230.6	$ 35.3	$ 530.3	$ 499.7	$ 76.5	$ 1,149.4
2012	$ 497.9	$ 76.2	$ 1,143.9	$ 370.6	$ 56.7	$ 851.3	$ 813.6	$ 124.5	$ 1,868.9
2013	$ 720.3	$ 110.2	$ 1,654.4	$ 516.2	$ 79.0	$ 1,185.7	$ 1,134.7	$ 173.7	$ 2,606.4
2014	$ 877.8	$ 134.2	$ 2,017.8	$ 596.9	$ 91.3	$ 1,372.2	$ 1,312.2	$ 200.6	$ 3,016.6
2015	$ 998.0	$ 152.6	$ 2,295.2	$ 651.8	$ 99.7	$ 1,499.1	$ 1,414.5	$ 216.3	$ 3,253.0
2016	$ 1,081.3	$ 165.2	$ 2,486.7	$ 685.8	$ 104.8	$ 1,577.2	$ 1,458.1	$ 222.7	$ 3,353.2
2017	$ 1,135.7	$ 173.4	$ 2,614.3	$ 707.5	$ 108.0	$ 1,628.6	$ 1,466.7	$ 224.0	$ 3,376.3
2018	$ 1,164.3	$ 177.5	$ 2,682.4	$ 719.8	$ 109.8	$ 1,658.3	$ 1,452.0	$ 221.4	$ 3,345.2
2019	$ 1,170.9	$ 178.4	$ 2,702.1	$ 724.8	$ 110.4	$ 1,672.6	$ 1,421.6	$ 216.6	$ 3,280.7
2020	$ 1,161.8	$ 176.9	$ 2,682.3	$ 724.0	$ 110.2	$ 1,671.5	$ 1,380.8	$ 210.3	$ 3,188.0
2021	$ 1,141.6	$ 173.6	$ 2,635.8	$ 718.5	$ 109.3	$ 1,658.9	$ 1,333.3	$ 202.8	$ 3,078.5
2022	$ 1,113.7	$ 169.4	$ 2,575.7	$ 709.3	$ 107.9	$ 1,640.4	$ 1,281.7	$ 194.9	$ 2,964.4
2023	$ 1,080.5	$ 164.3	$ 2,499.7	$ 697.0	$ 106.0	$ 1,612.4	$ 1,227.9	$ 186.8	$ 2,840.6
2024	$ 1,043.8	$ 158.7	$ 2,415.7	$ 682.3	$ 103.7	$ 1,579.1	$ 1,173.2	$ 178.3	$ 2,715.1
2025	$ 1,005.0	$ 152.5	$ 2,325.9	$ 665.8	$ 101.1	$ 1,541.0	$ 1,118.6	$ 169.8	$ 2,588.9
2026	$ 964.8	$ 146.3	$ 2,234.9	$ 647.8	$ 98.2	$ 1,500.6	$ 1,064.8	$ 161.4	$ 2,466.4
2027	$ 924.2	$ 139.9	$ 2,144.2	$ 628.8	$ 95.2	$ 1,458.7	$ 1,012.2	$ 153.2	$ 2,348.1
2028	$ 872.2	$ 132.2	$ 2,022.4	$ 601.0	$ 91.1	$ 1,393.6	$ 948.6	$ 143.8	$ 2,199.6
2029	$ 830.6	$ 125.7	$ 1,927.7	$ 579.5	$ 87.7	$ 1,344.9	$ 897.8	$ 135.9	$ 2,083.7
Total	**$ 18,200.0**	**$ 2,770.9**	**$ 42,016.6**	**$ 11,961.1**	**$ 1,821.0**	**$ 27,613.3**	**$ 22,627.7**	**$ 3,446.4**	**$ 52,218.4**
Ann.	**$ 1,561.8**	**$ 237.8**	**$ 3,605.5**	**$ 1,026.4**	**$ 156.3**	**$ 2,369.5**	**$ 1,941.7**	**$ 295.7**	**$ 4,480.9**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibit F.20u.

Exhibit F.20x Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 3% Discount Rate, by Small & Large Size Categories (Surface Water Systems)

TTHM - Preferred Alternative, ICR Matrix Method

	Small Systems									Large Systems								
	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model			Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 3.5	$ 0.5	$ 8.0	$ 2.5	$ 0.4	$ 5.7	$ 5.7	$ 0.9	$ 13.1	$ 136.6	$ 20.9	$ 313.9	$ 117.4	$ 18.0	$ 269.8	$ 243.9	$ 37.3	$ 560.7
2011	$ 8.8	$ 1.3	$ 20.2	$ 5.9	$ 0.9	$ 13.5	$ 14.0	$ 2.1	$ 32.3	$ 344.0	$ 52.7	$ 791.3	$ 272.5	$ 41.7	$ 626.8	$ 586.8	$ 89.8	$ 1,349.6
2012	$ 15.5	$ 2.4	$ 35.5	$ 10.0	$ 1.5	$ 22.9	$ 24.1	$ 3.7	$ 55.3	$ 604.6	$ 92.5	$ 1,389.0	$ 454.6	$ 69.6	$ 1,044.3	$ 991.4	$ 151.7	$ 2,277.5
2013	$ 23.2	$ 3.6	$ 53.3	$ 14.6	$ 2.2	$ 33.5	$ 35.2	$ 5.4	$ 80.9	$ 908.6	$ 139.1	$ 2,087.0	$ 657.2	$ 100.6	$ 1,509.6	$ 1,435.4	$ 219.7	$ 3,297.1
2014	$ 31.9	$ 4.9	$ 73.3	$ 19.7	$ 3.0	$ 45.3	$ 47.1	$ 7.2	$ 108.2	$ 1,145.2	$ 175.1	$ 2,632.5	$ 784.8	$ 120.0	$ 1,804.0	$ 1,714.1	$ 262.1	$ 3,940.5
2015	$ 41.3	$ 6.3	$ 95.0	$ 25.1	$ 3.8	$ 57.8	$ 59.3	$ 9.1	$ 136.5	$ 1,345.9	$ 205.8	$ 3,095.3	$ 884.6	$ 135.3	$ 2,034.5	$ 1,906.5	$ 291.5	$ 4,384.7
2016	$ 48.1	$ 7.4	$ 110.7	$ 28.7	$ 4.4	$ 66.0	$ 66.7	$ 10.2	$ 153.4	$ 1,512.0	$ 231.0	$ 3,477.1	$ 964.3	$ 147.3	$ 2,217.7	$ 2,035.3	$ 310.9	$ 4,680.6
2017	$ 53.6	$ 8.2	$ 123.3	$ 31.7	$ 4.8	$ 72.9	$ 71.8	$ 11.0	$ 165.2	$ 1,647.9	$ 251.6	$ 3,793.4	$ 1,031.4	$ 157.5	$ 2,374.2	$ 2,122.7	$ 324.1	$ 4,886.2
2018	$ 57.9	$ 8.8	$ 133.5	$ 34.2	$ 5.2	$ 78.8	$ 75.2	$ 11.5	$ 173.3	$ 1,753.4	$ 267.4	$ 4,039.6	$ 1,088.4	$ 166.0	$ 2,507.6	$ 2,180.2	$ 332.4	$ 5,022.8
2019	$ 61.4	$ 9.4	$ 141.7	$ 36.4	$ 5.5	$ 84.0	$ 77.5	$ 11.8	$ 178.8	$ 1,830.2	$ 278.8	$ 4,223.6	$ 1,137.2	$ 173.2	$ 2,624.2	$ 2,215.5	$ 337.5	$ 5,112.7
2020	$ 64.0	$ 9.7	$ 147.8	$ 38.3	$ 5.8	$ 88.4	$ 78.9	$ 12.0	$ 182.1	$ 1,885.2	$ 287.1	$ 4,352.3	$ 1,178.8	$ 179.5	$ 2,721.5	$ 2,234.1	$ 340.2	$ 5,158.0
2021	$ 65.9	$ 10.0	$ 152.1	$ 40.0	$ 6.1	$ 92.2	$ 79.6	$ 12.1	$ 183.8	$ 1,923.3	$ 292.5	$ 4,440.7	$ 1,214.2	$ 184.7	$ 2,803.6	$ 2,240.1	$ 340.7	$ 5,172.2
2022	$ 67.2	$ 10.2	$ 155.4	$ 41.4	$ 6.3	$ 95.7	$ 79.8	$ 12.1	$ 184.7	$ 1,948.4	$ 296.3	$ 4,506.2	$ 1,244.2	$ 189.2	$ 2,877.7	$ 2,236.4	$ 340.1	$ 5,172.3
2023	$ 68.0	$ 10.3	$ 157.4	$ 42.6	$ 6.5	$ 98.5	$ 79.7	$ 12.1	$ 184.4	$ 1,963.2	$ 298.6	$ 4,541.5	$ 1,269.4	$ 193.1	$ 2,936.6	$ 2,225.2	$ 338.4	$ 5,147.8
2024	$ 68.6	$ 10.4	$ 158.7	$ 43.6	$ 6.6	$ 101.0	$ 79.3	$ 12.1	$ 183.5	$ 1,969.6	$ 299.4	$ 4,558.2	$ 1,290.2	$ 196.1	$ 2,985.9	$ 2,208.4	$ 335.7	$ 5,110.7
2025	$ 68.8	$ 10.4	$ 159.2	$ 44.5	$ 6.8	$ 103.0	$ 78.6	$ 11.9	$ 182.0	$ 1,969.5	$ 298.9	$ 4,558.1	$ 1,307.2	$ 198.4	$ 3,025.4	$ 2,187.2	$ 332.0	$ 5,062.0
2026	$ 68.8	$ 10.4	$ 159.3	$ 45.3	$ 6.9	$ 104.8	$ 77.8	$ 11.8	$ 180.3	$ 1,963.9	$ 297.7	$ 4,549.2	$ 1,320.7	$ 200.2	$ 3,059.2	$ 2,162.6	$ 327.8	$ 5,009.5
2027	$ 68.6	$ 10.4	$ 159.1	$ 45.9	$ 6.9	$ 106.4	$ 76.9	$ 11.6	$ 178.5	$ 1,954.0	$ 295.9	$ 4,533.2	$ 1,331.0	$ 201.5	$ 3,088.0	$ 2,135.5	$ 323.3	$ 4,954.3
2028	$ 67.4	$ 10.2	$ 156.2	$ 45.8	$ 6.9	$ 106.1	$ 74.9	$ 11.4	$ 173.7	$ 1,915.4	$ 290.3	$ 4,441.2	$ 1,321.3	$ 200.2	$ 3,063.5	$ 2,079.2	$ 315.1	$ 4,821.1
2029	$ 66.8	$ 10.1	$ 154.9	$ 46.0	$ 7.0	$ 106.8	$ 73.7	$ 11.2	$ 171.0	$ 1,894.7	$ 286.7	$ 4,397.2	$ 1,323.0	$ 200.2	$ 3,070.5	$ 2,044.3	$ 309.4	$ 4,744.5
Total	**$ 1,019.2**	**$ 155.0**	**$ 2,354.7**	**$ 642.0**	**$ 97.6**	**$ 1,483.4**	**$ 1,255.9**	**$ 191.1**	**$ 2,900.9**	**$ 30,615.6**	**$ 4,658.2**	**$ 70,720.7**	**$ 20,192.5**	**$ 3,072.3**	**$ 46,644.4**	**$ 37,185.0**	**$ 5,659.9**	**$ 85,864.6**
Ann.	**$ 58.5**	**$ 8.9**	**$ 135.2**	**$ 36.9**	**$ 5.6**	**$ 85.2**	**$ 72.1**	**$ 11.0**	**$ 166.6**	**$ 1,758.2**	**$ 267.5**	**$ 4,061.3**	**$ 1,159.6**	**$ 176.4**	**$ 2,678.7**	**$ 2,135.5**	**$ 325.0**	**$ 4,931.0**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.20a through F.20i.

Exhibit F.20y Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 7% Discount Rate, by Small & Large Size Categories (Surface Water Systems)

TTHM - Preferred Alternative, ICR Matrix Method

	Small Systems									Large Systems								
	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model			Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 2.9	$ 0.4	$ 6.6	$ 2.0	$ 0.3	$ 4.7	$ 4.7	$ 0.7	$ 10.8	$ 112.9	$ 17.3	$ 259.5	$ 97.0	$ 14.8	$ 223.0	$ 201.6	$ 30.9	$ 463.5
2011	$ 7.0	$ 1.1	$ 16.1	$ 4.7	$ 0.7	$ 10.7	$ 11.2	$ 1.7	$ 25.7	$ 273.7	$ 41.9	$ 629.6	$ 216.8	$ 33.2	$ 498.7	$ 466.9	$ 71.5	$ 1,073.8
2012	$ 11.8	$ 1.8	$ 27.2	$ 7.6	$ 1.2	$ 17.5	$ 18.4	$ 2.8	$ 42.4	$ 463.1	$ 70.9	$ 1,063.8	$ 348.2	$ 53.3	$ 799.8	$ 759.3	$ 116.2	$ 1,744.3
2013	$ 17.1	$ 2.6	$ 39.3	$ 10.8	$ 1.6	$ 24.7	$ 26.0	$ 4.0	$ 59.7	$ 669.9	$ 102.5	$ 1,538.7	$ 484.5	$ 74.2	$ 1,113.0	$ 1,058.3	$ 162.0	$ 2,430.9
2014	$ 22.6	$ 3.5	$ 52.0	$ 14.0	$ 2.1	$ 32.1	$ 33.4	$ 5.1	$ 76.8	$ 812.7	$ 124.3	$ 1,868.3	$ 557.0	$ 85.1	$ 1,280.3	$ 1,216.5	$ 186.0	$ 2,796.6
2015	$ 28.2	$ 4.3	$ 64.9	$ 17.2	$ 2.6	$ 39.5	$ 40.5	$ 6.2	$ 93.2	$ 919.5	$ 140.6	$ 2,114.7	$ 604.4	$ 92.4	$ 1,390.0	$ 1,302.5	$ 199.2	$ 2,995.5
2016	$ 31.6	$ 4.8	$ 72.8	$ 18.9	$ 2.9	$ 43.4	$ 43.9	$ 6.7	$ 100.9	$ 994.3	$ 151.9	$ 2,286.7	$ 634.2	$ 96.9	$ 1,458.5	$ 1,338.5	$ 204.5	$ 3,078.1
2017	$ 33.9	$ 5.2	$ 78.0	$ 20.0	$ 3.1	$ 46.1	$ 45.4	$ 6.9	$ 104.6	$ 1,043.2	$ 159.3	$ 2,401.4	$ 652.9	$ 99.7	$ 1,503.0	$ 1,343.8	$ 205.2	$ 3,093.3
2018	$ 35.3	$ 5.4	$ 81.3	$ 20.8	$ 3.2	$ 48.0	$ 45.8	$ 7.0	$ 105.6	$ 1,068.5	$ 162.9	$ 2,461.7	$ 663.3	$ 101.1	$ 1,528.1	$ 1,328.6	$ 202.6	$ 3,060.8
2019	$ 36.0	$ 5.5	$ 83.1	$ 21.4	$ 3.3	$ 49.3	$ 45.4	$ 6.9	$ 104.9	$ 1,073.6	$ 163.5	$ 2,477.6	$ 667.1	$ 101.6	$ 1,539.4	$ 1,299.6	$ 198.0	$ 2,999.2
2020	$ 36.2	$ 5.5	$ 83.5	$ 21.6	$ 3.3	$ 49.9	$ 44.5	$ 6.8	$ 102.8	$ 1,064.5	$ 162.1	$ 2,457.7	$ 665.6	$ 101.4	$ 1,536.8	$ 1,261.6	$ 192.1	$ 2,912.6
2021	$ 35.8	$ 5.4	$ 82.7	$ 21.7	$ 3.3	$ 50.1	$ 43.3	$ 6.6	$ 99.9	$ 1,045.4	$ 159.0	$ 2,413.8	$ 660.0	$ 100.4	$ 1,523.9	$ 1,217.7	$ 185.2	$ 2,811.4
2022	$ 35.2	$ 5.3	$ 81.3	$ 21.6	$ 3.3	$ 50.1	$ 41.8	$ 6.4	$ 96.6	$ 1,019.5	$ 155.0	$ 2,357.9	$ 651.0	$ 99.0	$ 1,505.7	$ 1,170.2	$ 177.9	$ 2,706.4
2023	$ 34.3	$ 5.2	$ 79.3	$ 21.5	$ 3.3	$ 49.6	$ 40.1	$ 6.1	$ 92.9	$ 988.8	$ 150.4	$ 2,287.5	$ 639.4	$ 97.2	$ 1,479.1	$ 1,120.8	$ 170.5	$ 2,592.9
2024	$ 33.2	$ 5.1	$ 76.9	$ 21.2	$ 3.2	$ 49.0	$ 38.4	$ 5.8	$ 89.0	$ 955.0	$ 145.2	$ 2,210.1	$ 625.6	$ 95.1	$ 1,447.7	$ 1,070.8	$ 162.8	$ 2,478.0
2025	$ 32.1	$ 4.9	$ 74.3	$ 20.8	$ 3.2	$ 48.1	$ 36.7	$ 5.6	$ 85.0	$ 919.2	$ 139.5	$ 2,127.4	$ 610.1	$ 92.6	$ 1,412.0	$ 1,020.8	$ 155.0	$ 2,362.6
2026	$ 30.9	$ 4.7	$ 71.6	$ 20.3	$ 3.1	$ 47.1	$ 35.0	$ 5.3	$ 81.0	$ 882.4	$ 133.8	$ 2,043.9	$ 593.4	$ 89.9	$ 1,374.5	$ 971.6	$ 147.3	$ 2,250.7
2027	$ 29.7	$ 4.5	$ 68.8	$ 19.8	$ 3.0	$ 46.0	$ 33.3	$ 5.0	$ 77.2	$ 845.1	$ 128.0	$ 1,960.6	$ 575.7	$ 87.2	$ 1,335.5	$ 923.6	$ 139.8	$ 2,142.7
2028	$ 28.0	$ 4.3	$ 65.0	$ 19.0	$ 2.9	$ 44.2	$ 31.2	$ 4.7	$ 72.3	$ 797.4	$ 120.8	$ 1,849.0	$ 550.1	$ 83.4	$ 1,275.4	$ 865.6	$ 131.2	$ 2,007.1
2029	$ 26.8	$ 4.0	$ 62.1	$ 18.4	$ 2.8	$ 42.8	$ 29.5	$ 4.5	$ 68.5	$ 759.3	$ 114.9	$ 1,762.2	$ 530.2	$ 80.2	$ 1,230.5	$ 819.3	$ 124.0	$ 1,901.4
Total	**$ 548.7**	**$ 83.5**	**$ 1,267.0**	**$ 343.4**	**$ 52.3**	**$ 793.0**	**$ 688.7**	**$ 104.9**	**$ 1,589.7**	**$ 16,708.2**	**$ 2,543.8**	**$ 38,572.0**	**$ 11,026.4**	**$ 1,678.8**	**$ 25,454.9**	**$ 20,757.6**	**$ 3,161.6**	**$ 47,901.7**
Ann.	**$ 47.1**	**$ 7.2**	**$ 108.7**	**$ 29.5**	**$ 4.5**	**$ 68.1**	**$ 59.1**	**$ 9.0**	**$ 136.4**	**$ 1,433.7**	**$ 218.3**	**$ 3,309.9**	**$ 946.2**	**$ 144.1**	**$ 2,184.3**	**$ 1,781.2**	**$ 271.3**	**$ 4,110.5**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.20a through F.20i.

Exhibit F.20z Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 3% Discount Rate, by Small & Large Size Categories (Ground Water Systems)

TTHM - Preferred Alternative, ICR Matrix Method

	Small Systems									Large Systems								
	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model			Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 2.4	$ 0.4	$ 5.6	$ 1.7	$ 0.3	$ 4.0	$ 4.0	$ 0.6	$ 9.3	$ 4.3	$ 0.7	$ 9.8	$ 3.1	$ 0.5	$ 7.0	$ 7.0	$ 1.1	$ 16.2
2011	$ 6.2	$ 1.0	$ 14.3	$ 4.1	$ 0.6	$ 9.5	$ 9.9	$ 1.5	$ 22.8	$ 10.9	$ 1.7	$ 25.0	$ 7.2	$ 1.1	$ 16.7	$ 17.3	$ 2.7	$ 39.9
2012	$ 10.9	$ 1.7	$ 25.1	$ 7.0	$ 1.1	$ 16.2	$ 17.0	$ 2.6	$ 39.1	$ 19.1	$ 2.9	$ 43.9	$ 12.3	$ 1.9	$ 28.2	$ 29.7	$ 4.6	$ 68.3
2013	$ 16.4	$ 2.5	$ 37.7	$ 10.3	$ 1.6	$ 23.7	$ 24.9	$ 3.8	$ 57.2	$ 28.7	$ 4.4	$ 65.9	$ 18.0	$ 2.8	$ 41.4	$ 43.5	$ 6.7	$ 100.0
2014	$ 22.5	$ 3.4	$ 51.8	$ 13.9	$ 2.1	$ 32.0	$ 33.3	$ 5.1	$ 76.5	$ 37.2	$ 5.7	$ 85.5	$ 22.7	$ 3.5	$ 52.2	$ 54.5	$ 8.3	$ 125.3
2015	$ 29.2	$ 4.5	$ 67.2	$ 17.8	$ 2.7	$ 40.9	$ 41.9	$ 6.4	$ 96.4	$ 44.4	$ 6.8	$ 102.1	$ 26.6	$ 4.1	$ 61.1	$ 62.6	$ 9.6	$ 144.1
2016	$ 34.0	$ 5.2	$ 78.2	$ 20.3	$ 3.1	$ 46.6	$ 47.1	$ 7.2	$ 108.4	$ 50.1	$ 7.7	$ 115.2	$ 29.6	$ 4.5	$ 68.0	$ 68.0	$ 10.4	$ 156.5
2017	$ 37.9	$ 5.8	$ 87.1	$ 22.4	$ 3.4	$ 51.5	$ 50.7	$ 7.7	$ 116.8	$ 54.7	$ 8.4	$ 125.9	$ 32.1	$ 4.9	$ 74.0	$ 71.7	$ 11.0	$ 165.1
2018	$ 40.9	$ 6.2	$ 94.3	$ 24.2	$ 3.7	$ 55.7	$ 53.2	$ 8.1	$ 122.5	$ 58.3	$ 8.9	$ 134.3	$ 34.4	$ 5.2	$ 79.1	$ 74.2	$ 11.3	$ 170.9
2019	$ 43.4	$ 6.6	$ 100.2	$ 25.7	$ 3.9	$ 59.4	$ 54.8	$ 8.3	$ 126.4	$ 61.0	$ 9.3	$ 140.8	$ 36.3	$ 5.5	$ 83.7	$ 75.7	$ 11.5	$ 174.8
2020	$ 45.2	$ 6.9	$ 104.5	$ 27.1	$ 4.1	$ 62.5	$ 55.7	$ 8.5	$ 128.7	$ 63.0	$ 9.6	$ 145.5	$ 37.9	$ 5.8	$ 87.6	$ 76.6	$ 11.7	$ 176.9
2021	$ 46.6	$ 7.1	$ 107.5	$ 28.2	$ 4.3	$ 65.2	$ 56.3	$ 8.6	$ 129.9	$ 64.4	$ 9.8	$ 148.7	$ 39.4	$ 6.0	$ 90.9	$ 77.0	$ 11.7	$ 177.7
2022	$ 47.5	$ 7.2	$ 109.8	$ 29.2	$ 4.4	$ 67.6	$ 56.4	$ 8.6	$ 130.5	$ 65.4	$ 9.9	$ 151.1	$ 40.6	$ 6.2	$ 94.0	$ 76.9	$ 11.7	$ 177.9
2023	$ 48.1	$ 7.3	$ 111.3	$ 30.1	$ 4.6	$ 69.7	$ 56.3	$ 8.6	$ 130.3	$ 65.9	$ 10.0	$ 152.5	$ 41.7	$ 6.3	$ 96.4	$ 76.6	$ 11.6	$ 177.2
2024	$ 48.5	$ 7.4	$ 112.1	$ 30.8	$ 4.7	$ 71.4	$ 56.0	$ 8.5	$ 129.7	$ 66.2	$ 10.1	$ 153.3	$ 42.6	$ 6.5	$ 98.6	$ 76.0	$ 11.6	$ 175.9
2025	$ 48.6	$ 7.4	$ 112.5	$ 31.5	$ 4.8	$ 72.8	$ 55.6	$ 8.4	$ 128.6	$ 66.3	$ 10.1	$ 153.4	$ 43.4	$ 6.6	$ 100.3	$ 75.3	$ 11.4	$ 174.3
2026	$ 48.6	$ 7.4	$ 112.6	$ 32.0	$ 4.8	$ 74.1	$ 55.0	$ 8.3	$ 127.4	$ 66.2	$ 10.0	$ 153.3	$ 44.0	$ 6.7	$ 101.9	$ 74.4	$ 11.3	$ 172.4
2027	$ 48.5	$ 7.3	$ 112.5	$ 32.4	$ 4.9	$ 75.2	$ 54.4	$ 8.2	$ 126.1	$ 65.9	$ 10.0	$ 152.9	$ 44.5	$ 6.7	$ 103.2	$ 73.5	$ 11.1	$ 170.5
2028	$ 47.6	$ 7.2	$ 110.4	$ 32.3	$ 4.9	$ 75.0	$ 53.0	$ 8.0	$ 122.8	$ 64.6	$ 9.8	$ 149.9	$ 44.3	$ 6.7	$ 102.7	$ 71.5	$ 10.8	$ 165.8
2029	$ 47.2	$ 7.1	$ 109.5	$ 32.5	$ 4.9	$ 75.5	$ 52.1	$ 7.9	$ 120.8	$ 64.0	$ 9.7	$ 148.5	$ 44.5	$ 6.7	$ 103.3	$ 70.3	$ 10.6	$ 163.1
Total	**$ 720.3**	**$ 109.6**	**$ 1,664.2**	**$ 453.8**	**$ 69.0**	**$ 1,048.5**	**$ 887.6**	**$ 135.1**	**$ 2,050.2**	**$ 1,020.5**	**$ 155.3**	**$ 2,357.5**	**$ 645.1**	**$ 98.1**	**$ 1,490.4**	**$ 1,252.5**	**$ 190.6**	**$ 2,892.4**
Ann.	**$ 41.4**	**$ 6.3**	**$ 95.6**	**$ 26.1**	**$ 4.0**	**$ 60.2**	**$ 51.0**	**$ 7.8**	**$ 117.7**	**$ 58.6**	**$ 8.9**	**$ 135.4**	**$ 37.0**	**$ 5.6**	**$ 85.6**	**$ 71.9**	**$ 10.9**	**$ 166.1**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.20k through F.20s.

Exhibit F.20aa Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 7% Discount Rate, by Small & Large Size Categories (Ground Water Systems)

TTHM - Preferred Alternative, ICR Matrix Method

	Small Systems									Large Systems								
	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model			Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 2.0	$ 0.3	$ 4.7	$ 1.4	$ 0.2	$ 3.3	$ 3.3	$ 0.5	$ 7.7	$ 3.5	$ 0.5	$ 8.1	$ 2.5	$ 0.4	$ 5.8	$ 5.8	$ 0.9	$ 13.4
2011	$ 4.9	$ 0.8	$ 11.4	$ 3.3	$ 0.5	$ 7.6	$ 7.9	$ 1.2	$ 18.1	$ 8.6	$ 1.3	$ 19.9	$ 5.8	$ 0.9	$ 13.3	$ 13.8	$ 2.1	$ 31.7
2012	$ 8.4	$ 1.3	$ 19.2	$ 5.4	$ 0.8	$ 12.4	$ 13.0	$ 2.0	$ 29.9	$ 14.6	$ 2.2	$ 33.6	$ 9.4	$ 1.4	$ 21.6	$ 22.8	$ 3.5	$ 52.3
2013	$ 12.1	$ 1.9	$ 27.8	$ 7.6	$ 1.2	$ 17.5	$ 18.4	$ 2.8	$ 42.2	$ 21.2	$ 3.2	$ 48.6	$ 13.3	$ 2.0	$ 30.5	$ 32.1	$ 4.9	$ 73.7
2014	$ 16.0	$ 2.4	$ 36.8	$ 9.9	$ 1.5	$ 22.7	$ 23.6	$ 3.6	$ 54.3	$ 26.4	$ 4.0	$ 60.7	$ 16.1	$ 2.5	$ 37.1	$ 38.7	$ 5.9	$ 88.9
2015	$ 19.9	$ 3.1	$ 45.9	$ 12.1	$ 1.9	$ 27.9	$ 28.7	$ 4.4	$ 65.9	$ 30.3	$ 4.6	$ 69.8	$ 18.1	$ 2.8	$ 41.7	$ 42.8	$ 6.5	$ 98.4
2016	$ 22.4	$ 3.4	$ 51.4	$ 13.3	$ 2.0	$ 30.7	$ 31.0	$ 4.7	$ 71.3	$ 32.9	$ 5.0	$ 75.8	$ 19.4	$ 3.0	$ 44.7	$ 44.7	$ 6.8	$ 102.9
2017	$ 24.0	$ 3.7	$ 55.2	$ 14.2	$ 2.2	$ 32.6	$ 32.1	$ 4.9	$ 73.9	$ 34.6	$ 5.3	$ 79.7	$ 20.3	$ 3.1	$ 46.8	$ 45.4	$ 6.9	$ 104.5
2018	$ 25.0	$ 3.8	$ 57.5	$ 14.7	$ 2.2	$ 33.9	$ 32.4	$ 4.9	$ 74.6	$ 35.5	$ 5.4	$ 81.9	$ 20.9	$ 3.2	$ 48.2	$ 45.2	$ 6.9	$ 104.1
2019	$ 25.5	$ 3.9	$ 58.7	$ 15.1	$ 2.3	$ 34.8	$ 32.1	$ 4.9	$ 74.1	$ 35.8	$ 5.5	$ 82.6	$ 21.3	$ 3.2	$ 49.1	$ 44.4	$ 6.8	$ 102.5
2020	$ 25.6	$ 3.9	$ 59.0	$ 15.3	$ 2.3	$ 35.3	$ 31.5	$ 4.8	$ 72.7	$ 35.6	$ 5.4	$ 82.1	$ 21.4	$ 3.3	$ 49.5	$ 43.3	$ 6.6	$ 99.9
2021	$ 25.3	$ 3.8	$ 58.4	$ 15.3	$ 2.3	$ 35.4	$ 30.6	$ 4.7	$ 70.6	$ 35.0	$ 5.3	$ 80.8	$ 21.4	$ 3.3	$ 49.4	$ 41.8	$ 6.4	$ 96.6
2022	$ 24.8	$ 3.8	$ 57.5	$ 15.3	$ 2.3	$ 35.4	$ 29.5	$ 4.5	$ 68.3	$ 34.2	$ 5.2	$ 79.1	$ 21.3	$ 3.2	$ 49.2	$ 40.2	$ 6.1	$ 93.1
2023	$ 24.2	$ 3.7	$ 56.0	$ 15.2	$ 2.3	$ 35.1	$ 28.4	$ 4.3	$ 65.6	$ 33.2	$ 5.1	$ 76.8	$ 21.0	$ 3.2	$ 48.6	$ 38.6	$ 5.9	$ 89.2
2024	$ 23.5	$ 3.6	$ 54.4	$ 15.0	$ 2.3	$ 34.6	$ 27.2	$ 4.1	$ 62.9	$ 32.1	$ 4.9	$ 74.3	$ 20.7	$ 3.1	$ 47.8	$ 36.9	$ 5.6	$ 85.3
2025	$ 22.7	$ 3.4	$ 52.5	$ 14.7	$ 2.2	$ 34.0	$ 25.9	$ 3.9	$ 60.0	$ 30.9	$ 4.7	$ 71.6	$ 20.2	$ 3.1	$ 46.8	$ 35.1	$ 5.3	$ 81.3
2026	$ 21.8	$ 3.3	$ 50.6	$ 14.4	$ 2.2	$ 33.3	$ 24.7	$ 3.7	$ 57.3	$ 29.7	$ 4.5	$ 68.9	$ 19.8	$ 3.0	$ 45.8	$ 33.4	$ 5.1	$ 77.5
2027	$ 21.0	$ 3.2	$ 48.6	$ 14.0	$ 2.1	$ 32.5	$ 23.5	$ 3.6	$ 54.5	$ 28.5	$ 4.3	$ 66.1	$ 19.2	$ 2.9	$ 44.6	$ 31.8	$ 4.8	$ 73.7
2028	$ 19.8	$ 3.0	$ 46.0	$ 13.5	$ 2.0	$ 31.2	$ 22.0	$ 3.3	$ 51.1	$ 26.9	$ 4.1	$ 62.4	$ 18.4	$ 2.8	$ 42.8	$ 29.8	$ 4.5	$ 69.0
2029	$ 18.9	$ 2.9	$ 43.9	$ 13.0	$ 2.0	$ 30.2	$ 20.9	$ 3.2	$ 48.4	$ 25.6	$ 3.9	$ 59.5	$ 17.8	$ 2.7	$ 41.4	$ 28.2	$ 4.3	$ 65.4
Total	**$ 387.8**	**$ 59.0**	**$ 895.4**	**$ 242.7**	**$ 36.9**	**$ 560.6**	**$ 486.7**	**$ 74.1**	**$ 1,123.5**	**$ 555.4**	**$ 84.6**	**$ 1,282.2**	**$ 348.5**	**$ 53.1**	**$ 804.7**	**$ 694.8**	**$ 105.8**	**$ 1,603.5**
Ann.	**$ 33.3**	**$ 5.1**	**$ 76.8**	**$ 20.8**	**$ 3.2**	**$ 48.1**	**$ 41.8**	**$ 6.4**	**$ 96.4**	**$ 47.7**	**$ 7.3**	**$ 110.0**	**$ 29.9**	**$ 4.6**	**$ 69.1**	**$ 59.6**	**$ 9.1**	**$ 137.6**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.20k through F.20s.

Exhibit F.20ab Mean Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 3% Discount Rate, by System Size
(All Systems)

TTHM - Preferred Alternative, ICR Matrix Method

	Smoking/Lung Cancer Cessation Lag Model										
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	>1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.3	$ 0.4	$ 1.5	$ 3.7	$ 16.7	$ 13.9	$ 60.2	$ 50.0	$ 146.8
2011	$ 0.1	$ 0.8	$ 1.0	$ 3.8	$ 9.3	$ 42.1	$ 34.9	$ 151.8	$ 126.1	$ 369.9
2012	$ 0.2	$ 1.4	$ 1.7	$ 6.7	$ 16.3	$ 74.0	$ 61.4	$ 266.8	$ 221.6	$ 650.1
2013	$ 0.3	$ 2.1	$ 2.6	$ 10.1	$ 24.5	$ 111.2	$ 92.2	$ 400.9	$ 333.0	$ 976.9
2014	$ 0.4	$ 2.9	$ 3.6	$ 13.8	$ 33.7	$ 153.1	$ 120.6	$ 496.3	$ 412.3	$ 1,236.8
2015	$ 0.5	$ 3.8	$ 4.7	$ 17.9	$ 43.6	$ 191.4	$ 142.6	$ 577.0	$ 479.3	$ 1,460.8
2016	$ 0.6	$ 4.4	$ 5.4	$ 20.9	$ 50.8	$ 220.7	$ 160.9	$ 644.8	$ 535.7	$ 1,644.2
2017	$ 0.6	$ 4.9	$ 6.1	$ 23.2	$ 56.5	$ 244.6	$ 175.9	$ 700.3	$ 581.8	$ 1,794.0
2018	$ 0.7	$ 5.3	$ 6.6	$ 25.1	$ 61.2	$ 264.1	$ 187.7	$ 742.7	$ 617.2	$ 1,910.6
2019	$ 0.7	$ 5.7	$ 6.9	$ 26.6	$ 64.8	$ 279.3	$ 196.5	$ 773.1	$ 642.4	$ 1,996.0
2020	$ 0.8	$ 5.9	$ 7.2	$ 27.8	$ 67.6	$ 290.4	$ 202.8	$ 794.6	$ 660.3	$ 2,057.4
2021	$ 0.8	$ 6.1	$ 7.5	$ 28.6	$ 69.6	$ 298.3	$ 207.1	$ 809.6	$ 672.7	$ 2,100.2
2022	$ 0.8	$ 6.2	$ 7.6	$ 29.1	$ 70.9	$ 303.7	$ 210.0	$ 819.3	$ 680.8	$ 2,128.4
2023	$ 0.8	$ 6.3	$ 7.7	$ 29.5	$ 71.8	$ 307.1	$ 211.8	$ 824.8	$ 685.4	$ 2,145.2
2024	$ 0.8	$ 6.3	$ 7.8	$ 29.7	$ 72.4	$ 309.1	$ 212.6	$ 827.0	$ 687.2	$ 2,152.9
2025	$ 0.8	$ 6.3	$ 7.8	$ 29.8	$ 72.6	$ 309.8	$ 212.7	$ 826.5	$ 686.8	$ 2,153.2
2026	$ 0.8	$ 6.3	$ 7.8	$ 29.8	$ 72.6	$ 309.5	$ 212.1	$ 823.9	$ 684.6	$ 2,147.5
2027	$ 0.8	$ 6.3	$ 7.8	$ 29.7	$ 72.4	$ 308.4	$ 211.1	$ 819.5	$ 680.9	$ 2,137.0
2028	$ 0.8	$ 6.2	$ 7.6	$ 29.2	$ 71.1	$ 302.7	$ 207.0	$ 803.0	$ 667.3	$ 2,095.0
2029	$ 0.8	$ 6.2	$ 7.6	$ 29.0	$ 70.5	$ 299.7	$ 204.8	$ 794.2	$ 659.9	$ 2,072.6
Total	**$ 12.1**	**$ 94.1**	**$ 115.3**	**$ 442.0**	**$ 1,076.0**	**$ 4,635.9**	**$ 3,278.6**	**$ 12,956.2**	**$ 10,765.4**	**$ 33,375.6**
Ann.	**$ 0.7**	**$ 5.4**	**$ 6.6**	**$ 25.4**	**$ 61.8**	**$ 266.2**	**$ 188.3**	**$ 744.0**	**$ 618.2**	**$ 1,916.7**

	Smoking/Bladder Cancer Cessation Lag Model									
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	>1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.2	$ 0.3	$ 1.1	$ 2.6	$ 14.1	$ 11.8	$ 51.5	$ 43.0	$ 124.6
2011	$ 0.1	$ 0.5	$ 0.7	$ 2.5	$ 6.2	$ 32.9	$ 27.5	$ 119.7	$ 99.8	$ 289.8
2012	$ 0.1	$ 0.9	$ 1.1	$ 4.3	$ 10.5	$ 54.9	$ 45.8	$ 199.7	$ 166.4	$ 483.9
2013	$ 0.2	$ 1.3	$ 1.7	$ 6.3	$ 15.4	$ 79.5	$ 66.3	$ 288.8	$ 240.6	$ 700.1
2014	$ 0.2	$ 1.8	$ 2.2	$ 8.5	$ 20.8	$ 106.0	$ 83.0	$ 337.5	$ 281.0	$ 841.1
2015	$ 0.3	$ 2.3	$ 2.8	$ 10.9	$ 26.5	$ 127.8	$ 93.8	$ 376.3	$ 313.3	$ 954.1
2016	$ 0.3	$ 2.6	$ 3.2	$ 12.4	$ 30.3	$ 142.4	$ 102.6	$ 408.7	$ 340.2	$ 1,042.9
2017	$ 0.4	$ 2.9	$ 3.6	$ 13.7	$ 33.4	$ 154.4	$ 110.1	$ 436.1	$ 362.9	$ 1,117.6
2018	$ 0.4	$ 3.2	$ 3.9	$ 14.8	$ 36.1	$ 164.5	$ 116.4	$ 459.5	$ 382.3	$ 1,181.2
2019	$ 0.4	$ 3.4	$ 4.1	$ 15.8	$ 38.4	$ 173.2	$ 121.8	$ 479.5	$ 398.9	$ 1,235.6
2020	$ 0.5	$ 3.5	$ 4.3	$ 16.6	$ 40.4	$ 180.6	$ 126.5	$ 496.7	$ 413.0	$ 1,282.1
2021	$ 0.5	$ 3.7	$ 4.5	$ 17.3	$ 42.2	$ 186.9	$ 130.4	$ 511.2	$ 425.1	$ 1,321.8
2022	$ 0.5	$ 3.8	$ 4.7	$ 17.9	$ 43.7	$ 192.3	$ 133.8	$ 523.6	$ 435.3	$ 1,355.5
2023	$ 0.5	$ 3.9	$ 4.8	$ 18.5	$ 45.0	$ 196.8	$ 136.6	$ 533.9	$ 443.8	$ 1,383.8
2024	$ 0.5	$ 4.0	$ 4.9	$ 18.9	$ 46.1	$ 200.6	$ 138.9	$ 542.4	$ 450.9	$ 1,407.3
2025	$ 0.5	$ 4.1	$ 5.0	$ 19.3	$ 47.0	$ 203.7	$ 140.8	$ 549.4	$ 456.6	$ 1,426.5
2026	$ 0.5	$ 4.2	$ 5.1	$ 19.6	$ 47.8	$ 206.3	$ 142.4	$ 554.9	$ 461.2	$ 1,441.9
2027	$ 0.5	$ 4.2	$ 5.2	$ 19.9	$ 48.4	$ 208.3	$ 143.5	$ 559.1	$ 464.6	$ 1,453.8
2028	$ 0.5	$ 4.2	$ 5.2	$ 19.8	$ 48.3	$ 207.1	$ 142.5	$ 554.9	$ 461.1	$ 1,443.6
2029	$ 0.5	$ 4.2	$ 5.2	$ 20.0	$ 48.6	$ 207.7	$ 142.8	$ 555.5	$ 461.6	$ 1,446.0
Total	**$ 7.6**	**$ 59.3**	**$ 72.6**	**$ 278.4**	**$ 677.8**	**$ 3,039.7**	**$ 2,157.3**	**$ 8,538.9**	**$ 7,101.7**	**$ 21,933.3**
Ann.	**$ 0.4**	**$ 3.4**	**$ 4.2**	**$ 16.0**	**$ 38.9**	**$ 174.6**	**$ 123.9**	**$ 490.4**	**$ 407.8**	**$ 1,259.6**

	Arsenic/Bladder Cancer Cessation Lag Model									
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	>1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.1	$ 0.5	$ 0.6	$ 2.5	$ 6.0	$ 29.6	$ 24.7	$ 107.3	$ 89.3	$ 260.7
2011	$ 0.2	$ 1.3	$ 1.6	$ 6.1	$ 14.8	$ 71.4	$ 59.4	$ 258.4	$ 214.9	$ 628.1
2012	$ 0.3	$ 2.2	$ 2.7	$ 10.4	$ 25.4	$ 120.8	$ 100.4	$ 436.8	$ 363.2	$ 1,062.2
2013	$ 0.4	$ 3.3	$ 4.0	$ 15.3	$ 37.2	$ 175.1	$ 145.4	$ 632.6	$ 525.9	$ 1,539.1
2014	$ 0.6	$ 4.3	$ 5.3	$ 20.4	$ 49.7	$ 232.3	$ 181.6	$ 739.9	$ 614.9	$ 1,849.0
2015	$ 0.7	$ 5.5	$ 6.7	$ 25.7	$ 62.6	$ 277.9	$ 203.2	$ 812.8	$ 675.3	$ 2,070.4
2016	$ 0.8	$ 6.2	$ 7.5	$ 28.9	$ 70.4	$ 305.4	$ 218.0	$ 863.0	$ 716.9	$ 2,217.2
2017	$ 0.9	$ 6.6	$ 8.1	$ 31.1	$ 75.8	$ 324.2	$ 228.1	$ 897.0	$ 745.1	$ 2,316.9
2018	$ 0.9	$ 6.9	$ 8.5	$ 32.6	$ 79.4	$ 336.8	$ 234.8	$ 919.3	$ 763.6	$ 2,382.7
2019	$ 0.9	$ 7.2	$ 8.8	$ 33.6	$ 81.8	$ 344.9	$ 238.9	$ 932.7	$ 774.7	$ 2,423.5
2020	$ 0.9	$ 7.3	$ 8.9	$ 34.2	$ 83.3	$ 349.8	$ 241.2	$ 939.5	$ 780.3	$ 2,445.3
2021	$ 0.9	$ 7.3	$ 9.0	$ 34.5	$ 84.0	$ 352.2	$ 242.0	$ 941.2	$ 781.7	$ 2,452.9
2022	$ 0.9	$ 7.4	$ 9.0	$ 34.6	$ 84.3	$ 352.7	$ 241.8	$ 939.0	$ 779.9	$ 2,449.6
2023	$ 0.9	$ 7.4	$ 9.0	$ 34.6	$ 84.1	$ 351.8	$ 240.7	$ 933.8	$ 775.6	$ 2,437.8
2024	$ 0.9	$ 7.3	$ 9.0	$ 34.4	$ 83.7	$ 349.7	$ 238.9	$ 926.3	$ 769.4	$ 2,419.7
2025	$ 0.9	$ 7.3	$ 8.9	$ 34.1	$ 83.0	$ 346.8	$ 236.7	$ 917.1	$ 761.8	$ 2,396.7
2026	$ 0.9	$ 7.2	$ 8.8	$ 33.8	$ 82.2	$ 343.3	$ 234.1	$ 906.6	$ 753.0	$ 2,369.9
2027	$ 0.9	$ 7.1	$ 8.7	$ 33.4	$ 81.2	$ 339.3	$ 231.2	$ 895.1	$ 743.5	$ 2,340.3
2028	$ 0.9	$ 6.9	$ 8.5	$ 32.5	$ 79.1	$ 330.6	$ 225.1	$ 871.3	$ 723.7	$ 2,278.6
2029	$ 0.9	$ 6.8	$ 8.3	$ 32.0	$ 77.8	$ 325.2	$ 221.4	$ 856.5	$ 711.5	$ 2,240.3
Total	**$ 14.9**	**$ 115.9**	**$ 142.1**	**$ 544.7**	**$ 1,325.9**	**$ 5,659.8**	**$ 3,987.5**	**$ 15,726.1**	**$ 13,064.1**	**$ 40,581.0**
Ann.	**$ 0.9**	**$ 6.7**	**$ 8.2**	**$ 31.3**	**$ 76.1**	**$ 325.0**	**$ 229.0**	**$ 903.1**	**$ 750.2**	**$ 2,330.5**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.20a through F.20i and F.20k through F.20s.

Exhibit F.20ac Mean Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 7% Discount Rate, by System Size
(All Systems)

TTHM - Preferred Alternative, ICR Matrix Method

	Smoking/Lung Cancer Cessation Lag Model											Smoking/Bladder Cancer Cessation Lag Model										Arsenic/Bladder Cancer Cessation Lag Model									
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.3	$ 0.3	$ 1.2	$ 3.0	$ 13.8	$ 11.5	$ 49.8	$ 41.4	$ 121.3	$ 0.0	$ 0.2	$ 0.2	$ 0.9	$ 2.2	$ 11.7	$ 9.8	$ 42.6	$ 35.5	$ 103.0	$ 0.1	$ 0.4	$ 0.5	$ 2.0	$ 5.0	$ 24.5	$ 20.4	$ 88.7	$ 73.8	$ 215.5
2011	$ 0.1	$ 0.6	$ 0.8	$ 3.0	$ 7.4	$ 33.5	$ 27.8	$ 120.8	$ 100.3	$ 294.3	$ 0.1	$ 0.4	$ 0.5	$ 2.0	$ 4.9	$ 26.2	$ 21.8	$ 95.2	$ 79.4	$ 230.6	$ 0.1	$ 1.0	$ 1.3	$ 4.8	$ 11.8	$ 56.8	$ 47.3	$ 205.6	$ 171.0	$ 499.7
2012	$ 0.1	$ 1.1	$ 1.3	$ 5.1	$ 12.5	$ 56.7	$ 47.0	$ 204.3	$ 169.7	$ 497.9	$ 0.1	$ 0.7	$ 0.9	$ 3.3	$ 8.1	$ 42.0	$ 35.1	$ 152.9	$ 127.5	$ 370.6	$ 0.2	$ 1.7	$ 2.1	$ 8.0	$ 19.5	$ 92.5	$ 76.9	$ 334.5	$ 278.2	$ 813.6
2013	$ 0.2	$ 1.6	$ 1.9	$ 7.4	$ 18.1	$ 82.0	$ 68.0	$ 295.6	$ 245.5	$ 720.3	$ 0.1	$ 1.0	$ 1.2	$ 4.7	$ 11.4	$ 58.6	$ 48.9	$ 212.9	$ 177.4	$ 516.2	$ 0.3	$ 2.4	$ 2.9	$ 11.3	$ 27.4	$ 129.1	$ 107.2	$ 466.4	$ 387.7	$ 1,134.7
2014	$ 0.3	$ 2.1	$ 2.6	$ 9.8	$ 23.9	$ 108.7	$ 85.6	$ 352.3	$ 292.6	$ 877.8	$ 0.2	$ 1.3	$ 1.6	$ 6.1	$ 14.8	$ 75.2	$ 58.9	$ 239.5	$ 199.5	$ 596.9	$ 0.4	$ 3.1	$ 3.8	$ 14.5	$ 35.3	$ 164.9	$ 128.9	$ 525.1	$ 436.4	$ 1,312.2
2015	$ 0.3	$ 2.6	$ 3.2	$ 12.2	$ 29.8	$ 130.7	$ 97.4	$ 394.2	$ 327.5	$ 998.0	$ 0.2	$ 1.6	$ 1.9	$ 7.4	$ 18.1	$ 87.3	$ 64.1	$ 257.1	$ 214.1	$ 651.8	$ 0.5	$ 3.7	$ 4.6	$ 17.6	$ 42.8	$ 189.8	$ 138.8	$ 555.3	$ 461.3	$ 1,414.5
2016	$ 0.4	$ 2.9	$ 3.6	$ 13.7	$ 33.4	$ 145.1	$ 105.8	$ 424.1	$ 352.3	$ 1,081.3	$ 0.2	$ 1.7	$ 2.1	$ 8.2	$ 19.9	$ 93.6	$ 67.5	$ 268.8	$ 223.7	$ 685.8	$ 0.5	$ 4.0	$ 5.0	$ 19.0	$ 46.3	$ 200.9	$ 143.4	$ 567.5	$ 471.5	$ 1,458.1
2017	$ 0.4	$ 3.1	$ 3.8	$ 14.7	$ 35.8	$ 154.9	$ 111.3	$ 443.3	$ 368.3	$ 1,135.7	$ 0.2	$ 1.9	$ 2.3	$ 8.7	$ 21.2	$ 97.7	$ 69.7	$ 276.1	$ 229.7	$ 707.5	$ 0.5	$ 4.2	$ 5.1	$ 19.7	$ 48.0	$ 205.2	$ 144.4	$ 567.9	$ 471.7	$ 1,466.7
2018	$ 0.4	$ 3.3	$ 4.0	$ 15.3	$ 37.3	$ 160.9	$ 114.4	$ 452.6	$ 376.1	$ 1,164.3	$ 0.2	$ 1.9	$ 2.4	$ 9.0	$ 22.0	$ 100.3	$ 70.9	$ 280.0	$ 233.0	$ 719.8	$ 0.5	$ 4.2	$ 5.2	$ 19.9	$ 48.4	$ 205.2	$ 143.1	$ 560.2	$ 465.3	$ 1,452.0
2019	$ 0.4	$ 3.3	$ 4.1	$ 15.6	$ 38.0	$ 163.8	$ 115.3	$ 453.5	$ 376.8	$ 1,170.9	$ 0.3	$ 2.0	$ 2.4	$ 9.3	$ 22.5	$ 101.6	$ 71.5	$ 281.3	$ 234.0	$ 724.8	$ 0.5	$ 4.2	$ 5.1	$ 19.7	$ 48.0	$ 202.3	$ 140.2	$ 547.1	$ 454.4	$ 1,421.6
2020	$ 0.4	$ 3.3	$ 4.1	$ 15.7	$ 38.2	$ 164.0	$ 114.5	$ 448.7	$ 372.9	$ 1,161.8	$ 0.3	$ 2.0	$ 2.4	$ 9.4	$ 22.8	$ 102.0	$ 71.4	$ 280.5	$ 233.2	$ 724.0	$ 0.5	$ 4.1	$ 5.0	$ 19.3	$ 47.0	$ 197.5	$ 136.2	$ 530.5	$ 440.6	$ 1,380.8
2021	$ 0.4	$ 3.3	$ 4.1	$ 15.5	$ 37.8	$ 162.2	$ 112.6	$ 440.0	$ 365.7	$ 1,141.6	$ 0.3	$ 2.0	$ 2.5	$ 9.4	$ 22.9	$ 101.6	$ 70.9	$ 277.9	$ 231.1	$ 718.5	$ 0.5	$ 4.0	$ 4.9	$ 18.8	$ 45.7	$ 191.4	$ 131.6	$ 511.6	$ 424.9	$ 1,333.3
2022	$ 0.4	$ 3.2	$ 4.0	$ 15.2	$ 37.1	$ 158.9	$ 109.9	$ 428.7	$ 356.2	$ 1,113.7	$ 0.3	$ 2.0	$ 2.4	$ 9.4	$ 22.9	$ 100.6	$ 70.0	$ 273.9	$ 227.8	$ 709.3	$ 0.5	$ 3.9	$ 4.7	$ 18.1	$ 44.1	$ 184.5	$ 126.5	$ 491.3	$ 408.1	$ 1,281.7
2023	$ 0.4	$ 3.2	$ 3.9	$ 14.9	$ 36.2	$ 154.7	$ 106.7	$ 415.4	$ 345.2	$ 1,080.5	$ 0.3	$ 2.0	$ 2.4	$ 9.3	$ 22.7	$ 99.1	$ 68.8	$ 268.9	$ 223.6	$ 697.0	$ 0.5	$ 3.7	$ 4.5	$ 17.4	$ 42.4	$ 177.2	$ 121.2	$ 470.3	$ 390.7	$ 1,227.9
2024	$ 0.4	$ 3.1	$ 3.8	$ 14.4	$ 35.1	$ 149.9	$ 103.1	$ 401.0	$ 333.2	$ 1,043.8	$ 0.3	$ 2.0	$ 2.4	$ 9.2	$ 22.3	$ 97.3	$ 67.4	$ 263.0	$ 218.6	$ 682.3	$ 0.5	$ 3.5	$ 4.3	$ 16.7	$ 40.6	$ 169.6	$ 115.8	$ 449.1	$ 373.1	$ 1,173.2
2025	$ 0.4	$ 3.0	$ 3.6	$ 13.9	$ 33.9	$ 144.6	$ 99.3	$ 385.8	$ 320.6	$ 1,005.0	$ 0.2	$ 1.9	$ 2.4	$ 9.0	$ 21.9	$ 95.1	$ 65.7	$ 256.4	$ 213.1	$ 665.8	$ 0.4	$ 3.4	$ 4.2	$ 15.9	$ 38.8	$ 161.9	$ 110.5	$ 428.1	$ 355.5	$ 1,118.6
2026	$ 0.4	$ 2.9	$ 3.5	$ 13.4	$ 32.6	$ 139.0	$ 95.3	$ 370.2	$ 307.6	$ 964.8	$ 0.2	$ 1.9	$ 2.3	$ 8.8	$ 21.5	$ 92.7	$ 64.0	$ 249.3	$ 207.2	$ 647.8	$ 0.4	$ 3.2	$ 4.0	$ 15.2	$ 36.9	$ 154.2	$ 105.2	$ 407.3	$ 338.3	$ 1,064.8
2027	$ 0.4	$ 2.7	$ 3.4	$ 12.9	$ 31.3	$ 133.4	$ 91.3	$ 354.4	$ 294.5	$ 924.2	$ 0.2	$ 1.8	$ 2.2	$ 8.6	$ 20.9	$ 90.1	$ 62.1	$ 241.8	$ 201.0	$ 628.8	$ 0.4	$ 3.1	$ 3.8	$ 14.4	$ 35.1	$ 146.7	$ 100.0	$ 387.1	$ 321.5	$ 1,012.2
2028	$ 0.3	$ 2.6	$ 3.2	$ 12.2	$ 29.6	$ 126.0	$ 86.2	$ 334.3	$ 277.8	$ 872.2	$ 0.2	$ 1.8	$ 2.2	$ 8.3	$ 20.1	$ 86.2	$ 59.3	$ 231.0	$ 192.0	$ 601.0	$ 0.4	$ 2.9	$ 3.5	$ 13.5	$ 32.9	$ 137.6	$ 93.7	$ 362.7	$ 301.3	$ 948.6
2029	$ 0.3	$ 2.5	$ 3.0	$ 11.6	$ 28.2	$ 120.1	$ 82.1	$ 318.3	$ 264.5	$ 830.6	$ 0.2	$ 1.7	$ 2.1	$ 8.0	$ 19.5	$ 83.2	$ 57.2	$ 222.6	$ 185.0	$ 579.5	$ 0.4	$ 2.7	$ 3.3	$ 12.8	$ 31.2	$ 130.3	$ 88.7	$ 343.3	$ 285.1	$ 897.8
Total	**$ 6.5**	**$ 50.6**	**$ 62.1**	**$ 237.9**	**$ 579.2**	**$ 2,502.9**	**$ 1,784.9**	**$ 7,087.1**	**$ 5,888.6**	**$ 18,200.0**	**$ 4.1**	**$ 31.7**	**$ 38.9**	**$ 148.9**	**$ 362.6**	**$ 1,642.0**	**$ 1,174.9**	**$ 4,671.8**	**$ 3,886.2**	**$ 11,961.1**	**$ 8.2**	**$ 63.6**	**$ 77.9**	**$ 298.6**	**$ 727.0**	**$ 3,122.3**	**$ 2,219.9**	**$ 8,799.7**	**$ 7,310.5**	**$ 22,627.7**
Ann.	**$ 0.6**	**$ 4.3**	**$ 5.3**	**$ 20.4**	**$ 49.7**	**$ 214.8**	**$ 153.2**	**$ 608.2**	**$ 505.3**	**$ 1,561.8**	**$ 0.4**	**$ 2.7**	**$ 3.3**	**$ 12.8**	**$ 31.1**	**$ 140.9**	**$ 100.8**	**$ 400.9**	**$ 333.5**	**$ 1,026.4**	**$ 0.7**	**$ 5.5**	**$ 6.7**	**$ 25.6**	**$ 62.4**	**$ 267.9**	**$ 190.5**	**$ 755.1**	**$ 627.3**	**$ 1,941.7**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.20a through F.20i and F.20k through F.20s.

Section F.21
Model Outputs - Preferred Alternative, SWAT Method
TTHM as Indicator
Lymphoma for Non-Fatal Cases

Exhibit F.21a Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving <100 People)

TTHM - Preferred Alternative, SWAT Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
2011	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
2012	$ 0.0	$ 0.0	$ 0.1	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.1
2013	$ 0.0	$ 0.0	$ 0.1	$ 0.0	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.1
2014	$ 0.1	$ 0.0	$ 0.1	$ 0.0	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.2
2015	$ 0.1	$ 0.0	$ 0.2	$ 0.0	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.2
2016	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.3
2017	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.3
2018	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.3
2019	$ 0.1	$ 0.0	$ 0.3	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.3
2020	$ 0.1	$ 0.0	$ 0.3	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.4
2021	$ 0.1	$ 0.0	$ 0.3	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.4
2022	$ 0.1	$ 0.0	$ 0.3	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.4
2023	$ 0.1	$ 0.0	$ 0.3	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.4
2024	$ 0.2	$ 0.0	$ 0.4	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.4
2025	$ 0.2	$ 0.0	$ 0.4	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.4
2026	$ 0.2	$ 0.0	$ 0.4	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.4
2027	$ 0.2	$ 0.0	$ 0.4	$ 0.1	$ 0.0	$ 0.3	$ 0.2	$ 0.0	$ 0.4
2028	$ 0.2	$ 0.0	$ 0.4	$ 0.1	$ 0.0	$ 0.3	$ 0.2	$ 0.0	$ 0.4
2029	$ 0.2	$ 0.0	$ 0.4	$ 0.1	$ 0.0	$ 0.3	$ 0.2	$ 0.0	$ 0.4
Total	**$ 2.2**	**$ 0.3**	**$ 5.0**	**$ 1.4**	**$ 0.2**	**$ 3.2**	**$ 2.6**	**$ 0.4**	**$ 6.0**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.21b Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving 100-499 People)

TTHM - Preferred Alternative, SWAT Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.0	$ 0.1	$ 0.0	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.2
2011	$ 0.1	$ 0.0	$ 0.3	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.5
2012	$ 0.2	$ 0.0	$ 0.5	$ 0.2	$ 0.0	$ 0.4	$ 0.4	$ 0.1	$ 0.8
2013	$ 0.3	$ 0.1	$ 0.8	$ 0.2	$ 0.0	$ 0.5	$ 0.5	$ 0.1	$ 1.2
2014	$ 0.5	$ 0.1	$ 1.1	$ 0.3	$ 0.0	$ 0.7	$ 0.7	$ 0.1	$ 1.7
2015	$ 0.7	$ 0.1	$ 1.5	$ 0.4	$ 0.1	$ 1.0	$ 0.9	$ 0.1	$ 2.2
2016	$ 0.8	$ 0.1	$ 1.8	$ 0.5	$ 0.1	$ 1.1	$ 1.1	$ 0.2	$ 2.5
2017	$ 0.9	$ 0.1	$ 2.1	$ 0.5	$ 0.1	$ 1.3	$ 1.2	$ 0.2	$ 2.8
2018	$ 1.0	$ 0.2	$ 2.3	$ 0.6	$ 0.1	$ 1.4	$ 1.3	$ 0.2	$ 3.0
2019	$ 1.1	$ 0.2	$ 2.5	$ 0.7	$ 0.1	$ 1.5	$ 1.4	$ 0.2	$ 3.2
2020	$ 1.2	$ 0.2	$ 2.7	$ 0.7	$ 0.1	$ 1.7	$ 1.4	$ 0.2	$ 3.3
2021	$ 1.3	$ 0.2	$ 2.9	$ 0.8	$ 0.1	$ 1.8	$ 1.5	$ 0.2	$ 3.5
2022	$ 1.3	$ 0.2	$ 3.1	$ 0.8	$ 0.1	$ 1.9	$ 1.6	$ 0.2	$ 3.6
2023	$ 1.4	$ 0.2	$ 3.2	$ 0.9	$ 0.1	$ 2.0	$ 1.6	$ 0.2	$ 3.7
2024	$ 1.4	$ 0.2	$ 3.3	$ 0.9	$ 0.1	$ 2.1	$ 1.6	$ 0.2	$ 3.8
2025	$ 1.5	$ 0.2	$ 3.4	$ 1.0	$ 0.1	$ 2.2	$ 1.7	$ 0.3	$ 3.9
2026	$ 1.5	$ 0.2	$ 3.5	$ 1.0	$ 0.2	$ 2.3	$ 1.7	$ 0.3	$ 4.0
2027	$ 1.6	$ 0.2	$ 3.6	$ 1.0	$ 0.2	$ 2.4	$ 1.7	$ 0.3	$ 4.0
2028	$ 1.6	$ 0.2	$ 3.7	$ 1.1	$ 0.2	$ 2.5	$ 1.7	$ 0.3	$ 4.0
2029	$ 1.6	$ 0.2	$ 3.7	$ 1.1	$ 0.2	$ 2.6	$ 1.8	$ 0.3	$ 4.1
Total	**$ 20.0**	**$ 3.0**	**$ 46.2**	**$ 12.8**	**$ 2.0**	**$ 29.7**	**$ 24.2**	**$ 3.7**	**$ 56.0**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.21c Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving 500-999 People)

TTHM - Preferred Alternative, SWAT Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.3
2011	$ 0.2	$ 0.0	$ 0.5	$ 0.2	$ 0.0	$ 0.4	$ 0.4	$ 0.1	$ 0.8
2012	$ 0.4	$ 0.1	$ 0.9	$ 0.3	$ 0.0	$ 0.6	$ 0.6	$ 0.1	$ 1.4
2013	$ 0.6	$ 0.1	$ 1.4	$ 0.4	$ 0.1	$ 0.9	$ 0.9	$ 0.1	$ 2.2
2014	$ 0.9	$ 0.1	$ 2.0	$ 0.6	$ 0.1	$ 1.3	$ 1.3	$ 0.2	$ 3.0
2015	$ 1.2	$ 0.2	$ 2.7	$ 0.7	$ 0.1	$ 1.7	$ 1.7	$ 0.3	$ 3.8
2016	$ 1.4	$ 0.2	$ 3.2	$ 0.9	$ 0.1	$ 2.0	$ 1.9	$ 0.3	$ 4.4
2017	$ 1.6	$ 0.2	$ 3.7	$ 1.0	$ 0.1	$ 2.2	$ 2.1	$ 0.3	$ 4.9
2018	$ 1.8	$ 0.3	$ 4.1	$ 1.1	$ 0.2	$ 2.5	$ 2.3	$ 0.4	$ 5.3
2019	$ 1.9	$ 0.3	$ 4.5	$ 1.2	$ 0.2	$ 2.7	$ 2.4	$ 0.4	$ 5.6
2020	$ 2.1	$ 0.3	$ 4.8	$ 1.3	$ 0.2	$ 2.9	$ 2.6	$ 0.4	$ 5.9
2021	$ 2.2	$ 0.3	$ 5.1	$ 1.4	$ 0.2	$ 3.1	$ 2.7	$ 0.4	$ 6.1
2022	$ 2.3	$ 0.4	$ 5.4	$ 1.4	$ 0.2	$ 3.3	$ 2.7	$ 0.4	$ 6.3
2023	$ 2.4	$ 0.4	$ 5.6	$ 1.5	$ 0.2	$ 3.5	$ 2.8	$ 0.4	$ 6.5
2024	$ 2.5	$ 0.4	$ 5.8	$ 1.6	$ 0.2	$ 3.7	$ 2.9	$ 0.4	$ 6.7
2025	$ 2.6	$ 0.4	$ 6.0	$ 1.7	$ 0.3	$ 3.9	$ 3.0	$ 0.4	$ 6.8
2026	$ 2.7	$ 0.4	$ 6.2	$ 1.8	$ 0.3	$ 4.1	$ 3.0	$ 0.5	$ 7.0
2027	$ 2.8	$ 0.4	$ 6.4	$ 1.8	$ 0.3	$ 4.3	$ 3.1	$ 0.5	$ 7.1
2028	$ 2.8	$ 0.4	$ 6.5	$ 1.9	$ 0.3	$ 4.4	$ 3.1	$ 0.5	$ 7.1
2029	$ 2.8	$ 0.4	$ 6.6	$ 2.0	$ 0.3	$ 4.5	$ 3.1	$ 0.5	$ 7.2
Total	**$ 35.2**	**$ 5.4**	**$ 81.5**	**$ 22.6**	**$ 3.4**	**$ 52.3**	**$ 42.7**	**$ 6.5**	**$ 98.7**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.21d Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving 1,000-3,299 People)

TTHM - Preferred Alternative, SWAT Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.5	$ 0.1	$ 1.2	$ 0.4	$ 0.1	$ 0.9	$ 0.9	$ 0.1	$ 2.1
2011	$ 1.4	$ 0.2	$ 3.2	$ 1.0	$ 0.2	$ 2.3	$ 2.3	$ 0.4	$ 5.3
2012	$ 2.5	$ 0.4	$ 5.8	$ 1.7	$ 0.3	$ 4.0	$ 4.0	$ 0.6	$ 9.3
2013	$ 3.9	$ 0.6	$ 9.0	$ 2.6	$ 0.4	$ 6.0	$ 6.1	$ 0.9	$ 13.9
2014	$ 5.6	$ 0.9	$ 12.8	$ 3.6	$ 0.6	$ 8.3	$ 8.3	$ 1.3	$ 19.1
2015	$ 7.5	$ 1.1	$ 17.1	$ 4.7	$ 0.7	$ 10.9	$ 10.8	$ 1.6	$ 24.8
2016	$ 8.9	$ 1.4	$ 20.6	$ 5.5	$ 0.8	$ 12.7	$ 12.4	$ 1.9	$ 28.6
2017	$ 10.3	$ 1.6	$ 23.6	$ 6.2	$ 1.0	$ 14.4	$ 13.8	$ 2.1	$ 31.7
2018	$ 11.5	$ 1.7	$ 26.4	$ 6.9	$ 1.1	$ 15.9	$ 14.8	$ 2.3	$ 34.2
2019	$ 12.5	$ 1.9	$ 28.9	$ 7.6	$ 1.2	$ 17.4	$ 15.7	$ 2.4	$ 36.3
2020	$ 13.5	$ 2.0	$ 31.1	$ 8.2	$ 1.2	$ 18.9	$ 16.5	$ 2.5	$ 38.0
2021	$ 14.3	$ 2.2	$ 32.9	$ 8.8	$ 1.3	$ 20.2	$ 17.1	$ 2.6	$ 39.5
2022	$ 15.0	$ 2.3	$ 34.7	$ 9.3	$ 1.4	$ 21.6	$ 17.7	$ 2.7	$ 40.9
2023	$ 15.6	$ 2.4	$ 36.2	$ 9.9	$ 1.5	$ 22.8	$ 18.2	$ 2.8	$ 42.1
2024	$ 16.2	$ 2.5	$ 37.5	$ 10.4	$ 1.6	$ 24.1	$ 18.6	$ 2.8	$ 43.1
2025	$ 16.8	$ 2.5	$ 38.8	$ 10.9	$ 1.7	$ 25.2	$ 19.0	$ 2.9	$ 44.1
2026	$ 17.3	$ 2.6	$ 40.0	$ 11.4	$ 1.7	$ 26.4	$ 19.4	$ 2.9	$ 45.0
2027	$ 17.7	$ 2.7	$ 41.1	$ 11.9	$ 1.8	$ 27.6	$ 19.8	$ 3.0	$ 45.8
2028	$ 17.9	$ 2.7	$ 41.6	$ 12.2	$ 1.8	$ 28.3	$ 19.8	$ 3.0	$ 46.0
2029	$ 18.3	$ 2.8	$ 42.5	$ 12.6	$ 1.9	$ 29.3	$ 20.1	$ 3.0	$ 46.6
Total	**$ 227.3**	**$ 34.6**	**$ 525.3**	**$ 145.9**	**$ 22.2**	**$ 337.2**	**$ 275.3**	**$ 41.9**	**$ 636.2**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.21e Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving 3,300-9,999 People)

TTHM - Preferred Alternative, SWAT Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 1.5	$ 0.2	$ 3.5	$ 1.2	$ 0.2	$ 2.7	$ 2.6	$ 0.4	$ 6.0
2011	$ 4.0	$ 0.6	$ 9.2	$ 2.9	$ 0.4	$ 6.6	$ 6.6	$ 1.0	$ 15.1
2012	$ 7.3	$ 1.1	$ 16.7	$ 5.0	$ 0.8	$ 11.4	$ 11.5	$ 1.8	$ 26.5
2013	$ 11.3	$ 1.7	$ 25.9	$ 7.5	$ 1.1	$ 17.1	$ 17.3	$ 2.7	$ 39.8
2014	$ 16.0	$ 2.4	$ 36.7	$ 10.3	$ 1.6	$ 23.7	$ 23.8	$ 3.6	$ 54.7
2015	$ 21.3	$ 3.3	$ 49.0	$ 13.5	$ 2.1	$ 31.1	$ 30.8	$ 4.7	$ 70.9
2016	$ 25.6	$ 3.9	$ 58.9	$ 15.8	$ 2.4	$ 36.3	$ 35.6	$ 5.4	$ 81.9
2017	$ 29.4	$ 4.5	$ 67.6	$ 17.9	$ 2.7	$ 41.1	$ 39.3	$ 6.0	$ 90.6
2018	$ 32.8	$ 5.0	$ 75.5	$ 19.8	$ 3.0	$ 45.6	$ 42.4	$ 6.5	$ 97.7
2019	$ 35.8	$ 5.5	$ 82.7	$ 21.6	$ 3.3	$ 49.9	$ 45.0	$ 6.8	$ 103.7
2020	$ 38.5	$ 5.9	$ 88.9	$ 23.4	$ 3.6	$ 54.0	$ 47.1	$ 7.2	$ 108.8
2021	$ 40.8	$ 6.2	$ 94.2	$ 25.1	$ 3.8	$ 57.8	$ 49.0	$ 7.4	$ 113.0
2022	$ 42.9	$ 6.5	$ 99.2	$ 26.7	$ 4.1	$ 61.7	$ 50.6	$ 7.7	$ 117.0
2023	$ 44.7	$ 6.8	$ 103.5	$ 28.2	$ 4.3	$ 65.3	$ 52.0	$ 7.9	$ 120.3
2024	$ 46.4	$ 7.1	$ 107.4	$ 29.7	$ 4.5	$ 68.8	$ 53.3	$ 8.1	$ 123.3
2025	$ 48.0	$ 7.3	$ 111.0	$ 31.2	$ 4.7	$ 72.2	$ 54.5	$ 8.3	$ 126.0
2026	$ 49.4	$ 7.5	$ 114.4	$ 32.6	$ 4.9	$ 75.6	$ 55.5	$ 8.4	$ 128.6
2027	$ 50.7	$ 7.7	$ 117.7	$ 34.0	$ 5.2	$ 78.9	$ 56.5	$ 8.6	$ 131.1
2028	$ 51.3	$ 7.8	$ 119.0	$ 34.9	$ 5.3	$ 81.0	$ 56.7	$ 8.6	$ 131.5
2029	$ 52.4	$ 7.9	$ 121.6	$ 36.1	$ 5.5	$ 83.9	$ 57.5	$ 8.7	$ 133.4
Total	**$ 650.1**	**$ 98.8**	**$ 1,502.6**	**$ 417.3**	**$ 63.4**	**$ 964.6**	**$ 787.6**	**$ 119.8**	**$ 1,820.0**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.21f Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving 10,000-49,999 People)

TTHM - Preferred Alternative, SWAT Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 10.0	$ 1.5	$ 22.9	$ 9.1	$ 1.4	$ 20.8	$ 18.3	$ 2.8	$ 42.1
2011	$ 25.8	$ 4.0	$ 59.5	$ 21.6	$ 3.3	$ 49.6	$ 45.0	$ 6.9	$ 103.6
2012	$ 46.8	$ 7.2	$ 107.4	$ 36.9	$ 5.6	$ 84.7	$ 78.0	$ 11.9	$ 179.2
2013	$ 72.4	$ 11.1	$ 166.3	$ 54.7	$ 8.4	$ 125.6	$ 115.9	$ 17.7	$ 266.3
2014	$ 102.8	$ 15.7	$ 236.3	$ 74.8	$ 11.4	$ 172.0	$ 158.0	$ 24.1	$ 363.1
2015	$ 132.5	$ 20.3	$ 304.7	$ 92.4	$ 14.1	$ 212.5	$ 193.9	$ 29.6	$ 445.9
2016	$ 157.6	$ 24.1	$ 362.5	$ 105.5	$ 16.1	$ 242.6	$ 218.7	$ 33.4	$ 502.9
2017	$ 180.3	$ 27.5	$ 415.0	$ 117.3	$ 17.9	$ 269.9	$ 238.5	$ 36.4	$ 548.9
2018	$ 200.7	$ 30.6	$ 462.5	$ 128.2	$ 19.5	$ 295.4	$ 254.8	$ 38.8	$ 586.9
2019	$ 218.9	$ 33.3	$ 505.2	$ 138.5	$ 21.1	$ 319.6	$ 268.5	$ 40.9	$ 619.6
2020	$ 234.7	$ 35.7	$ 541.8	$ 148.3	$ 22.6	$ 342.4	$ 280.3	$ 42.7	$ 647.1
2021	$ 248.3	$ 37.8	$ 573.3	$ 157.7	$ 24.0	$ 364.1	$ 290.6	$ 44.2	$ 670.9
2022	$ 260.4	$ 39.6	$ 602.3	$ 166.7	$ 25.3	$ 385.5	$ 299.7	$ 45.6	$ 693.1
2023	$ 271.3	$ 41.3	$ 627.6	$ 175.4	$ 26.7	$ 405.7	$ 307.9	$ 46.8	$ 712.2
2024	$ 281.2	$ 42.7	$ 650.7	$ 183.8	$ 27.9	$ 425.3	$ 315.3	$ 47.9	$ 729.7
2025	$ 290.2	$ 44.1	$ 671.7	$ 191.9	$ 29.1	$ 444.2	$ 322.2	$ 48.9	$ 745.6
2026	$ 298.6	$ 45.3	$ 691.7	$ 199.9	$ 30.3	$ 463.0	$ 328.5	$ 49.8	$ 761.0
2027	$ 306.5	$ 46.4	$ 711.0	$ 207.6	$ 31.4	$ 481.6	$ 334.5	$ 50.7	$ 776.1
2028	$ 309.8	$ 46.9	$ 718.3	$ 212.3	$ 32.2	$ 492.3	$ 335.8	$ 50.9	$ 778.6
2029	$ 315.9	$ 47.8	$ 733.2	$ 219.1	$ 33.2	$ 508.4	$ 340.3	$ 51.5	$ 789.9
Total	**$ 3,964.7**	**$ 602.8**	**$ 9,163.8**	**$ 2,641.5**	**$ 401.7**	**$ 6,105.3**	**$ 4,744.7**	**$ 721.7**	**$ 10,963.0**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.21g Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving 50,000-99,999 People)

TTHM - Preferred Alternative, SWAT Method

	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 8.7	$ 1.3	$ 20.0	$ 7.9	$ 1.2	$ 18.2	$ 16.0	$ 2.4	$ 36.7
2011	$ 22.5	$ 3.4	$ 51.8	$ 18.8	$ 2.9	$ 43.2	$ 39.2	$ 6.0	$ 90.3
2012	$ 40.7	$ 6.2	$ 93.6	$ 32.1	$ 4.9	$ 73.8	$ 68.0	$ 10.4	$ 156.1
2013	$ 63.1	$ 9.7	$ 144.9	$ 47.7	$ 7.3	$ 109.5	$ 101.0	$ 15.5	$ 232.0
2014	$ 85.0	$ 13.0	$ 195.5	$ 61.1	$ 9.3	$ 140.5	$ 129.4	$ 19.8	$ 297.4
2015	$ 103.7	$ 15.9	$ 238.6	$ 70.7	$ 10.8	$ 162.7	$ 148.5	$ 22.7	$ 341.6
2016	$ 120.8	$ 18.4	$ 277.7	$ 79.4	$ 12.1	$ 182.6	$ 163.7	$ 25.0	$ 376.4
2017	$ 136.2	$ 20.8	$ 313.6	$ 87.4	$ 13.3	$ 201.1	$ 176.1	$ 26.9	$ 405.3
2018	$ 150.0	$ 22.9	$ 345.5	$ 94.8	$ 14.5	$ 218.5	$ 186.5	$ 28.4	$ 429.6
2019	$ 161.8	$ 24.6	$ 373.4	$ 101.9	$ 15.5	$ 235.2	$ 195.3	$ 29.8	$ 450.7
2020	$ 172.0	$ 26.2	$ 397.1	$ 108.7	$ 16.6	$ 251.0	$ 203.0	$ 30.9	$ 468.7
2021	$ 181.0	$ 27.5	$ 417.9	$ 115.2	$ 17.5	$ 266.0	$ 209.8	$ 31.9	$ 484.4
2022	$ 189.0	$ 28.7	$ 437.2	$ 121.5	$ 18.5	$ 280.9	$ 215.9	$ 32.8	$ 499.2
2023	$ 196.3	$ 29.9	$ 454.2	$ 127.5	$ 19.4	$ 295.0	$ 221.3	$ 33.7	$ 512.0
2024	$ 203.0	$ 30.9	$ 469.8	$ 133.4	$ 20.3	$ 308.7	$ 226.4	$ 34.4	$ 523.9
2025	$ 209.1	$ 31.7	$ 484.0	$ 139.1	$ 21.1	$ 321.9	$ 231.0	$ 35.1	$ 534.7
2026	$ 214.9	$ 32.6	$ 497.7	$ 144.6	$ 21.9	$ 335.0	$ 235.4	$ 35.7	$ 545.2
2027	$ 220.3	$ 33.3	$ 511.0	$ 150.0	$ 22.7	$ 348.1	$ 239.5	$ 36.3	$ 555.6
2028	$ 222.4	$ 33.7	$ 515.7	$ 153.3	$ 23.2	$ 355.5	$ 240.3	$ 36.4	$ 557.1
2029	$ 226.6	$ 34.3	$ 526.0	$ 158.0	$ 23.9	$ 366.8	$ 243.4	$ 36.8	$ 564.9
Total	**$ 2,927.3**	**$ 445.2**	**$ 6,765.2**	**$ 1,953.3**	**$ 297.0**	**$ 4,514.2**	**$ 3,489.5**	**$ 530.9**	**$ 8,061.9**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.21h Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving 100,000-999,999 People)

TTHM - Preferred Alternative, SWAT Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 38.5	$ 5.9	$ 88.5	$ 35.0	$ 5.4	$ 80.4	$ 70.6	$ 10.8	$ 162.2
2011	$ 99.6	$ 15.3	$ 229.2	$ 83.1	$ 12.7	$ 191.2	$ 173.6	$ 26.6	$ 399.3
2012	$ 180.3	$ 27.6	$ 414.1	$ 142.1	$ 21.8	$ 326.5	$ 300.7	$ 46.0	$ 690.7
2013	$ 279.1	$ 42.7	$ 641.1	$ 210.8	$ 32.3	$ 484.3	$ 446.9	$ 68.4	$ 1,026.5
2014	$ 356.2	$ 54.5	$ 818.9	$ 252.1	$ 38.5	$ 579.5	$ 535.5	$ 81.9	$ 1,231.0
2015	$ 427.3	$ 65.3	$ 982.7	$ 288.1	$ 44.1	$ 662.6	$ 603.8	$ 92.3	$ 1,388.6
2016	$ 492.8	$ 75.3	$ 1,133.3	$ 320.9	$ 49.0	$ 738.0	$ 658.9	$ 100.6	$ 1,515.2
2017	$ 552.2	$ 84.3	$ 1,271.0	$ 351.4	$ 53.7	$ 809.0	$ 704.4	$ 107.6	$ 1,621.4
2018	$ 603.9	$ 92.1	$ 1,391.2	$ 380.2	$ 58.0	$ 876.0	$ 742.9	$ 113.3	$ 1,711.4
2019	$ 647.7	$ 98.7	$ 1,494.7	$ 407.6	$ 62.1	$ 940.7	$ 775.9	$ 118.2	$ 1,790.5
2020	$ 685.9	$ 104.4	$ 1,583.6	$ 433.8	$ 66.1	$ 1,001.6	$ 804.8	$ 122.5	$ 1,858.0
2021	$ 719.9	$ 109.5	$ 1,662.1	$ 459.0	$ 69.8	$ 1,059.9	$ 830.3	$ 126.3	$ 1,917.1
2022	$ 750.3	$ 114.1	$ 1,735.4	$ 483.3	$ 73.5	$ 1,117.9	$ 853.3	$ 129.7	$ 1,973.4
2023	$ 778.1	$ 118.3	$ 1,799.9	$ 506.8	$ 77.1	$ 1,172.5	$ 874.1	$ 132.9	$ 2,022.2
2024	$ 803.5	$ 122.1	$ 1,859.5	$ 529.6	$ 80.5	$ 1,225.7	$ 893.3	$ 135.8	$ 2,067.4
2025	$ 827.1	$ 125.5	$ 1,914.1	$ 551.8	$ 83.8	$ 1,277.1	$ 911.2	$ 138.3	$ 2,108.8
2026	$ 849.1	$ 128.7	$ 1,966.7	$ 573.4	$ 86.9	$ 1,328.2	$ 928.0	$ 140.7	$ 2,149.5
2027	$ 869.8	$ 131.7	$ 2,017.8	$ 594.5	$ 90.0	$ 1,379.1	$ 943.8	$ 142.9	$ 2,189.7
2028	$ 877.8	$ 133.0	$ 2,035.4	$ 607.1	$ 92.0	$ 1,407.6	$ 946.6	$ 143.4	$ 2,194.8
2029	$ 894.1	$ 135.3	$ 2,075.1	$ 625.4	$ 94.6	$ 1,451.5	$ 958.7	$ 145.1	$ 2,225.0
Total	**$ 11,733.1**	**$ 1,784.4**	**$ 27,114.4**	**$ 7,836.3**	**$ 1,191.8**	**$ 18,109.2**	**$ 13,957.1**	**$ 2,123.4**	**$ 32,242.8**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.21i Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Surface Water Systems Serving ≥1,000,000 People)

TTHM - Preferred Alternative, SWAT Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 32.7	$ 5.0	$ 75.3	$ 29.8	$ 4.6	$ 68.4	$ 60.1	$ 9.2	$ 138.1
2011	$ 84.8	$ 13.0	$ 195.0	$ 70.7	$ 10.8	$ 162.7	$ 147.7	$ 22.6	$ 339.8
2012	$ 153.4	$ 23.5	$ 352.4	$ 121.0	$ 18.5	$ 277.9	$ 255.9	$ 39.2	$ 587.9
2013	$ 237.5	$ 36.4	$ 545.6	$ 179.4	$ 27.5	$ 412.1	$ 380.3	$ 58.2	$ 873.6
2014	$ 303.2	$ 46.3	$ 696.9	$ 214.6	$ 32.8	$ 493.2	$ 455.7	$ 69.7	$ 1,047.6
2015	$ 363.7	$ 55.6	$ 836.4	$ 245.2	$ 37.5	$ 563.9	$ 513.9	$ 78.6	$ 1,181.8
2016	$ 419.4	$ 64.1	$ 964.5	$ 273.1	$ 41.7	$ 628.1	$ 560.7	$ 85.7	$ 1,289.5
2017	$ 469.9	$ 71.8	$ 1,081.7	$ 299.1	$ 45.7	$ 688.5	$ 599.5	$ 91.5	$ 1,379.9
2018	$ 513.9	$ 78.4	$ 1,184.0	$ 323.6	$ 49.3	$ 745.5	$ 632.2	$ 96.4	$ 1,456.5
2019	$ 551.2	$ 84.0	$ 1,272.1	$ 346.9	$ 52.8	$ 800.6	$ 660.3	$ 100.6	$ 1,523.9
2020	$ 583.8	$ 88.9	$ 1,347.8	$ 369.2	$ 56.2	$ 852.4	$ 684.9	$ 104.3	$ 1,581.2
2021	$ 612.6	$ 93.2	$ 1,414.5	$ 390.7	$ 59.4	$ 902.0	$ 706.6	$ 107.5	$ 1,631.6
2022	$ 638.6	$ 97.1	$ 1,476.9	$ 411.3	$ 62.6	$ 951.4	$ 726.2	$ 110.4	$ 1,679.5
2023	$ 662.2	$ 100.7	$ 1,531.9	$ 431.4	$ 65.6	$ 997.9	$ 743.9	$ 113.1	$ 1,721.0
2024	$ 683.8	$ 104.0	$ 1,582.5	$ 450.8	$ 68.5	$ 1,043.2	$ 760.3	$ 115.6	$ 1,759.5
2025	$ 703.9	$ 106.8	$ 1,629.0	$ 469.6	$ 71.3	$ 1,086.9	$ 775.5	$ 117.7	$ 1,794.7
2026	$ 722.6	$ 109.5	$ 1,673.8	$ 488.0	$ 74.0	$ 1,130.4	$ 789.7	$ 119.7	$ 1,829.3
2027	$ 740.2	$ 112.1	$ 1,717.3	$ 505.9	$ 76.6	$ 1,173.7	$ 803.3	$ 121.6	$ 1,863.5
2028	$ 747.1	$ 113.2	$ 1,732.2	$ 516.6	$ 78.3	$ 1,197.9	$ 805.6	$ 122.1	$ 1,867.9
2029	$ 760.9	$ 115.2	$ 1,766.0	$ 532.3	$ 80.6	$ 1,235.3	$ 815.9	$ 123.5	$ 1,893.6
Total	**$ 9,985.5**	**$ 1,518.6**	**$ 23,075.9**	**$ 6,669.2**	**$ 1,014.3**	**$ 15,412.0**	**$ 11,878.3**	**$ 1,807.1**	**$ 27,440.5**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.21j Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (All Surface Water Systems)

TTHM - Preferred Alternative, SWAT Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 92.1	$ 14.1	$ 211.8	$ 83.4	$ 12.8	$ 191.7	$ 168.6	$ 25.8	$ 387.7
2011	$ 238.6	$ 36.5	$ 548.8	$ 198.3	$ 30.4	$ 456.2	$ 415.1	$ 63.6	$ 954.7
2012	$ 431.7	$ 66.1	$ 991.7	$ 339.2	$ 51.9	$ 779.3	$ 719.1	$ 110.1	$ 1,652.0
2013	$ 668.3	$ 102.3	$ 1,535.1	$ 503.3	$ 77.0	$ 1,156.1	$ 1,069.1	$ 163.6	$ 2,455.6
2014	$ 870.2	$ 133.0	$ 2,000.3	$ 617.4	$ 94.4	$ 1,419.3	$ 1,312.8	$ 200.7	$ 3,017.8
2015	$ 1,057.9	$ 161.8	$ 2,432.9	$ 715.9	$ 109.5	$ 1,646.4	$ 1,504.4	$ 230.0	$ 3,459.9
2016	$ 1,227.4	$ 187.5	$ 2,822.7	$ 801.6	$ 122.5	$ 1,843.4	$ 1,653.1	$ 252.5	$ 3,801.7
2017	$ 1,380.8	$ 210.8	$ 3,178.5	$ 880.8	$ 134.5	$ 2,027.6	$ 1,775.0	$ 271.0	$ 4,085.8
2018	$ 1,515.6	$ 231.1	$ 3,491.7	$ 955.4	$ 145.7	$ 2,201.0	$ 1,877.3	$ 286.2	$ 4,324.9
2019	$ 1,631.2	$ 248.5	$ 3,764.2	$ 1,026.1	$ 156.3	$ 2,367.9	$ 1,964.7	$ 299.3	$ 4,533.9
2020	$ 1,731.7	$ 263.7	$ 3,998.1	$ 1,093.7	$ 166.5	$ 2,525.0	$ 2,040.7	$ 310.7	$ 4,711.4
2021	$ 1,820.5	$ 276.9	$ 4,203.3	$ 1,158.6	$ 176.2	$ 2,675.1	$ 2,107.7	$ 320.6	$ 4,866.5
2022	$ 1,900.0	$ 288.9	$ 4,394.4	$ 1,221.2	$ 185.7	$ 2,824.3	$ 2,167.7	$ 329.6	$ 5,013.5
2023	$ 1,972.1	$ 300.0	$ 4,562.3	$ 1,281.7	$ 194.9	$ 2,965.0	$ 2,222.1	$ 338.0	$ 5,140.4
2024	$ 2,038.2	$ 309.8	$ 4,716.9	$ 1,340.3	$ 203.8	$ 3,101.9	$ 2,271.9	$ 345.4	$ 5,257.8
2025	$ 2,099.3	$ 318.6	$ 4,858.5	$ 1,397.3	$ 212.1	$ 3,234.0	$ 2,318.1	$ 351.9	$ 5,365.1
2026	$ 2,156.2	$ 326.8	$ 4,994.5	$ 1,452.8	$ 220.2	$ 3,365.3	$ 2,361.5	$ 358.0	$ 5,470.0
2027	$ 2,209.6	$ 334.6	$ 5,126.3	$ 1,506.9	$ 228.2	$ 3,496.0	$ 2,402.4	$ 363.7	$ 5,573.5
2028	$ 2,230.9	$ 338.1	$ 5,172.8	$ 1,539.6	$ 233.3	$ 3,569.7	$ 2,409.8	$ 365.2	$ 5,587.6
2029	$ 2,272.9	$ 344.0	$ 5,275.1	$ 1,586.8	$ 240.1	$ 3,682.6	$ 2,441.0	$ 369.4	$ 5,665.1
Total	**$ 29,545.3**	**$ 4,493.1**	**$ 68,279.8**	**$ 19,700.3**	**$ 2,995.9**	**$ 45,527.7**	**$ 35,202.1**	**$ 5,355.3**	**$ 81,325.0**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.21k Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving <100 People)

TTHM - Preferred Alternative, SWAT Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.1
2011	$ 0.1	$ 0.0	$ 0.1	$ 0.0	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ 0.2
2012	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.4
2013	$ 0.2	$ 0.0	$ 0.4	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.0	$ 0.5
2014	$ 0.2	$ 0.0	$ 0.5	$ 0.1	$ 0.0	$ 0.3	$ 0.3	$ 0.1	$ 0.8
2015	$ 0.3	$ 0.0	$ 0.7	$ 0.2	$ 0.0	$ 0.4	$ 0.4	$ 0.1	$ 1.0
2016	$ 0.4	$ 0.1	$ 0.8	$ 0.2	$ 0.0	$ 0.5	$ 0.5	$ 0.1	$ 1.1
2017	$ 0.4	$ 0.1	$ 0.9	$ 0.2	$ 0.0	$ 0.6	$ 0.5	$ 0.1	$ 1.3
2018	$ 0.5	$ 0.1	$ 1.0	$ 0.3	$ 0.0	$ 0.6	$ 0.6	$ 0.1	$ 1.3
2019	$ 0.5	$ 0.1	$ 1.1	$ 0.3	$ 0.0	$ 0.7	$ 0.6	$ 0.1	$ 1.4
2020	$ 0.5	$ 0.1	$ 1.2	$ 0.3	$ 0.0	$ 0.7	$ 0.7	$ 0.1	$ 1.5
2021	$ 0.6	$ 0.1	$ 1.3	$ 0.3	$ 0.1	$ 0.8	$ 0.7	$ 0.1	$ 1.6
2022	$ 0.6	$ 0.1	$ 1.4	$ 0.4	$ 0.1	$ 0.9	$ 0.7	$ 0.1	$ 1.6
2023	$ 0.6	$ 0.1	$ 1.4	$ 0.4	$ 0.1	$ 0.9	$ 0.7	$ 0.1	$ 1.7
2024	$ 0.6	$ 0.1	$ 1.5	$ 0.4	$ 0.1	$ 0.9	$ 0.7	$ 0.1	$ 1.7
2025	$ 0.7	$ 0.1	$ 1.5	$ 0.4	$ 0.1	$ 1.0	$ 0.8	$ 0.1	$ 1.7
2026	$ 0.7	$ 0.1	$ 1.6	$ 0.5	$ 0.1	$ 1.0	$ 0.8	$ 0.1	$ 1.8
2027	$ 0.7	$ 0.1	$ 1.6	$ 0.5	$ 0.1	$ 1.1	$ 0.8	$ 0.1	$ 1.8
2028	$ 0.7	$ 0.1	$ 1.6	$ 0.5	$ 0.1	$ 1.1	$ 0.8	$ 0.1	$ 1.8
2029	$ 0.7	$ 0.1	$ 1.7	$ 0.5	$ 0.1	$ 1.2	$ 0.8	$ 0.1	$ 1.8
Total	**$ 9.0**	**$ 1.4**	**$ 20.7**	**$ 5.8**	**$ 0.9**	**$ 13.3**	**$ 10.9**	**$ 1.7**	**$ 25.1**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.21l Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving 100-499 People)

TTHM - Preferred Alternative, SWAT Method

	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.2	$ 0.0	$ 0.4	$ 0.1	$ 0.0	$ 0.3	$ 0.3	$ 0.0	$ 0.6
2011	$ 0.4	$ 0.1	$ 0.9	$ 0.3	$ 0.0	$ 0.7	$ 0.7	$ 0.1	$ 1.5
2012	$ 0.7	$ 0.1	$ 1.7	$ 0.5	$ 0.1	$ 1.2	$ 1.2	$ 0.2	$ 2.7
2013	$ 1.1	$ 0.2	$ 2.6	$ 0.8	$ 0.1	$ 1.7	$ 1.8	$ 0.3	$ 4.1
2014	$ 1.6	$ 0.2	$ 3.7	$ 1.1	$ 0.2	$ 2.4	$ 2.4	$ 0.4	$ 5.6
2015	$ 2.2	$ 0.3	$ 5.0	$ 1.4	$ 0.2	$ 3.2	$ 3.1	$ 0.5	$ 7.2
2016	$ 2.6	$ 0.4	$ 6.0	$ 1.6	$ 0.2	$ 3.7	$ 3.6	$ 0.6	$ 8.3
2017	$ 3.0	$ 0.5	$ 6.9	$ 1.8	$ 0.3	$ 4.2	$ 4.0	$ 0.6	$ 9.2
2018	$ 3.3	$ 0.5	$ 7.7	$ 2.0	$ 0.3	$ 4.7	$ 4.3	$ 0.7	$ 10.0
2019	$ 3.7	$ 0.6	$ 8.4	$ 2.2	$ 0.3	$ 5.1	$ 4.6	$ 0.7	$ 10.6
2020	$ 3.9	$ 0.6	$ 9.1	$ 2.4	$ 0.4	$ 5.5	$ 4.8	$ 0.7	$ 11.1
2021	$ 4.2	$ 0.6	$ 9.6	$ 2.6	$ 0.4	$ 5.9	$ 5.0	$ 0.8	$ 11.5
2022	$ 4.4	$ 0.7	$ 10.1	$ 2.7	$ 0.4	$ 6.3	$ 5.2	$ 0.8	$ 11.9
2023	$ 4.6	$ 0.7	$ 10.5	$ 2.9	$ 0.4	$ 6.7	$ 5.3	$ 0.8	$ 12.3
2024	$ 4.7	$ 0.7	$ 11.0	$ 3.0	$ 0.5	$ 7.0	$ 5.4	$ 0.8	$ 12.6
2025	$ 4.9	$ 0.7	$ 11.3	$ 3.2	$ 0.5	$ 7.4	$ 5.6	$ 0.8	$ 12.8
2026	$ 5.0	$ 0.8	$ 11.7	$ 3.3	$ 0.5	$ 7.7	$ 5.7	$ 0.9	$ 13.1
2027	$ 5.2	$ 0.8	$ 12.0	$ 3.5	$ 0.5	$ 8.0	$ 5.8	$ 0.9	$ 13.4
2028	$ 5.2	$ 0.8	$ 12.1	$ 3.6	$ 0.5	$ 8.3	$ 5.8	$ 0.9	$ 13.4
2029	$ 5.3	$ 0.8	$ 12.4	$ 3.7	$ 0.6	$ 8.6	$ 5.9	$ 0.9	$ 13.6
Total	**$ 66.3**	**$ 10.1**	**$ 153.2**	**$ 42.6**	**$ 6.5**	**$ 98.4**	**$ 80.3**	**$ 12.2**	**$ 185.6**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.21m Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving 500-999 People)

TTHM - Preferred Alternative, SWAT Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.2	$ 0.0	$ 0.4	$ 0.1	$ 0.0	$ 0.3	$ 0.3	$ 0.0	$ 0.7
2011	$ 0.4	$ 0.1	$ 1.0	$ 0.3	$ 0.0	$ 0.7	$ 0.7	$ 0.1	$ 1.6
2012	$ 0.8	$ 0.1	$ 1.8	$ 0.5	$ 0.1	$ 1.2	$ 1.3	$ 0.2	$ 2.9
2013	$ 1.2	$ 0.2	$ 2.8	$ 0.8	$ 0.1	$ 1.9	$ 1.9	$ 0.3	$ 4.3
2014	$ 1.7	$ 0.3	$ 4.0	$ 1.1	$ 0.2	$ 2.6	$ 2.6	$ 0.4	$ 5.9
2015	$ 2.3	$ 0.4	$ 5.3	$ 1.5	$ 0.2	$ 3.4	$ 3.3	$ 0.5	$ 7.7
2016	$ 2.8	$ 0.4	$ 6.4	$ 1.7	$ 0.3	$ 3.9	$ 3.9	$ 0.6	$ 8.9
2017	$ 3.2	$ 0.5	$ 7.3	$ 1.9	$ 0.3	$ 4.5	$ 4.3	$ 0.7	$ 9.8
2018	$ 3.6	$ 0.5	$ 8.2	$ 2.1	$ 0.3	$ 4.9	$ 4.6	$ 0.7	$ 10.6
2019	$ 3.9	$ 0.6	$ 9.0	$ 2.3	$ 0.4	$ 5.4	$ 4.9	$ 0.7	$ 11.3
2020	$ 4.2	$ 0.6	$ 9.6	$ 2.5	$ 0.4	$ 5.9	$ 5.1	$ 0.8	$ 11.8
2021	$ 4.4	$ 0.7	$ 10.2	$ 2.7	$ 0.4	$ 6.3	$ 5.3	$ 0.8	$ 12.3
2022	$ 4.7	$ 0.7	$ 10.8	$ 2.9	$ 0.4	$ 6.7	$ 5.5	$ 0.8	$ 12.7
2023	$ 4.9	$ 0.7	$ 11.2	$ 3.1	$ 0.5	$ 7.1	$ 5.6	$ 0.9	$ 13.1
2024	$ 5.0	$ 0.8	$ 11.7	$ 3.2	$ 0.5	$ 7.5	$ 5.8	$ 0.9	$ 13.4
2025	$ 5.2	$ 0.8	$ 12.0	$ 3.4	$ 0.5	$ 7.8	$ 5.9	$ 0.9	$ 13.7
2026	$ 5.4	$ 0.8	$ 12.4	$ 3.5	$ 0.5	$ 8.2	$ 6.0	$ 0.9	$ 14.0
2027	$ 5.5	$ 0.8	$ 12.8	$ 3.7	$ 0.6	$ 8.6	$ 6.1	$ 0.9	$ 14.2
2028	$ 5.6	$ 0.8	$ 12.9	$ 3.8	$ 0.6	$ 8.8	$ 6.2	$ 0.9	$ 14.3
2029	$ 5.7	$ 0.9	$ 13.2	$ 3.9	$ 0.6	$ 9.1	$ 6.2	$ 0.9	$ 14.5
Total	**$ 70.5**	**$ 10.7**	**$ 163.0**	**$ 45.3**	**$ 6.9**	**$ 104.7**	**$ 85.4**	**$ 13.0**	**$ 197.4**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.21n Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving 1,000-3,299 People)

TTHM - Preferred Alternative, SWAT Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.4	$ 0.1	$ 1.0	$ 0.3	$ 0.0	$ 0.7	$ 0.7	$ 0.1	$ 1.6
2011	$ 1.1	$ 0.2	$ 2.5	$ 0.8	$ 0.1	$ 1.8	$ 1.8	$ 0.3	$ 4.1
2012	$ 2.0	$ 0.3	$ 4.6	$ 1.4	$ 0.2	$ 3.1	$ 3.2	$ 0.5	$ 7.3
2013	$ 3.1	$ 0.5	$ 7.1	$ 2.0	$ 0.3	$ 4.7	$ 4.8	$ 0.7	$ 10.9
2014	$ 4.4	$ 0.7	$ 10.1	$ 2.8	$ 0.4	$ 6.5	$ 6.5	$ 1.0	$ 15.0
2015	$ 5.8	$ 0.9	$ 13.4	$ 3.7	$ 0.6	$ 8.5	$ 8.5	$ 1.3	$ 19.4
2016	$ 7.0	$ 1.1	$ 16.1	$ 4.3	$ 0.7	$ 10.0	$ 9.8	$ 1.5	$ 22.4
2017	$ 8.1	$ 1.2	$ 18.5	$ 4.9	$ 0.7	$ 11.3	$ 10.8	$ 1.6	$ 24.8
2018	$ 9.0	$ 1.4	$ 20.7	$ 5.4	$ 0.8	$ 12.5	$ 11.6	$ 1.8	$ 26.8
2019	$ 9.8	$ 1.5	$ 22.6	$ 5.9	$ 0.9	$ 13.7	$ 12.3	$ 1.9	$ 28.4
2020	$ 10.5	$ 1.6	$ 24.4	$ 6.4	$ 1.0	$ 14.8	$ 12.9	$ 2.0	$ 29.8
2021	$ 11.2	$ 1.7	$ 25.8	$ 6.9	$ 1.0	$ 15.8	$ 13.4	$ 2.0	$ 31.0
2022	$ 11.7	$ 1.8	$ 27.2	$ 7.3	$ 1.1	$ 16.9	$ 13.9	$ 2.1	$ 32.0
2023	$ 12.3	$ 1.9	$ 28.4	$ 7.7	$ 1.2	$ 17.9	$ 14.2	$ 2.2	$ 33.0
2024	$ 12.7	$ 1.9	$ 29.4	$ 8.1	$ 1.2	$ 18.9	$ 14.6	$ 2.2	$ 33.8
2025	$ 13.1	$ 2.0	$ 30.4	$ 8.5	$ 1.3	$ 19.8	$ 14.9	$ 2.3	$ 34.5
2026	$ 13.5	$ 2.1	$ 31.4	$ 8.9	$ 1.4	$ 20.7	$ 15.2	$ 2.3	$ 35.2
2027	$ 13.9	$ 2.1	$ 32.3	$ 9.3	$ 1.4	$ 21.6	$ 15.5	$ 2.3	$ 35.9
2028	$ 14.1	$ 2.1	$ 32.6	$ 9.6	$ 1.4	$ 22.2	$ 15.5	$ 2.4	$ 36.0
2029	$ 14.4	$ 2.2	$ 33.3	$ 9.9	$ 1.5	$ 23.0	$ 15.7	$ 2.4	$ 36.5
Total	**$ 178.1**	**$ 27.1**	**$ 411.7**	**$ 114.3**	**$ 17.4**	**$ 264.3**	**$ 215.8**	**$ 32.8**	**$ 498.7**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.21o Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving 3,300-9,999 People)

TTHM - Preferred Alternative, SWAT Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.8	$ 0.1	$ 1.8	$ 0.6	$ 0.1	$ 1.4	$ 1.4	$ 0.2	$ 3.1
2011	$ 2.1	$ 0.3	$ 4.8	$ 1.5	$ 0.2	$ 3.4	$ 3.4	$ 0.5	$ 7.8
2012	$ 3.8	$ 0.6	$ 8.7	$ 2.6	$ 0.4	$ 5.9	$ 6.0	$ 0.9	$ 13.7
2013	$ 5.8	$ 0.9	$ 13.4	$ 3.9	$ 0.6	$ 8.9	$ 9.0	$ 1.4	$ 20.6
2014	$ 8.3	$ 1.3	$ 19.0	$ 5.3	$ 0.8	$ 12.3	$ 12.3	$ 1.9	$ 28.3
2015	$ 11.0	$ 1.7	$ 25.4	$ 7.0	$ 1.1	$ 16.1	$ 16.0	$ 2.4	$ 36.7
2016	$ 13.3	$ 2.0	$ 30.5	$ 8.2	$ 1.2	$ 18.8	$ 18.4	$ 2.8	$ 42.4
2017	$ 15.2	$ 2.3	$ 35.0	$ 9.3	$ 1.4	$ 21.3	$ 20.4	$ 3.1	$ 46.9
2018	$ 17.0	$ 2.6	$ 39.1	$ 10.3	$ 1.6	$ 23.6	$ 22.0	$ 3.3	$ 50.6
2019	$ 18.6	$ 2.8	$ 42.8	$ 11.2	$ 1.7	$ 25.9	$ 23.3	$ 3.5	$ 53.7
2020	$ 19.9	$ 3.0	$ 46.0	$ 12.1	$ 1.8	$ 28.0	$ 24.4	$ 3.7	$ 56.3
2021	$ 21.1	$ 3.2	$ 48.8	$ 13.0	$ 2.0	$ 30.0	$ 25.4	$ 3.9	$ 58.6
2022	$ 22.2	$ 3.4	$ 51.4	$ 13.8	$ 2.1	$ 32.0	$ 26.2	$ 4.0	$ 60.6
2023	$ 23.2	$ 3.5	$ 53.6	$ 14.6	$ 2.2	$ 33.8	$ 26.9	$ 4.1	$ 62.3
2024	$ 24.0	$ 3.7	$ 55.6	$ 15.4	$ 2.3	$ 35.7	$ 27.6	$ 4.2	$ 63.9
2025	$ 24.8	$ 3.8	$ 57.5	$ 16.2	$ 2.5	$ 37.4	$ 28.2	$ 4.3	$ 65.3
2026	$ 25.6	$ 3.9	$ 59.3	$ 16.9	$ 2.6	$ 39.2	$ 28.8	$ 4.4	$ 66.6
2027	$ 26.3	$ 4.0	$ 61.0	$ 17.6	$ 2.7	$ 40.9	$ 29.3	$ 4.4	$ 67.9
2028	$ 26.6	$ 4.0	$ 61.6	$ 18.1	$ 2.7	$ 41.9	$ 29.4	$ 4.5	$ 68.1
2029	$ 27.1	$ 4.1	$ 63.0	$ 18.7	$ 2.8	$ 43.4	$ 29.8	$ 4.5	$ 69.1
Total	**$ 336.8**	**$ 51.2**	**$ 778.4**	**$ 216.2**	**$ 32.9**	**$ 499.7**	**$ 408.0**	**$ 62.1**	**$ 942.8**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.21p Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving 10,000-49,999 People)

TTHM - Preferred Alternative, SWAT Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 1.0	$ 0.2	$ 2.3	$ 0.8	$ 0.1	$ 1.7	$ 1.7	$ 0.3	$ 3.8
2011	$ 2.6	$ 0.4	$ 5.9	$ 1.8	$ 0.3	$ 4.2	$ 4.2	$ 0.6	$ 9.7
2012	$ 4.7	$ 0.7	$ 10.7	$ 3.2	$ 0.5	$ 7.3	$ 7.4	$ 1.1	$ 17.0
2013	$ 7.2	$ 1.1	$ 16.6	$ 4.8	$ 0.7	$ 11.0	$ 11.1	$ 1.7	$ 25.5
2014	$ 10.2	$ 1.6	$ 23.5	$ 6.6	$ 1.0	$ 15.2	$ 15.2	$ 2.3	$ 35.1
2015	$ 13.1	$ 2.0	$ 30.2	$ 8.3	$ 1.3	$ 19.0	$ 18.9	$ 2.9	$ 43.4
2016	$ 15.6	$ 2.4	$ 35.8	$ 9.5	$ 1.5	$ 22.0	$ 21.5	$ 3.3	$ 49.4
2017	$ 17.7	$ 2.7	$ 40.8	$ 10.7	$ 1.6	$ 24.7	$ 23.6	$ 3.6	$ 54.2
2018	$ 19.7	$ 3.0	$ 45.3	$ 11.9	$ 1.8	$ 27.3	$ 25.3	$ 3.9	$ 58.2
2019	$ 21.4	$ 3.3	$ 49.4	$ 12.9	$ 2.0	$ 29.8	$ 26.7	$ 4.1	$ 61.6
2020	$ 22.9	$ 3.5	$ 52.9	$ 13.9	$ 2.1	$ 32.2	$ 27.9	$ 4.2	$ 64.4
2021	$ 24.2	$ 3.7	$ 55.9	$ 14.9	$ 2.3	$ 34.4	$ 28.9	$ 4.4	$ 66.8
2022	$ 25.4	$ 3.9	$ 58.7	$ 15.8	$ 2.4	$ 36.6	$ 29.9	$ 4.5	$ 69.0
2023	$ 26.5	$ 4.0	$ 61.2	$ 16.7	$ 2.5	$ 38.7	$ 30.7	$ 4.7	$ 70.9
2024	$ 27.4	$ 4.2	$ 63.5	$ 17.6	$ 2.7	$ 40.8	$ 31.4	$ 4.8	$ 72.7
2025	$ 28.3	$ 4.3	$ 65.5	$ 18.5	$ 2.8	$ 42.8	$ 32.1	$ 4.9	$ 74.2
2026	$ 29.1	$ 4.4	$ 67.5	$ 19.3	$ 2.9	$ 44.7	$ 32.7	$ 5.0	$ 75.7
2027	$ 29.9	$ 4.5	$ 69.4	$ 20.1	$ 3.0	$ 46.7	$ 33.3	$ 5.0	$ 77.2
2028	$ 30.2	$ 4.6	$ 70.1	$ 20.6	$ 3.1	$ 47.9	$ 33.4	$ 5.1	$ 77.4
2029	$ 30.8	$ 4.7	$ 71.6	$ 21.3	$ 3.2	$ 49.5	$ 33.8	$ 5.1	$ 78.4
Total	**$ 388.1**	**$ 59.0**	**$ 896.9**	**$ 249.4**	**$ 37.9**	**$ 576.5**	**$ 469.4**	**$ 71.4**	**$ 1,084.6**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.21q Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving 50,000-99,999 People)

TTHM - Preferred Alternative, SWAT Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.4	$ 0.1	$ 1.0	$ 0.3	$ 0.0	$ 0.7	$ 0.7	$ 0.1	$ 1.6
2011	$ 1.1	$ 0.2	$ 2.5	$ 0.8	$ 0.1	$ 1.8	$ 1.8	$ 0.3	$ 4.1
2012	$ 2.0	$ 0.3	$ 4.5	$ 1.3	$ 0.2	$ 3.1	$ 3.1	$ 0.5	$ 7.1
2013	$ 3.0	$ 0.5	$ 6.9	$ 2.0	$ 0.3	$ 4.6	$ 4.7	$ 0.7	$ 10.7
2014	$ 4.1	$ 0.6	$ 9.3	$ 2.6	$ 0.4	$ 6.0	$ 6.0	$ 0.9	$ 13.8
2015	$ 4.9	$ 0.8	$ 11.4	$ 3.1	$ 0.5	$ 7.0	$ 7.0	$ 1.1	$ 16.1
2016	$ 5.7	$ 0.9	$ 13.2	$ 3.5	$ 0.5	$ 8.0	$ 7.8	$ 1.2	$ 17.8
2017	$ 6.4	$ 1.0	$ 14.8	$ 3.9	$ 0.6	$ 8.9	$ 8.4	$ 1.3	$ 19.3
2018	$ 7.1	$ 1.1	$ 16.2	$ 4.2	$ 0.6	$ 9.8	$ 8.9	$ 1.4	$ 20.5
2019	$ 7.6	$ 1.2	$ 17.5	$ 4.6	$ 0.7	$ 10.6	$ 9.3	$ 1.4	$ 21.5
2020	$ 8.1	$ 1.2	$ 18.6	$ 4.9	$ 0.7	$ 11.4	$ 9.7	$ 1.5	$ 22.4
2021	$ 8.5	$ 1.3	$ 19.6	$ 5.2	$ 0.8	$ 12.1	$ 10.0	$ 1.5	$ 23.2
2022	$ 8.9	$ 1.3	$ 20.5	$ 5.6	$ 0.8	$ 12.9	$ 10.3	$ 1.6	$ 23.9
2023	$ 9.2	$ 1.4	$ 21.3	$ 5.9	$ 0.9	$ 13.6	$ 10.6	$ 1.6	$ 24.5
2024	$ 9.5	$ 1.4	$ 22.0	$ 6.2	$ 0.9	$ 14.3	$ 10.8	$ 1.6	$ 25.1
2025	$ 9.8	$ 1.5	$ 22.7	$ 6.4	$ 1.0	$ 14.9	$ 11.0	$ 1.7	$ 25.6
2026	$ 10.1	$ 1.5	$ 23.3	$ 6.7	$ 1.0	$ 15.6	$ 11.2	$ 1.7	$ 26.1
2027	$ 10.3	$ 1.6	$ 24.0	$ 7.0	$ 1.1	$ 16.2	$ 11.4	$ 1.7	$ 26.5
2028	$ 10.4	$ 1.6	$ 24.2	$ 7.2	$ 1.1	$ 16.6	$ 11.5	$ 1.7	$ 26.6
2029	$ 10.6	$ 1.6	$ 24.7	$ 7.4	$ 1.1	$ 17.2	$ 11.6	$ 1.8	$ 26.9
Total	**$ 137.7**	**$ 20.9**	**$ 318.1**	**$ 88.7**	**$ 13.5**	**$ 205.1**	**$ 165.9**	**$ 25.2**	**$ 383.3**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.21r Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving 100,000-999,999 People)

TTHM - Preferred Alternative, SWAT Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 1.1	$ 0.2	$ 2.6	$ 0.9	$ 0.1	$ 2.0	$ 1.9	$ 0.3	$ 4.5
2011	$ 3.0	$ 0.5	$ 6.9	$ 2.1	$ 0.3	$ 4.9	$ 4.9	$ 0.7	$ 11.2
2012	$ 5.4	$ 0.8	$ 12.4	$ 3.7	$ 0.6	$ 8.5	$ 8.6	$ 1.3	$ 19.7
2013	$ 8.4	$ 1.3	$ 19.2	$ 5.5	$ 0.8	$ 12.7	$ 12.9	$ 2.0	$ 29.6
2014	$ 10.7	$ 1.6	$ 24.5	$ 6.7	$ 1.0	$ 15.5	$ 15.7	$ 2.4	$ 36.0
2015	$ 12.7	$ 1.9	$ 29.3	$ 7.8	$ 1.2	$ 18.0	$ 17.8	$ 2.7	$ 41.0
2016	$ 14.6	$ 2.2	$ 33.6	$ 8.8	$ 1.3	$ 20.3	$ 19.6	$ 3.0	$ 45.1
2017	$ 16.3	$ 2.5	$ 37.5	$ 9.8	$ 1.5	$ 22.5	$ 21.0	$ 3.2	$ 48.4
2018	$ 17.8	$ 2.7	$ 40.9	$ 10.7	$ 1.6	$ 24.6	$ 22.2	$ 3.4	$ 51.2
2019	$ 19.0	$ 2.9	$ 43.9	$ 11.5	$ 1.8	$ 26.6	$ 23.3	$ 3.5	$ 53.7
2020	$ 20.1	$ 3.1	$ 46.5	$ 12.3	$ 1.9	$ 28.5	$ 24.1	$ 3.7	$ 55.7
2021	$ 21.1	$ 3.2	$ 48.8	$ 13.1	$ 2.0	$ 30.3	$ 24.9	$ 3.8	$ 57.5
2022	$ 22.0	$ 3.4	$ 51.0	$ 13.9	$ 2.1	$ 32.1	$ 25.6	$ 3.9	$ 59.2
2023	$ 22.8	$ 3.5	$ 52.9	$ 14.6	$ 2.2	$ 33.8	$ 26.2	$ 4.0	$ 60.6
2024	$ 23.6	$ 3.6	$ 54.6	$ 15.3	$ 2.3	$ 35.5	$ 26.8	$ 4.1	$ 62.0
2025	$ 24.3	$ 3.7	$ 56.2	$ 16.0	$ 2.4	$ 37.1	$ 27.3	$ 4.1	$ 63.2
2026	$ 24.9	$ 3.8	$ 57.8	$ 16.7	$ 2.5	$ 38.7	$ 27.8	$ 4.2	$ 64.3
2027	$ 25.6	$ 3.9	$ 59.3	$ 17.4	$ 2.6	$ 40.3	$ 28.2	$ 4.3	$ 65.5
2028	$ 25.8	$ 3.9	$ 59.8	$ 17.8	$ 2.7	$ 41.3	$ 28.3	$ 4.3	$ 65.6
2029	$ 26.3	$ 4.0	$ 61.0	$ 18.4	$ 2.8	$ 42.7	$ 28.6	$ 4.3	$ 66.5
Total	**$ 345.7**	**$ 52.6**	**$ 799.0**	**$ 223.2**	**$ 33.9**	**$ 515.9**	**$ 415.8**	**$ 63.3**	**$ 960.6**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.21s Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (Ground Water Systems Serving ≥1,000,000 People)

TTHM - Preferred Alternative, SWAT Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.2	$ 0.0	$ 0.4	$ 0.1	$ 0.0	$ 0.3	$ 0.3	$ 0.0	$ 0.7
2011	$ 0.5	$ 0.1	$ 1.1	$ 0.4	$ 0.1	$ 0.8	$ 0.8	$ 0.1	$ 1.9
2012	$ 0.9	$ 0.1	$ 2.1	$ 0.6	$ 0.1	$ 1.4	$ 1.4	$ 0.2	$ 3.3
2013	$ 1.4	$ 0.2	$ 3.2	$ 0.9	$ 0.1	$ 2.1	$ 2.1	$ 0.3	$ 4.9
2014	$ 1.8	$ 0.3	$ 4.1	$ 1.1	$ 0.2	$ 2.6	$ 2.6	$ 0.4	$ 6.0
2015	$ 2.1	$ 0.3	$ 4.9	$ 1.3	$ 0.2	$ 3.0	$ 3.0	$ 0.5	$ 6.8
2016	$ 2.4	$ 0.4	$ 5.6	$ 1.5	$ 0.2	$ 3.4	$ 3.3	$ 0.5	$ 7.5
2017	$ 2.7	$ 0.4	$ 6.2	$ 1.6	$ 0.2	$ 3.7	$ 3.5	$ 0.5	$ 8.1
2018	$ 3.0	$ 0.5	$ 6.8	$ 1.8	$ 0.3	$ 4.1	$ 3.7	$ 0.6	$ 8.5
2019	$ 3.2	$ 0.5	$ 7.3	$ 1.9	$ 0.3	$ 4.4	$ 3.9	$ 0.6	$ 8.9
2020	$ 3.4	$ 0.5	$ 7.7	$ 2.1	$ 0.3	$ 4.7	$ 4.0	$ 0.6	$ 9.3
2021	$ 3.5	$ 0.5	$ 8.1	$ 2.2	$ 0.3	$ 5.0	$ 4.1	$ 0.6	$ 9.6
2022	$ 3.7	$ 0.6	$ 8.5	$ 2.3	$ 0.4	$ 5.3	$ 4.3	$ 0.6	$ 9.9
2023	$ 3.8	$ 0.6	$ 8.8	$ 2.4	$ 0.4	$ 5.6	$ 4.4	$ 0.7	$ 10.1
2024	$ 3.9	$ 0.6	$ 9.1	$ 2.6	$ 0.4	$ 5.9	$ 4.5	$ 0.7	$ 10.3
2025	$ 4.0	$ 0.6	$ 9.4	$ 2.7	$ 0.4	$ 6.2	$ 4.5	$ 0.7	$ 10.5
2026	$ 4.2	$ 0.6	$ 9.6	$ 2.8	$ 0.4	$ 6.5	$ 4.6	$ 0.7	$ 10.7
2027	$ 4.3	$ 0.6	$ 9.9	$ 2.9	$ 0.4	$ 6.7	$ 4.7	$ 0.7	$ 10.9
2028	$ 4.3	$ 0.7	$ 10.0	$ 3.0	$ 0.4	$ 6.9	$ 4.7	$ 0.7	$ 10.9
2029	$ 4.4	$ 0.7	$ 10.2	$ 3.1	$ 0.5	$ 7.1	$ 4.8	$ 0.7	$ 11.1
Total	**$ 57.6**	**$ 8.8**	**$ 133.1**	**$ 37.2**	**$ 5.7**	**$ 85.9**	**$ 69.2**	**$ 10.5**	**$ 160.0**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.21t Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (All Ground Water Systems)

TTHM - Preferred Alternative, SWAT Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 4.3	$ 0.7	$ 9.9	$ 3.3	$ 0.5	$ 7.6	$ 7.3	$ 1.1	$ 16.8
2011	$ 11.2	$ 1.7	$ 25.8	$ 8.0	$ 1.2	$ 18.3	$ 18.3	$ 2.8	$ 42.2
2012	$ 20.3	$ 3.1	$ 46.7	$ 13.9	$ 2.1	$ 31.8	$ 32.2	$ 4.9	$ 74.1
2013	$ 31.5	$ 4.8	$ 72.3	$ 20.8	$ 3.2	$ 47.8	$ 48.4	$ 7.4	$ 111.2
2014	$ 43.0	$ 6.6	$ 98.7	$ 27.5	$ 4.2	$ 63.3	$ 63.8	$ 9.7	$ 146.5
2015	$ 54.6	$ 8.3	$ 125.6	$ 34.2	$ 5.2	$ 78.6	$ 78.0	$ 11.9	$ 179.4
2016	$ 64.3	$ 9.8	$ 148.0	$ 39.4	$ 6.0	$ 90.5	$ 88.3	$ 13.5	$ 203.0
2017	$ 73.0	$ 11.2	$ 168.1	$ 44.1	$ 6.7	$ 101.6	$ 96.5	$ 14.7	$ 222.0
2018	$ 80.8	$ 12.3	$ 186.1	$ 48.6	$ 7.4	$ 112.1	$ 103.2	$ 15.7	$ 237.7
2019	$ 87.6	$ 13.3	$ 202.2	$ 52.9	$ 8.1	$ 122.1	$ 108.8	$ 16.6	$ 251.2
2020	$ 93.6	$ 14.3	$ 216.1	$ 57.0	$ 8.7	$ 131.6	$ 113.6	$ 17.3	$ 262.4
2021	$ 98.8	$ 15.0	$ 228.2	$ 60.9	$ 9.3	$ 140.6	$ 117.8	$ 17.9	$ 272.0
2022	$ 103.5	$ 15.7	$ 239.4	$ 64.7	$ 9.8	$ 149.6	$ 121.4	$ 18.5	$ 280.9
2023	$ 107.8	$ 16.4	$ 249.3	$ 68.4	$ 10.4	$ 158.1	$ 124.7	$ 19.0	$ 288.4
2024	$ 111.6	$ 17.0	$ 258.3	$ 71.9	$ 10.9	$ 166.4	$ 127.6	$ 19.4	$ 295.3
2025	$ 115.2	$ 17.5	$ 266.6	$ 75.4	$ 11.4	$ 174.4	$ 130.3	$ 19.8	$ 301.5
2026	$ 118.5	$ 18.0	$ 274.5	$ 78.7	$ 11.9	$ 182.3	$ 132.8	$ 20.1	$ 307.5
2027	$ 121.6	$ 18.4	$ 282.2	$ 82.0	$ 12.4	$ 190.2	$ 135.1	$ 20.5	$ 313.4
2028	$ 122.9	$ 18.6	$ 285.1	$ 84.1	$ 12.7	$ 194.9	$ 135.5	$ 20.5	$ 314.1
2029	$ 125.4	$ 19.0	$ 291.0	$ 86.9	$ 13.2	$ 201.7	$ 137.2	$ 20.8	$ 318.4
Total	**$ 1,589.7**	**$ 241.7**	**$ 3,674.2**	**$ 1,022.6**	**$ 155.5**	**$ 2,363.7**	**$ 1,920.8**	**$ 292.2**	**$ 4,438.1**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.1f and Stage 2 DBPR Benefits Model.

Exhibit F.21u Projections of Yearly Benefits, WTP for Lymphoma as Basis for Non-Fatal Cases (All Water Systems)

TTHM - Preferred Alternative, SWAT Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
	Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound		Mean Value	90 Percent Confidence Bound	
		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)		Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 96.4	$ 14.8	$ 221.7	$ 86.7	$ 13.3	$ 199.2	$ 175.9	$ 26.9	$ 404.4
2011	$ 249.8	$ 38.3	$ 574.6	$ 206.3	$ 31.6	$ 474.5	$ 433.4	$ 66.4	$ 996.9
2012	$ 452.0	$ 69.2	$ 1,038.4	$ 353.1	$ 54.0	$ 811.1	$ 751.4	$ 115.0	$ 1,726.1
2013	$ 699.8	$ 107.1	$ 1,607.4	$ 524.1	$ 80.2	$ 1,203.9	$ 1,117.5	$ 171.1	$ 2,566.9
2014	$ 913.1	$ 139.6	$ 2,099.1	$ 645.0	$ 98.6	$ 1,482.6	$ 1,376.5	$ 210.4	$ 3,164.4
2015	$ 1,112.5	$ 170.1	$ 2,558.5	$ 750.0	$ 114.7	$ 1,725.0	$ 1,582.5	$ 242.0	$ 3,639.4
2016	$ 1,291.8	$ 197.3	$ 2,970.7	$ 840.9	$ 128.5	$ 1,933.9	$ 1,741.4	$ 266.0	$ 4,004.7
2017	$ 1,453.9	$ 222.0	$ 3,346.7	$ 925.0	$ 141.2	$ 2,129.2	$ 1,871.4	$ 285.8	$ 4,307.9
2018	$ 1,596.4	$ 243.4	$ 3,677.8	$ 1,004.0	$ 153.1	$ 2,313.0	$ 1,980.4	$ 302.0	$ 4,562.6
2019	$ 1,718.8	$ 261.8	$ 3,966.4	$ 1,079.0	$ 164.4	$ 2,490.0	$ 2,073.5	$ 315.9	$ 4,785.1
2020	$ 1,825.3	$ 277.9	$ 4,214.1	$ 1,150.7	$ 175.2	$ 2,656.6	$ 2,154.3	$ 328.0	$ 4,973.8
2021	$ 1,919.3	$ 291.9	$ 4,431.5	$ 1,219.5	$ 185.5	$ 2,815.7	$ 2,225.5	$ 338.5	$ 5,138.5
2022	$ 2,003.6	$ 304.7	$ 4,633.8	$ 1,285.9	$ 195.5	$ 2,974.0	$ 2,289.2	$ 348.1	$ 5,294.3
2023	$ 2,079.9	$ 316.3	$ 4,811.6	$ 1,350.0	$ 205.3	$ 3,123.2	$ 2,346.7	$ 356.9	$ 5,428.9
2024	$ 2,149.8	$ 326.8	$ 4,975.2	$ 1,412.2	$ 214.7	$ 3,268.3	$ 2,399.5	$ 364.8	$ 5,553.1
2025	$ 2,214.5	$ 336.1	$ 5,125.1	$ 1,472.7	$ 223.5	$ 3,408.3	$ 2,448.4	$ 371.6	$ 5,666.6
2026	$ 2,274.7	$ 344.8	$ 5,269.1	$ 1,531.5	$ 232.2	$ 3,547.6	$ 2,494.2	$ 378.1	$ 5,777.6
2027	$ 2,331.3	$ 353.0	$ 5,408.4	$ 1,588.9	$ 240.6	$ 3,686.1	$ 2,537.5	$ 384.2	$ 5,886.8
2028	$ 2,353.9	$ 356.7	$ 5,457.8	$ 1,623.6	$ 246.0	$ 3,764.6	$ 2,545.3	$ 385.7	$ 5,901.7
2029	$ 2,398.3	$ 362.9	$ 5,566.1	$ 1,673.7	$ 253.3	$ 3,884.4	$ 2,578.2	$ 390.2	$ 5,983.6
Total	**$ 31,135.0**	**$ 4,734.8**	**$ 71,954.0**	**$ 20,722.9**	**$ 3,151.4**	**$ 47,891.4**	**$ 37,122.9**	**$ 5,647.5**	**$ 85,763.1**

Notes: All values in millions of year 2003 dollars.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.2j and F.2t.

Exhibit F.21v Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 3% Discount Rate
(All Water Systems)

TTHM - Preferred Alternative, SWAT Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 83.2	$ 12.7	$ 191.2	$ 74.8	$ 11.4	$ 171.9	$ 151.8	$ 23.2	$ 348.9
2011	$ 209.2	$ 32.0	$ 481.2	$ 172.8	$ 26.5	$ 397.4	$ 363.0	$ 55.6	$ 834.9
2012	$ 367.5	$ 56.2	$ 844.3	$ 287.1	$ 43.9	$ 659.5	$ 610.9	$ 93.5	$ 1,403.5
2013	$ 552.4	$ 84.6	$ 1,268.9	$ 413.8	$ 63.3	$ 950.4	$ 882.2	$ 135.0	$ 2,026.3
2014	$ 699.8	$ 107.0	$ 1,608.8	$ 494.3	$ 75.6	$ 1,136.3	$ 1,055.0	$ 161.3	$ 2,425.2
2015	$ 827.8	$ 126.6	$ 1,903.7	$ 558.1	$ 85.3	$ 1,283.5	$ 1,177.5	$ 180.1	$ 2,708.0
2016	$ 933.2	$ 142.6	$ 2,146.1	$ 607.5	$ 92.8	$ 1,397.1	$ 1,258.0	$ 192.2	$ 2,893.1
2017	$ 1,019.7	$ 155.7	$ 2,347.3	$ 648.8	$ 99.1	$ 1,493.4	$ 1,312.6	$ 200.4	$ 3,021.5
2018	$ 1,087.1	$ 165.8	$ 2,504.4	$ 683.7	$ 104.2	$ 1,575.1	$ 1,348.6	$ 205.6	$ 3,106.9
2019	$ 1,136.3	$ 173.1	$ 2,622.3	$ 713.3	$ 108.7	$ 1,646.2	$ 1,370.8	$ 208.8	$ 3,163.5
2020	$ 1,171.6	$ 178.4	$ 2,704.9	$ 738.6	$ 112.5	$ 1,705.2	$ 1,382.8	$ 210.6	$ 3,192.5
2021	$ 1,196.1	$ 181.9	$ 2,761.6	$ 760.0	$ 115.6	$ 1,754.7	$ 1,386.9	$ 210.9	$ 3,202.2
2022	$ 1,212.2	$ 184.3	$ 2,803.5	$ 778.0	$ 118.3	$ 1,799.3	$ 1,385.0	$ 210.6	$ 3,203.2
2023	$ 1,221.7	$ 185.8	$ 2,826.3	$ 793.0	$ 120.6	$ 1,834.5	$ 1,378.5	$ 209.7	$ 3,188.9
2024	$ 1,226.0	$ 186.4	$ 2,837.3	$ 805.4	$ 122.4	$ 1,863.9	$ 1,368.4	$ 208.0	$ 3,166.9
2025	$ 1,226.1	$ 186.1	$ 2,837.6	$ 815.4	$ 123.8	$ 1,887.1	$ 1,355.6	$ 205.8	$ 3,137.5
2026	$ 1,222.8	$ 185.4	$ 2,832.4	$ 823.3	$ 124.8	$ 1,907.0	$ 1,340.8	$ 203.2	$ 3,105.7
2027	$ 1,216.7	$ 184.2	$ 2,822.6	$ 829.2	$ 125.6	$ 1,923.8	$ 1,324.3	$ 200.5	$ 3,072.3
2028	$ 1,192.7	$ 180.7	$ 2,765.4	$ 822.7	$ 124.7	$ 1,907.5	$ 1,289.7	$ 195.4	$ 2,990.3
2029	$ 1,179.8	$ 178.5	$ 2,738.2	$ 823.3	$ 124.6	$ 1,910.9	$ 1,268.3	$ 191.9	$ 2,943.5
Total	**$ 18,981.9**	**$ 2,888.0**	**$ 43,848.0**	**$ 12,642.9**	**$ 1,923.6**	**$ 29,204.5**	**$ 23,010.6**	**$ 3,502.4**	**$ 53,134.6**
Ann.	**$ 1,090.1**	**$ 165.9**	**$ 2,518.1**	**$ 726.1**	**$ 110.5**	**$ 1,677.2**	**$ 1,321.4**	**$ 201.1**	**$ 3,051.4**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibit F.21u.

Exhibit F.21w Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 7% Discount Rate
(All Water Systems)

TTHM - Preferred Alternative, SWAT Method

Year	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 68.8	$ 10.5	$ 158.0	$ 61.8	$ 9.5	$ 142.0	$ 125.4	$ 19.2	$ 288.4
2011	$ 166.5	$ 25.5	$ 382.9	$ 137.5	$ 21.0	$ 316.2	$ 288.8	$ 44.2	$ 664.3
2012	$ 281.5	$ 43.1	$ 646.7	$ 219.9	$ 33.6	$ 505.1	$ 467.9	$ 71.6	$ 1,074.9
2013	$ 407.3	$ 62.3	$ 935.5	$ 305.1	$ 46.7	$ 700.7	$ 650.4	$ 99.6	$ 1,493.9
2014	$ 496.7	$ 75.9	$ 1,141.8	$ 350.8	$ 53.6	$ 806.5	$ 748.7	$ 114.5	$ 1,721.2
2015	$ 565.5	$ 86.5	$ 1,300.6	$ 381.3	$ 58.3	$ 876.9	$ 804.4	$ 123.0	$ 1,850.1
2016	$ 613.7	$ 93.8	$ 1,411.4	$ 399.5	$ 61.0	$ 918.8	$ 827.3	$ 126.4	$ 1,902.6
2017	$ 645.5	$ 98.6	$ 1,486.0	$ 410.7	$ 62.7	$ 945.4	$ 830.9	$ 126.9	$ 1,912.7
2018	$ 662.5	$ 101.0	$ 1,526.2	$ 416.6	$ 63.5	$ 959.8	$ 821.8	$ 125.3	$ 1,893.3
2019	$ 666.6	$ 101.5	$ 1,538.2	$ 418.5	$ 63.7	$ 965.7	$ 804.1	$ 122.5	$ 1,855.7
2020	$ 661.6	$ 100.7	$ 1,527.4	$ 417.1	$ 63.5	$ 962.9	$ 780.8	$ 118.9	$ 1,802.7
2021	$ 650.1	$ 98.9	$ 1,501.1	$ 413.1	$ 62.8	$ 953.8	$ 753.9	$ 114.7	$ 1,740.6
2022	$ 634.3	$ 96.4	$ 1,466.9	$ 407.1	$ 61.9	$ 941.5	$ 724.7	$ 110.2	$ 1,676.1
2023	$ 615.4	$ 93.6	$ 1,423.6	$ 399.4	$ 60.8	$ 924.0	$ 694.3	$ 105.6	$ 1,606.2
2024	$ 594.4	$ 90.4	$ 1,375.7	$ 390.5	$ 59.4	$ 903.7	$ 663.5	$ 100.9	$ 1,535.5
2025	$ 572.3	$ 86.9	$ 1,324.4	$ 380.6	$ 57.8	$ 880.8	$ 632.7	$ 96.0	$ 1,464.4
2026	$ 549.4	$ 83.3	$ 1,272.5	$ 369.9	$ 56.1	$ 856.8	$ 602.4	$ 91.3	$ 1,395.4
2027	$ 526.2	$ 79.7	$ 1,220.8	$ 358.6	$ 54.3	$ 832.0	$ 572.7	$ 86.7	$ 1,328.7
2028	$ 496.5	$ 75.2	$ 1,151.3	$ 342.5	$ 51.9	$ 794.1	$ 536.9	$ 81.4	$ 1,244.9
2029	$ 472.8	$ 71.6	$ 1,097.3	$ 330.0	$ 49.9	$ 765.8	$ 508.3	$ 76.9	$ 1,179.6
Total	**$ 10,347.4**	**$ 1,575.3**	**$ 23,888.3**	**$ 6,910.3**	**$ 1,052.1**	**$ 15,952.5**	**$ 12,840.2**	**$ 1,955.7**	**$ 29,631.3**
Ann.	**$ 887.9**	**$ 135.2**	**$ 2,049.9**	**$ 593.0**	**$ 90.3**	**$ 1,368.9**	**$ 1,101.8**	**$ 167.8**	**$ 2,542.7**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibit F.21u.

Exhibit F.21x Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 3% Discount Rate, by Small & Large Size Categories (Surface Water Systems)

TTHM - Preferred Alternative, SWAT Method

	Small Systems									Large Systems								
	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model			Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 1.9	$ 0.3	$ 4.4	$ 1.5	$ 0.2	$ 3.4	$ 3.2	$ 0.5	$ 7.4	$ 77.5	$ 11.9	$ 178.3	$ 70.5	$ 10.8	$ 162.0	$ 142.2	$ 21.8	$ 326.9
2011	$ 4.8	$ 0.7	$ 11.1	$ 3.4	$ 0.5	$ 7.9	$ 7.9	$ 1.2	$ 18.2	$ 195.0	$ 29.9	$ 448.5	$ 162.7	$ 24.9	$ 374.1	$ 339.7	$ 52.0	$ 781.4
2012	$ 8.5	$ 1.3	$ 19.6	$ 5.8	$ 0.9	$ 13.3	$ 13.5	$ 2.1	$ 31.0	$ 342.5	$ 52.4	$ 786.8	$ 270.0	$ 41.3	$ 620.3	$ 571.2	$ 87.4	$ 1,312.2
2013	$ 12.8	$ 2.0	$ 29.4	$ 8.5	$ 1.3	$ 19.4	$ 19.7	$ 3.0	$ 45.2	$ 514.8	$ 78.8	$ 1,182.5	$ 388.9	$ 59.5	$ 893.2	$ 824.3	$ 126.2	$ 1,893.3
2014	$ 17.6	$ 2.7	$ 40.4	$ 11.4	$ 1.7	$ 26.1	$ 26.2	$ 4.0	$ 60.3	$ 649.3	$ 99.3	$ 1,492.6	$ 461.8	$ 70.6	$ 1,061.7	$ 979.9	$ 149.8	$ 2,252.6
2015	$ 22.8	$ 3.5	$ 52.4	$ 14.5	$ 2.2	$ 33.2	$ 33.0	$ 5.0	$ 75.9	$ 764.3	$ 116.9	$ 1,757.9	$ 518.2	$ 79.2	$ 1,191.8	$ 1,086.4	$ 166.1	$ 2,498.6
2016	$ 26.6	$ 4.1	$ 61.1	$ 16.4	$ 2.5	$ 37.7	$ 37.0	$ 5.6	$ 85.0	$ 860.1	$ 131.4	$ 1,978.0	$ 562.7	$ 86.0	$ 1,294.0	$ 1,157.3	$ 176.8	$ 2,661.4
2017	$ 29.6	$ 4.5	$ 68.2	$ 18.0	$ 2.8	$ 41.5	$ 39.7	$ 6.1	$ 91.3	$ 938.9	$ 143.4	$ 2,161.2	$ 599.8	$ 91.6	$ 1,380.7	$ 1,205.3	$ 184.0	$ 2,774.4
2018	$ 32.1	$ 4.9	$ 73.9	$ 19.4	$ 3.0	$ 44.7	$ 41.5	$ 6.3	$ 95.7	$ 1,000.0	$ 152.5	$ 2,303.8	$ 631.2	$ 96.2	$ 1,454.1	$ 1,236.8	$ 188.6	$ 2,849.4
2019	$ 34.0	$ 5.2	$ 78.6	$ 20.6	$ 3.1	$ 47.4	$ 42.7	$ 6.5	$ 98.6	$ 1,044.3	$ 159.1	$ 2,410.0	$ 657.8	$ 100.2	$ 1,518.0	$ 1,256.2	$ 191.4	$ 2,898.8
2020	$ 35.5	$ 5.4	$ 82.0	$ 21.6	$ 3.3	$ 49.8	$ 43.5	$ 6.6	$ 100.4	$ 1,076.0	$ 163.8	$ 2,484.2	$ 680.4	$ 103.6	$ 1,570.9	$ 1,266.4	$ 192.8	$ 2,923.7
2021	$ 36.6	$ 5.6	$ 84.4	$ 22.4	$ 3.4	$ 51.8	$ 43.9	$ 6.7	$ 101.3	$ 1,097.9	$ 167.0	$ 2,534.9	$ 699.6	$ 106.4	$ 1,615.2	$ 1,269.6	$ 193.1	$ 2,931.4
2022	$ 37.3	$ 5.7	$ 86.3	$ 23.2	$ 3.5	$ 53.7	$ 44.0	$ 6.7	$ 101.8	$ 1,112.3	$ 169.1	$ 2,572.4	$ 715.6	$ 108.8	$ 1,655.1	$ 1,267.5	$ 192.7	$ 2,931.5
2023	$ 37.8	$ 5.7	$ 87.4	$ 23.8	$ 3.6	$ 55.1	$ 43.9	$ 6.7	$ 101.6	$ 1,120.7	$ 170.4	$ 2,592.5	$ 729.0	$ 110.9	$ 1,686.5	$ 1,261.3	$ 191.8	$ 2,917.9
2024	$ 38.1	$ 5.8	$ 88.1	$ 24.4	$ 3.7	$ 56.4	$ 43.7	$ 6.6	$ 101.1	$ 1,124.3	$ 170.9	$ 2,601.9	$ 740.0	$ 112.5	$ 1,712.5	$ 1,251.9	$ 190.3	$ 2,897.3
2025	$ 38.2	$ 5.8	$ 88.4	$ 24.8	$ 3.8	$ 57.5	$ 43.3	$ 6.6	$ 100.3	$ 1,124.1	$ 170.6	$ 2,601.7	$ 748.8	$ 113.7	$ 1,733.1	$ 1,240.2	$ 188.2	$ 2,870.2
2026	$ 38.2	$ 5.8	$ 88.4	$ 25.2	$ 3.8	$ 58.4	$ 42.9	$ 6.5	$ 99.4	$ 1,120.9	$ 169.9	$ 2,596.4	$ 755.7	$ 114.6	$ 1,750.6	$ 1,226.5	$ 185.9	$ 2,841.0
2027	$ 38.1	$ 5.8	$ 88.3	$ 25.5	$ 3.9	$ 59.2	$ 42.4	$ 6.4	$ 98.4	$ 1,115.1	$ 168.8	$ 2,587.0	$ 760.9	$ 115.2	$ 1,765.3	$ 1,211.4	$ 183.4	$ 2,810.4
2028	$ 37.4	$ 5.7	$ 86.7	$ 25.4	$ 3.9	$ 59.0	$ 41.3	$ 6.3	$ 95.8	$ 1,093.0	$ 165.6	$ 2,534.3	$ 754.6	$ 114.4	$ 1,749.8	$ 1,179.7	$ 178.8	$ 2,735.4
2029	$ 37.0	$ 5.6	$ 86.0	$ 25.6	$ 3.9	$ 59.3	$ 40.6	$ 6.2	$ 94.3	$ 1,081.1	$ 163.6	$ 2,509.0	$ 755.0	$ 114.3	$ 1,752.3	$ 1,160.2	$ 175.6	$ 2,692.5
Total	**$ 564.9**	**$ 85.9**	**$ 1,305.2**	**$ 361.3**	**$ 55.0**	**$ 834.9**	**$ 694.1**	**$ 105.6**	**$ 1,603.1**	**$ 17,452.1**	**$ 2,655.3**	**$ 40,313.7**	**$ 11,663.3**	**$ 1,774.6**	**$ 26,941.2**	**$ 21,133.9**	**$ 3,216.8**	**$ 48,800.2**
Ann.	**$ 32.4**	**$ 4.9**	**$ 75.0**	**$ 20.8**	**$ 3.2**	**$ 47.9**	**$ 39.9**	**$ 6.1**	**$ 92.1**	**$ 1,002.2**	**$ 152.5**	**$ 2,315.1**	**$ 669.8**	**$ 101.9**	**$ 1,547.2**	**$ 1,213.7**	**$ 184.7**	**$ 2,802.5**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.21a through F.21i.

Exhibit F.21y Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 7% Discount Rate, by Small & Large Size Categories (Surface Water Systems)

TTHM - Preferred Alternative, SWAT Method

	Small Systems									Large Systems								
	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model			Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 1.6	$ 0.2	$ 3.6	$ 1.2	$ 0.2	$ 2.8	$ 2.7	$ 0.4	$ 6.2	$ 64.1	$ 9.8	$ 147.3	$ 58.2	$ 8.9	$ 133.9	$ 117.6	$ 18.0	$ 270.2
2011	$ 3.9	$ 0.6	$ 8.9	$ 2.7	$ 0.4	$ 6.3	$ 6.3	$ 1.0	$ 14.5	$ 155.1	$ 23.8	$ 356.8	$ 129.4	$ 19.8	$ 297.7	$ 270.3	$ 41.4	$ 621.7
2012	$ 6.5	$ 1.0	$ 15.0	$ 4.4	$ 0.7	$ 10.2	$ 10.3	$ 1.6	$ 23.8	$ 262.3	$ 40.1	$ 602.6	$ 206.8	$ 31.6	$ 475.1	$ 437.5	$ 67.0	$ 1,005.1
2013	$ 9.4	$ 1.4	$ 21.7	$ 6.2	$ 1.0	$ 14.3	$ 14.5	$ 2.2	$ 33.3	$ 379.5	$ 58.1	$ 871.8	$ 286.7	$ 43.9	$ 658.5	$ 607.7	$ 93.0	$ 1,395.9
2014	$ 12.5	$ 1.9	$ 28.7	$ 8.1	$ 1.2	$ 18.5	$ 18.6	$ 2.8	$ 42.8	$ 460.8	$ 70.5	$ 1,059.3	$ 327.8	$ 50.1	$ 753.5	$ 695.4	$ 106.3	$ 1,598.7
2015	$ 15.6	$ 2.4	$ 35.8	$ 9.9	$ 1.5	$ 22.7	$ 22.5	$ 3.4	$ 51.8	$ 522.2	$ 79.8	$ 1,200.9	$ 354.0	$ 54.1	$ 814.2	$ 742.2	$ 113.5	$ 1,707.0
2016	$ 17.5	$ 2.7	$ 40.2	$ 10.8	$ 1.6	$ 24.8	$ 24.3	$ 3.7	$ 55.9	$ 565.7	$ 86.4	$ 1,300.8	$ 370.0	$ 56.5	$ 851.0	$ 761.1	$ 116.3	$ 1,750.2
2017	$ 18.8	$ 2.9	$ 43.2	$ 11.4	$ 1.7	$ 26.2	$ 25.1	$ 3.8	$ 57.8	$ 594.3	$ 90.8	$ 1,368.1	$ 379.7	$ 58.0	$ 874.0	$ 763.0	$ 116.5	$ 1,756.3
2018	$ 19.6	$ 3.0	$ 45.1	$ 11.8	$ 1.8	$ 27.2	$ 25.3	$ 3.9	$ 58.3	$ 609.4	$ 92.9	$ 1,403.9	$ 384.6	$ 58.6	$ 886.1	$ 753.7	$ 114.9	$ 1,736.4
2019	$ 20.0	$ 3.0	$ 46.1	$ 12.1	$ 1.8	$ 27.8	$ 25.1	$ 3.8	$ 57.8	$ 612.6	$ 93.3	$ 1,413.7	$ 385.9	$ 58.8	$ 890.5	$ 736.9	$ 112.2	$ 1,700.5
2020	$ 20.1	$ 3.1	$ 46.3	$ 12.2	$ 1.9	$ 28.1	$ 24.6	$ 3.7	$ 56.7	$ 607.6	$ 92.5	$ 1,402.8	$ 384.2	$ 58.5	$ 887.1	$ 715.1	$ 108.9	$ 1,650.9
2021	$ 19.9	$ 3.0	$ 45.9	$ 12.2	$ 1.9	$ 28.2	$ 23.8	$ 3.6	$ 55.1	$ 596.8	$ 90.8	$ 1,377.9	$ 380.3	$ 57.8	$ 878.0	$ 690.1	$ 105.0	$ 1,593.4
2022	$ 19.5	$ 3.0	$ 45.1	$ 12.1	$ 1.8	$ 28.1	$ 23.0	$ 3.5	$ 53.2	$ 582.0	$ 88.5	$ 1,346.0	$ 374.5	$ 56.9	$ 866.0	$ 663.2	$ 100.9	$ 1,533.9
2023	$ 19.0	$ 2.9	$ 44.0	$ 12.0	$ 1.8	$ 27.8	$ 22.1	$ 3.4	$ 51.2	$ 564.5	$ 85.9	$ 1,305.8	$ 367.2	$ 55.8	$ 849.5	$ 635.3	$ 96.6	$ 1,469.7
2024	$ 18.5	$ 2.8	$ 42.7	$ 11.8	$ 1.8	$ 27.4	$ 21.2	$ 3.2	$ 49.0	$ 545.1	$ 82.9	$ 1,261.6	$ 358.8	$ 54.5	$ 830.3	$ 607.0	$ 92.3	$ 1,404.8
2025	$ 17.8	$ 2.7	$ 41.2	$ 11.6	$ 1.8	$ 26.8	$ 20.2	$ 3.1	$ 46.8	$ 524.7	$ 79.6	$ 1,214.3	$ 349.5	$ 53.1	$ 808.9	$ 578.8	$ 87.9	$ 1,339.6
2026	$ 17.2	$ 2.6	$ 39.7	$ 11.3	$ 1.7	$ 26.2	$ 19.3	$ 2.9	$ 44.7	$ 503.6	$ 76.3	$ 1,166.5	$ 339.5	$ 51.5	$ 786.5	$ 551.0	$ 83.5	$ 1,276.4
2027	$ 16.5	$ 2.5	$ 38.2	$ 11.0	$ 1.7	$ 25.6	$ 18.3	$ 2.8	$ 42.6	$ 482.3	$ 73.0	$ 1,118.9	$ 329.1	$ 49.8	$ 763.5	$ 523.9	$ 79.3	$ 1,215.4
2028	$ 15.6	$ 2.4	$ 36.1	$ 10.6	$ 1.6	$ 24.6	$ 17.2	$ 2.6	$ 39.9	$ 455.0	$ 69.0	$ 1,055.1	$ 314.2	$ 47.6	$ 728.5	$ 491.1	$ 74.4	$ 1,138.8
2029	$ 14.8	$ 2.2	$ 34.5	$ 10.2	$ 1.6	$ 23.8	$ 16.3	$ 2.5	$ 37.8	$ 433.3	$ 65.6	$ 1,005.5	$ 302.6	$ 45.8	$ 702.3	$ 464.9	$ 70.4	$ 1,079.1
Total	**$ 304.0**	**$ 46.3**	**$ 702.0**	**$ 193.8**	**$ 29.5**	**$ 447.5**	**$ 380.9**	**$ 58.0**	**$ 879.2**	**$ 9,520.9**	**$ 1,449.5**	**$ 21,979.7**	**$ 6,383.0**	**$ 971.9**	**$ 14,735.0**	**$ 11,806.0**	**$ 1,798.2**	**$ 27,244.1**
Ann.	**$ 26.1**	**$ 4.0**	**$ 60.2**	**$ 16.6**	**$ 2.5**	**$ 38.4**	**$ 32.7**	**$ 5.0**	**$ 75.4**	**$ 817.0**	**$ 124.4**	**$ 1,886.1**	**$ 547.7**	**$ 83.4**	**$ 1,264.4**	**$ 1,013.1**	**$ 154.3**	**$ 2,337.8**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.21a through F.21i.

Exhibit F.21z Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 3% Discount Rate, by Small & Large Size Categories (Ground Water Systems)

TTHM - Preferred Alternative, SWAT Method

	Small Systems									Large Systems								
	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model			Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 1.4	$ 0.2	$ 3.1	$ 1.0	$ 0.2	$ 2.4	$ 2.3	$ 0.4	$ 5.3	$ 2.4	$ 0.4	$ 5.4	$ 1.8	$ 0.3	$ 4.1	$ 4.0	$ 0.6	$ 9.2
2011	$ 3.4	$ 0.5	$ 7.9	$ 2.4	$ 0.4	$ 5.6	$ 5.6	$ 0.9	$ 12.9	$ 6.0	$ 0.9	$ 13.8	$ 4.2	$ 0.7	$ 9.8	$ 9.8	$ 1.5	$ 22.5
2012	$ 6.0	$ 0.9	$ 13.8	$ 4.1	$ 0.6	$ 9.4	$ 9.5	$ 1.5	$ 21.9	$ 10.5	$ 1.6	$ 24.2	$ 7.2	$ 1.1	$ 16.5	$ 16.7	$ 2.6	$ 38.3
2013	$ 9.0	$ 1.4	$ 20.8	$ 6.0	$ 0.9	$ 13.7	$ 13.9	$ 2.1	$ 32.0	$ 15.8	$ 2.4	$ 36.3	$ 10.4	$ 1.6	$ 24.0	$ 24.3	$ 3.7	$ 55.8
2014	$ 12.4	$ 1.9	$ 28.6	$ 8.0	$ 1.2	$ 18.5	$ 18.5	$ 2.8	$ 42.6	$ 20.5	$ 3.1	$ 47.1	$ 13.1	$ 2.0	$ 30.1	$ 30.3	$ 4.6	$ 69.7
2015	$ 16.1	$ 2.5	$ 37.1	$ 10.2	$ 1.6	$ 23.5	$ 23.3	$ 3.6	$ 53.6	$ 24.5	$ 3.7	$ 56.4	$ 15.2	$ 2.3	$ 35.0	$ 34.7	$ 5.3	$ 79.9
2016	$ 18.8	$ 2.9	$ 43.2	$ 11.6	$ 1.8	$ 26.7	$ 26.1	$ 4.0	$ 60.1	$ 27.7	$ 4.2	$ 63.7	$ 16.8	$ 2.6	$ 38.7	$ 37.6	$ 5.7	$ 86.5
2017	$ 20.9	$ 3.2	$ 48.2	$ 12.7	$ 1.9	$ 29.3	$ 28.0	$ 4.3	$ 64.6	$ 30.3	$ 4.6	$ 69.7	$ 18.2	$ 2.8	$ 42.0	$ 39.6	$ 6.0	$ 91.2
2018	$ 22.7	$ 3.5	$ 52.3	$ 13.7	$ 2.1	$ 31.6	$ 29.3	$ 4.5	$ 67.6	$ 32.3	$ 4.9	$ 74.5	$ 19.4	$ 3.0	$ 44.7	$ 40.9	$ 6.2	$ 94.3
2019	$ 24.1	$ 3.7	$ 55.5	$ 14.5	$ 2.2	$ 33.5	$ 30.2	$ 4.6	$ 69.7	$ 33.9	$ 5.2	$ 78.1	$ 20.4	$ 3.1	$ 47.2	$ 41.7	$ 6.4	$ 96.3
2020	$ 25.1	$ 3.8	$ 58.0	$ 15.2	$ 2.3	$ 35.2	$ 30.7	$ 4.7	$ 70.9	$ 35.0	$ 5.3	$ 80.7	$ 21.3	$ 3.2	$ 49.2	$ 42.2	$ 6.4	$ 97.5
2021	$ 25.8	$ 3.9	$ 59.7	$ 15.9	$ 2.4	$ 36.6	$ 31.0	$ 4.7	$ 71.6	$ 35.7	$ 5.4	$ 82.5	$ 22.1	$ 3.4	$ 51.0	$ 42.4	$ 6.4	$ 97.9
2022	$ 26.4	$ 4.0	$ 61.0	$ 16.4	$ 2.5	$ 37.9	$ 31.1	$ 4.7	$ 71.9	$ 36.3	$ 5.5	$ 83.9	$ 22.7	$ 3.5	$ 52.6	$ 42.4	$ 6.4	$ 98.0
2023	$ 26.7	$ 4.1	$ 61.8	$ 16.9	$ 2.6	$ 39.0	$ 31.0	$ 4.7	$ 71.8	$ 36.6	$ 5.6	$ 84.7	$ 23.3	$ 3.5	$ 53.9	$ 42.2	$ 6.4	$ 97.6
2024	$ 26.9	$ 4.1	$ 62.3	$ 17.2	$ 2.6	$ 39.9	$ 30.9	$ 4.7	$ 71.5	$ 36.8	$ 5.6	$ 85.1	$ 23.8	$ 3.6	$ 55.0	$ 41.9	$ 6.4	$ 97.0
2025	$ 27.0	$ 4.1	$ 62.5	$ 17.6	$ 2.7	$ 40.6	$ 30.6	$ 4.7	$ 70.9	$ 36.8	$ 5.6	$ 85.2	$ 24.2	$ 3.7	$ 55.9	$ 41.5	$ 6.3	$ 96.0
2026	$ 27.0	$ 4.1	$ 62.5	$ 17.8	$ 2.7	$ 41.3	$ 30.3	$ 4.6	$ 70.3	$ 36.7	$ 5.6	$ 85.1	$ 24.5	$ 3.7	$ 56.7	$ 41.0	$ 6.2	$ 95.0
2027	$ 26.9	$ 4.1	$ 62.4	$ 18.0	$ 2.7	$ 41.9	$ 30.0	$ 4.5	$ 69.5	$ 36.6	$ 5.5	$ 84.8	$ 24.7	$ 3.7	$ 57.4	$ 40.5	$ 6.1	$ 94.0
2028	$ 26.4	$ 4.0	$ 61.3	$ 18.0	$ 2.7	$ 41.7	$ 29.2	$ 4.4	$ 67.7	$ 35.9	$ 5.4	$ 83.2	$ 24.6	$ 3.7	$ 57.1	$ 39.4	$ 6.0	$ 91.5
2029	$ 26.2	$ 4.0	$ 60.8	$ 18.1	$ 2.7	$ 41.9	$ 28.7	$ 4.3	$ 66.7	$ 35.5	$ 5.4	$ 82.4	$ 24.7	$ 3.7	$ 57.3	$ 38.8	$ 5.9	$ 90.0
Total	**$ 399.3**	**$ 60.7**	**$ 922.5**	**$ 255.4**	**$ 38.9**	**$ 590.2**	**$ 490.6**	**$ 74.6**	**$ 1,133.1**	**$ 565.6**	**$ 86.1**	**$ 1,306.6**	**$ 362.8**	**$ 55.2**	**$ 838.3**	**$ 692.0**	**$ 105.3**	**$ 1,598.1**
Ann.	**$ 22.9**	**$ 3.5**	**$ 53.0**	**$ 14.7**	**$ 2.2**	**$ 33.9**	**$ 28.2**	**$ 4.3**	**$ 65.1**	**$ 32.5**	**$ 4.9**	**$ 75.0**	**$ 20.8**	**$ 3.2**	**$ 48.1**	**$ 39.7**	**$ 6.0**	**$ 91.8**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.21k through F.21s.

Exhibit F.21aa Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 7% Discount Rate, by Small & Large Size Categories (Ground Water Systems)

TTHM - Preferred Alternative, SWAT Method

	Small Systems									Large Systems								
	Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model			Smoking/Lung Cancer Cessation Lag Model			Smoking/Bladder Cancer Cessation Lag Model			Arsenic/Bladder Cancer Cessation Lag Model		
		90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound			90 Percent Confidence Bound	
Year	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)	Mean Value	Lower (5th %tile)	Upper (95th %tile)
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 1.1	$ 0.2	$ 2.6	$ 0.9	$ 0.1	$ 2.0	$ 1.9	$ 0.3	$ 4.4	$ 2.0	$ 0.3	$ 4.5	$ 1.5	$ 0.2	$ 3.4	$ 3.3	$ 0.5	$ 7.6
2011	$ 2.7	$ 0.4	$ 6.3	$ 1.9	$ 0.3	$ 4.5	$ 4.5	$ 0.7	$ 10.2	$ 4.8	$ 0.7	$ 10.9	$ 3.4	$ 0.5	$ 7.8	$ 7.8	$ 1.2	$ 17.9
2012	$ 4.6	$ 0.7	$ 10.6	$ 3.1	$ 0.5	$ 7.2	$ 7.3	$ 1.1	$ 16.8	$ 8.1	$ 1.2	$ 18.5	$ 5.5	$ 0.8	$ 12.6	$ 12.8	$ 2.0	$ 29.3
2013	$ 6.7	$ 1.0	$ 15.3	$ 4.4	$ 0.7	$ 10.1	$ 10.3	$ 1.6	$ 23.6	$ 11.7	$ 1.8	$ 26.8	$ 7.7	$ 1.2	$ 17.7	$ 17.9	$ 2.7	$ 41.2
2014	$ 8.8	$ 1.3	$ 20.3	$ 5.7	$ 0.9	$ 13.1	$ 13.2	$ 2.0	$ 30.3	$ 14.5	$ 2.2	$ 33.4	$ 9.3	$ 1.4	$ 21.3	$ 21.5	$ 3.3	$ 49.5
2015	$ 11.0	$ 1.7	$ 25.3	$ 7.0	$ 1.1	$ 16.1	$ 15.9	$ 2.4	$ 36.6	$ 16.7	$ 2.6	$ 38.5	$ 10.4	$ 1.6	$ 23.9	$ 23.7	$ 3.6	$ 54.6
2016	$ 12.4	$ 1.9	$ 28.4	$ 7.6	$ 1.2	$ 17.5	$ 17.2	$ 2.6	$ 39.5	$ 18.2	$ 2.8	$ 41.9	$ 11.1	$ 1.7	$ 25.5	$ 24.7	$ 3.8	$ 56.9
2017	$ 13.3	$ 2.0	$ 30.5	$ 8.1	$ 1.2	$ 18.6	$ 17.8	$ 2.7	$ 40.9	$ 19.2	$ 2.9	$ 44.1	$ 11.5	$ 1.8	$ 26.6	$ 25.1	$ 3.8	$ 57.7
2018	$ 13.8	$ 2.1	$ 31.8	$ 8.3	$ 1.3	$ 19.2	$ 17.9	$ 2.7	$ 41.2	$ 19.7	$ 3.0	$ 45.4	$ 11.8	$ 1.8	$ 27.3	$ 24.9	$ 3.8	$ 57.4
2019	$ 14.1	$ 2.2	$ 32.6	$ 8.5	$ 1.3	$ 19.7	$ 17.7	$ 2.7	$ 40.9	$ 19.9	$ 3.0	$ 45.8	$ 12.0	$ 1.8	$ 27.7	$ 24.5	$ 3.7	$ 56.5
2020	$ 14.2	$ 2.2	$ 32.7	$ 8.6	$ 1.3	$ 19.9	$ 17.4	$ 2.6	$ 40.1	$ 19.7	$ 3.0	$ 45.6	$ 12.0	$ 1.8	$ 27.8	$ 23.8	$ 3.6	$ 55.0
2021	$ 14.1	$ 2.1	$ 32.4	$ 8.6	$ 1.3	$ 19.9	$ 16.9	$ 2.6	$ 38.9	$ 19.4	$ 3.0	$ 44.9	$ 12.0	$ 1.8	$ 27.7	$ 23.0	$ 3.5	$ 53.2
2022	$ 13.8	$ 2.1	$ 31.9	$ 8.6	$ 1.3	$ 19.8	$ 16.3	$ 2.5	$ 37.6	$ 19.0	$ 2.9	$ 43.9	$ 11.9	$ 1.8	$ 27.5	$ 22.2	$ 3.4	$ 51.3
2023	$ 13.4	$ 2.0	$ 31.1	$ 8.5	$ 1.3	$ 19.6	$ 15.6	$ 2.4	$ 36.2	$ 18.4	$ 2.8	$ 42.6	$ 11.7	$ 1.8	$ 27.2	$ 21.3	$ 3.2	$ 49.2
2024	$ 13.0	$ 2.0	$ 30.2	$ 8.4	$ 1.3	$ 19.3	$ 15.0	$ 2.3	$ 34.7	$ 17.8	$ 2.7	$ 41.3	$ 11.5	$ 1.8	$ 26.7	$ 20.3	$ 3.1	$ 47.0
2025	$ 12.6	$ 1.9	$ 29.2	$ 8.2	$ 1.2	$ 19.0	$ 14.3	$ 2.2	$ 33.1	$ 17.2	$ 2.6	$ 39.7	$ 11.3	$ 1.7	$ 26.1	$ 19.4	$ 2.9	$ 44.8
2026	$ 12.1	$ 1.8	$ 28.1	$ 8.0	$ 1.2	$ 18.6	$ 13.6	$ 2.1	$ 31.6	$ 16.5	$ 2.5	$ 38.2	$ 11.0	$ 1.7	$ 25.5	$ 18.4	$ 2.8	$ 42.7
2027	$ 11.6	$ 1.8	$ 27.0	$ 7.8	$ 1.2	$ 18.1	$ 13.0	$ 2.0	$ 30.1	$ 15.8	$ 2.4	$ 36.7	$ 10.7	$ 1.6	$ 24.8	$ 17.5	$ 2.7	$ 40.7
2028	$ 11.0	$ 1.7	$ 25.5	$ 7.5	$ 1.1	$ 17.4	$ 12.2	$ 1.8	$ 28.2	$ 14.9	$ 2.3	$ 34.6	$ 10.2	$ 1.6	$ 23.8	$ 16.4	$ 2.5	$ 38.1
2029	$ 10.5	$ 1.6	$ 24.4	$ 7.2	$ 1.1	$ 16.8	$ 11.5	$ 1.7	$ 26.7	$ 14.2	$ 2.2	$ 33.0	$ 9.9	$ 1.5	$ 23.0	$ 15.5	$ 2.4	$ 36.1
Total	**$ 214.9**	**$ 32.7**	**$ 496.2**	**$ 137.0**	**$ 20.8**	**$ 316.3**	**$ 269.2**	**$ 41.0**	**$ 621.4**	**$ 307.7**	**$ 46.8**	**$ 710.4**	**$ 196.5**	**$ 29.9**	**$ 453.8**	**$ 384.2**	**$ 58.5**	**$ 886.6**
Ann.	**$ 18.4**	**$ 2.8**	**$ 42.6**	**$ 11.8**	**$ 1.8**	**$ 27.1**	**$ 23.1**	**$ 3.5**	**$ 53.3**	**$ 26.4**	**$ 4.0**	**$ 61.0**	**$ 16.9**	**$ 2.6**	**$ 38.9**	**$ 33.0**	**$ 5.0**	**$ 76.1**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.21k through F.21s.

Exhibit F.21ab Mean Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 3% Discount Rate, by System Size
(All Systems)

TTHM - Preferred Alternative, SWAT Method

	Smoking/Lung Cancer Cessation Lag Model										
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	>1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.2	$ 0.2	$ 0.8	$ 2.0	$ 9.5	$ 7.9	$ 34.2	$ 28.4	$ 83.2
2011	$ 0.1	$ 0.4	$ 0.5	$ 2.1	$ 5.1	$ 23.8	$ 19.8	$ 85.9	$ 71.4	$ 209.2
2012	$ 0.1	$ 0.8	$ 1.0	$ 3.7	$ 9.0	$ 41.8	$ 34.7	$ 151.0	$ 125.5	$ 367.5
2013	$ 0.2	$ 1.2	$ 1.4	$ 5.5	$ 13.5	$ 62.9	$ 52.2	$ 226.9	$ 188.6	$ 552.4
2014	$ 0.2	$ 1.6	$ 2.0	$ 7.6	$ 18.6	$ 86.6	$ 68.3	$ 281.2	$ 233.7	$ 699.8
2015	$ 0.3	$ 2.1	$ 2.6	$ 9.9	$ 24.1	$ 108.4	$ 80.9	$ 327.4	$ 272.2	$ 827.8
2016	$ 0.3	$ 2.5	$ 3.0	$ 11.5	$ 28.1	$ 125.1	$ 91.4	$ 366.6	$ 304.8	$ 933.2
2017	$ 0.4	$ 2.7	$ 3.4	$ 12.9	$ 31.3	$ 138.9	$ 100.1	$ 398.7	$ 331.5	$ 1,019.7
2018	$ 0.4	$ 3.0	$ 3.6	$ 13.9	$ 33.9	$ 150.1	$ 106.9	$ 423.3	$ 352.0	$ 1,087.1
2019	$ 0.4	$ 3.1	$ 3.9	$ 14.8	$ 35.9	$ 158.9	$ 112.0	$ 440.8	$ 366.5	$ 1,136.3
2020	$ 0.4	$ 3.3	$ 4.0	$ 15.4	$ 37.5	$ 165.3	$ 115.6	$ 453.2	$ 376.9	$ 1,171.6
2021	$ 0.4	$ 3.4	$ 4.1	$ 15.9	$ 38.6	$ 169.8	$ 118.1	$ 461.8	$ 384.0	$ 1,196.1
2022	$ 0.4	$ 3.4	$ 4.2	$ 16.2	$ 39.4	$ 172.9	$ 119.7	$ 467.3	$ 388.6	$ 1,212.2
2023	$ 0.4	$ 3.5	$ 4.3	$ 16.4	$ 39.9	$ 174.9	$ 120.7	$ 470.4	$ 391.2	$ 1,221.7
2024	$ 0.5	$ 3.5	$ 4.3	$ 16.5	$ 40.2	$ 176.0	$ 121.2	$ 471.7	$ 392.2	$ 1,226.0
2025	$ 0.5	$ 3.5	$ 4.3	$ 16.6	$ 40.3	$ 176.4	$ 121.2	$ 471.4	$ 392.0	$ 1,226.1
2026	$ 0.5	$ 3.5	$ 4.3	$ 16.6	$ 40.3	$ 176.2	$ 120.9	$ 469.8	$ 390.7	$ 1,222.8
2027	$ 0.5	$ 3.5	$ 4.3	$ 16.5	$ 40.2	$ 175.6	$ 120.3	$ 467.3	$ 388.5	$ 1,216.7
2028	$ 0.4	$ 3.5	$ 4.2	$ 16.2	$ 39.5	$ 172.3	$ 118.0	$ 457.9	$ 380.7	$ 1,192.7
2029	$ 0.4	$ 3.4	$ 4.2	$ 16.1	$ 39.1	$ 170.6	$ 116.7	$ 452.8	$ 376.5	$ 1,179.8
Total	**$ 6.7**	**$ 52.1**	**$ 63.9**	**$ 245.0**	**$ 596.4**	**$ 2,635.8**	**$ 1,866.5**	**$ 7,379.6**	**$ 6,135.8**	**$ 18,981.9**
Ann.	**$ 0.4**	**$ 3.0**	**$ 3.7**	**$ 14.1**	**$ 34.3**	**$ 151.4**	**$ 107.2**	**$ 423.8**	**$ 352.4**	**$ 1,090.1**

	Smoking/Bladder Cancer Cessation Lag Model									
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	>1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.1	$ 0.2	$ 0.6	$ 1.5	$ 8.5	$ 7.1	$ 30.9	$ 25.8	$ 74.8
2011	$ 0.0	$ 0.3	$ 0.4	$ 1.5	$ 3.6	$ 19.6	$ 16.4	$ 71.4	$ 59.5	$ 172.8
2012	$ 0.1	$ 0.5	$ 0.7	$ 2.5	$ 6.1	$ 32.6	$ 27.2	$ 118.6	$ 98.9	$ 287.1
2013	$ 0.1	$ 0.8	$ 1.0	$ 3.7	$ 8.9	$ 46.9	$ 39.2	$ 170.8	$ 142.4	$ 413.8
2014	$ 0.1	$ 1.0	$ 1.3	$ 4.9	$ 12.0	$ 62.4	$ 48.8	$ 198.4	$ 165.3	$ 494.3
2015	$ 0.2	$ 1.3	$ 1.6	$ 6.3	$ 15.3	$ 74.9	$ 54.9	$ 220.2	$ 183.4	$ 558.1
2016	$ 0.2	$ 1.5	$ 1.9	$ 7.1	$ 17.3	$ 83.1	$ 59.9	$ 238.2	$ 198.4	$ 607.5
2017	$ 0.2	$ 1.7	$ 2.0	$ 7.8	$ 19.0	$ 89.8	$ 64.0	$ 253.3	$ 210.9	$ 648.8
2018	$ 0.2	$ 1.8	$ 2.2	$ 8.4	$ 20.5	$ 95.4	$ 67.5	$ 266.2	$ 221.6	$ 683.7
2019	$ 0.2	$ 1.9	$ 2.3	$ 8.9	$ 21.7	$ 100.1	$ 70.4	$ 277.1	$ 230.6	$ 713.3
2020	$ 0.3	$ 2.0	$ 2.4	$ 9.4	$ 22.8	$ 104.1	$ 72.9	$ 286.4	$ 238.3	$ 738.6
2021	$ 0.3	$ 2.1	$ 2.5	$ 9.7	$ 23.7	$ 107.5	$ 75.1	$ 294.2	$ 244.8	$ 760.0
2022	$ 0.3	$ 2.1	$ 2.6	$ 10.1	$ 24.5	$ 110.4	$ 76.9	$ 300.8	$ 250.3	$ 778.0
2023	$ 0.3	$ 2.2	$ 2.7	$ 10.3	$ 25.2	$ 112.9	$ 78.4	$ 306.3	$ 254.8	$ 793.0
2024	$ 0.3	$ 2.3	$ 2.8	$ 10.6	$ 25.7	$ 114.9	$ 79.6	$ 310.8	$ 258.5	$ 805.4
2025	$ 0.3	$ 2.3	$ 2.8	$ 10.8	$ 26.2	$ 116.5	$ 80.6	$ 314.4	$ 261.5	$ 815.4
2026	$ 0.3	$ 2.3	$ 2.9	$ 10.9	$ 26.6	$ 117.8	$ 81.4	$ 317.2	$ 263.8	$ 823.3
2027	$ 0.3	$ 2.4	$ 2.9	$ 11.1	$ 27.0	$ 118.8	$ 82.0	$ 319.3	$ 265.5	$ 829.2
2028	$ 0.3	$ 2.3	$ 2.9	$ 11.0	$ 26.9	$ 118.0	$ 81.3	$ 316.6	$ 263.3	$ 822.7
2029	$ 0.3	$ 2.4	$ 2.9	$ 11.1	$ 27.0	$ 118.3	$ 81.4	$ 316.7	$ 263.4	$ 823.3
Total	**$ 4.3**	**$ 33.4**	**$ 40.9**	**$ 156.7**	**$ 381.5**	**$ 1,752.5**	**$ 1,244.8**	**$ 4,927.9**	**$ 4,101.0**	**$ 12,642.9**
Ann.	**$ 0.2**	**$ 1.9**	**$ 2.3**	**$ 9.0**	**$ 21.9**	**$ 100.6**	**$ 71.5**	**$ 283.0**	**$ 235.5**	**$ 726.1**

	Arsenic/Bladder Cancer Cessation Lag Model									
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	>1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.3	$ 0.4	$ 1.4	$ 3.4	$ 17.2	$ 14.4	$ 62.5	$ 52.1	$ 151.8
2011	$ 0.1	$ 0.7	$ 0.9	$ 3.4	$ 8.4	$ 41.2	$ 34.3	$ 149.5	$ 124.4	$ 363.0
2012	$ 0.2	$ 1.2	$ 1.5	$ 5.9	$ 14.3	$ 69.4	$ 57.8	$ 251.5	$ 209.2	$ 610.9
2013	$ 0.2	$ 1.8	$ 2.2	$ 8.5	$ 20.8	$ 100.3	$ 83.4	$ 363.0	$ 301.9	$ 882.2
2014	$ 0.3	$ 2.4	$ 3.0	$ 11.4	$ 27.7	$ 132.8	$ 103.8	$ 422.4	$ 351.3	$ 1,055.0
2015	$ 0.4	$ 3.0	$ 3.7	$ 14.3	$ 34.8	$ 158.3	$ 115.7	$ 462.6	$ 384.6	$ 1,177.5
2016	$ 0.4	$ 3.4	$ 4.2	$ 16.0	$ 39.0	$ 173.5	$ 123.8	$ 490.1	$ 407.4	$ 1,258.0
2017	$ 0.5	$ 3.7	$ 4.5	$ 17.2	$ 41.9	$ 183.8	$ 129.4	$ 508.8	$ 422.9	$ 1,312.6
2018	$ 0.5	$ 3.8	$ 4.7	$ 18.0	$ 43.8	$ 190.7	$ 133.0	$ 521.0	$ 433.0	$ 1,348.6
2019	$ 0.5	$ 3.9	$ 4.8	$ 18.5	$ 45.1	$ 195.1	$ 135.3	$ 528.3	$ 439.1	$ 1,370.8
2020	$ 0.5	$ 4.0	$ 4.9	$ 18.9	$ 45.9	$ 197.8	$ 136.5	$ 532.0	$ 442.2	$ 1,382.8
2021	$ 0.5	$ 4.0	$ 5.0	$ 19.0	$ 46.3	$ 199.1	$ 137.0	$ 532.9	$ 442.9	$ 1,386.9
2022	$ 0.5	$ 4.1	$ 5.0	$ 19.1	$ 46.4	$ 199.4	$ 136.8	$ 531.7	$ 441.9	$ 1,385.0
2023	$ 0.5	$ 4.1	$ 5.0	$ 19.0	$ 46.4	$ 198.9	$ 136.2	$ 528.9	$ 439.5	$ 1,378.5
2024	$ 0.5	$ 4.0	$ 4.9	$ 18.9	$ 46.1	$ 197.7	$ 135.3	$ 524.7	$ 436.1	$ 1,368.4
2025	$ 0.5	$ 4.0	$ 4.9	$ 18.8	$ 45.8	$ 196.1	$ 134.0	$ 519.6	$ 431.9	$ 1,355.6
2026	$ 0.5	$ 4.0	$ 4.9	$ 18.6	$ 45.3	$ 194.2	$ 132.6	$ 513.8	$ 427.0	$ 1,340.8
2027	$ 0.5	$ 3.9	$ 4.8	$ 18.4	$ 44.8	$ 191.9	$ 131.0	$ 507.3	$ 421.7	$ 1,324.3
2028	$ 0.5	$ 3.8	$ 4.7	$ 17.9	$ 43.6	$ 187.1	$ 127.6	$ 494.0	$ 410.6	$ 1,289.7
2029	$ 0.5	$ 3.8	$ 4.6	$ 17.6	$ 42.9	$ 184.1	$ 125.4	$ 485.7	$ 403.7	$ 1,268.3
Total	**$ 8.3**	**$ 64.1**	**$ 78.5**	**$ 301.0**	**$ 732.8**	**$ 3,208.6**	**$ 2,263.4**	**$ 8,930.3**	**$ 7,423.6**	**$ 23,010.6**
Ann.	**$ 0.5**	**$ 3.7**	**$ 4.5**	**$ 17.3**	**$ 42.1**	**$ 184.3**	**$ 130.0**	**$ 512.8**	**$ 426.3**	**$ 1,321.4**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.21a through F.21i and F.21k through F.21s.

Exhibit F.21ac Mean Present Value of Benefits Yearly Projections, WTP for Lymphoma as Basis for Non-Fatal Cases, at 7% Discount Rate, by System Size
(All Systems)

TTHM - Preferred Alternative, SWAT Method

	Smoking/Lung Cancer Cessation Lag Model										Smoking/Bladder Cancer Cessation Lag Model										Arsenic/Bladder Cancer Cessation Lag Model									
Year	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	≥1,000,000	Total
2005	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2009	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$ 0.0	$ 0.1	$ 0.2	$ 0.7	$ 1.7	$ 7.8	$ 6.5	$ 28.3	$ 23.5	$ 68.8	$ 0.0	$ 0.1	$ 0.1	$ 0.5	$ 1.3	$ 7.0	$ 5.9	$ 25.5	$ 21.3	$ 61.8	$ 0.0	$ 0.2	$ 0.3	$ 1.2	$ 2.8	$ 14.2	$ 11.9	$ 51.7	$ 43.0	$ 125.4
2011	$ 0.0	$ 0.4	$ 0.4	$ 1.7	$ 4.1	$ 18.9	$ 15.7	$ 68.4	$ 56.8	$ 166.5	$ 0.0	$ 0.3	$ 0.3	$ 1.2	$ 2.9	$ 15.6	$ 13.0	$ 56.8	$ 47.4	$ 137.5	$ 0.1	$ 0.6	$ 0.7	$ 2.7	$ 6.6	$ 32.8	$ 27.3	$ 118.9	$ 99.0	$ 288.8
2012	$ 0.1	$ 0.6	$ 0.7	$ 2.8	$ 6.9	$ 32.0	$ 26.6	$ 115.6	$ 96.1	$ 281.5	$ 0.1	$ 0.4	$ 0.5	$ 1.9	$ 4.7	$ 24.9	$ 20.8	$ 90.8	$ 75.7	$ 219.9	$ 0.1	$ 1.0	$ 1.2	$ 4.5	$ 10.9	$ 53.2	$ 44.3	$ 192.6	$ 160.2	$ 467.9
2013	$ 0.1	$ 0.9	$ 1.1	$ 4.1	$ 10.0	$ 46.3	$ 38.5	$ 167.3	$ 139.1	$ 407.3	$ 0.1	$ 0.6	$ 0.7	$ 2.7	$ 6.6	$ 34.6	$ 28.9	$ 125.9	$ 105.0	$ 305.1	$ 0.2	$ 1.3	$ 1.6	$ 6.3	$ 15.3	$ 73.9	$ 61.5	$ 267.6	$ 222.6	$ 650.4
2014	$ 0.1	$ 1.2	$ 1.4	$ 5.4	$ 13.2	$ 61.5	$ 48.5	$ 199.6	$ 165.9	$ 496.7	$ 0.1	$ 0.7	$ 0.9	$ 3.5	$ 8.5	$ 44.3	$ 34.6	$ 140.8	$ 117.3	$ 350.8	$ 0.2	$ 1.7	$ 2.1	$ 8.1	$ 19.7	$ 94.2	$ 73.6	$ 299.8	$ 249.3	$ 748.7
2015	$ 0.2	$ 1.4	$ 1.8	$ 6.8	$ 16.4	$ 74.0	$ 55.2	$ 223.7	$ 185.9	$ 565.5	$ 0.1	$ 0.9	$ 1.1	$ 4.3	$ 10.4	$ 51.2	$ 37.5	$ 150.4	$ 125.3	$ 381.3	$ 0.3	$ 2.1	$ 2.6	$ 9.8	$ 23.8	$ 108.2	$ 79.1	$ 316.0	$ 262.7	$ 804.4
2016	$ 0.2	$ 1.6	$ 2.0	$ 7.6	$ 18.5	$ 82.3	$ 60.1	$ 241.1	$ 200.4	$ 613.7	$ 0.1	$ 1.0	$ 1.2	$ 4.7	$ 11.4	$ 54.6	$ 39.4	$ 156.7	$ 130.5	$ 399.5	$ 0.3	$ 2.2	$ 2.8	$ 10.5	$ 25.7	$ 114.1	$ 81.4	$ 322.3	$ 267.9	$ 827.3
2017	$ 0.2	$ 1.7	$ 2.1	$ 8.1	$ 19.8	$ 87.9	$ 63.3	$ 252.4	$ 209.9	$ 645.5	$ 0.1	$ 1.1	$ 1.3	$ 4.9	$ 12.0	$ 56.8	$ 40.5	$ 160.4	$ 133.5	$ 410.7	$ 0.3	$ 2.3	$ 2.8	$ 10.9	$ 26.5	$ 116.3	$ 81.9	$ 322.1	$ 267.7	$ 830.9
2018	$ 0.2	$ 1.8	$ 2.2	$ 8.5	$ 20.6	$ 91.5	$ 65.2	$ 258.0	$ 214.5	$ 662.5	$ 0.1	$ 1.1	$ 1.3	$ 5.1	$ 12.5	$ 58.1	$ 41.1	$ 162.2	$ 135.0	$ 416.6	$ 0.3	$ 2.3	$ 2.9	$ 11.0	$ 26.7	$ 116.2	$ 81.1	$ 317.5	$ 263.9	$ 821.8
2019	$ 0.2	$ 1.8	$ 2.3	$ 8.7	$ 21.1	$ 93.2	$ 65.7	$ 258.6	$ 215.0	$ 666.6	$ 0.1	$ 1.1	$ 1.4	$ 5.2	$ 12.7	$ 58.7	$ 41.3	$ 162.5	$ 135.3	$ 418.5	$ 0.3	$ 2.3	$ 2.8	$ 10.9	$ 26.5	$ 114.5	$ 79.4	$ 309.9	$ 257.6	$ 804.1
2020	$ 0.2	$ 1.9	$ 2.3	$ 8.7	$ 21.2	$ 93.4	$ 65.3	$ 255.9	$ 212.8	$ 661.6	$ 0.1	$ 1.1	$ 1.4	$ 5.3	$ 12.9	$ 58.8	$ 41.2	$ 161.7	$ 134.6	$ 417.1	$ 0.3	$ 2.3	$ 2.8	$ 10.6	$ 25.9	$ 111.7	$ 77.1	$ 300.4	$ 249.7	$ 780.8
2021	$ 0.2	$ 1.8	$ 2.2	$ 8.6	$ 21.0	$ 92.3	$ 64.2	$ 251.0	$ 208.7	$ 650.1	$ 0.1	$ 1.1	$ 1.4	$ 5.3	$ 12.9	$ 58.5	$ 40.8	$ 159.9	$ 133.1	$ 413.1	$ 0.3	$ 2.2	$ 2.7	$ 10.3	$ 25.2	$ 108.2	$ 74.5	$ 289.7	$ 240.8	$ 753.9
2022	$ 0.2	$ 1.8	$ 2.2	$ 8.5	$ 20.6	$ 90.5	$ 62.7	$ 244.5	$ 203.3	$ 634.3	$ 0.1	$ 1.1	$ 1.4	$ 5.3	$ 12.8	$ 57.8	$ 40.2	$ 157.4	$ 131.0	$ 407.1	$ 0.3	$ 2.1	$ 2.6	$ 10.0	$ 24.3	$ 104.3	$ 71.6	$ 278.2	$ 231.2	$ 724.7
2023	$ 0.2	$ 1.8	$ 2.2	$ 8.3	$ 20.1	$ 88.1	$ 60.8	$ 237.0	$ 197.0	$ 615.4	$ 0.1	$ 1.1	$ 1.4	$ 5.2	$ 12.7	$ 56.8	$ 39.5	$ 154.3	$ 128.3	$ 399.4	$ 0.3	$ 2.0	$ 2.5	$ 9.6	$ 23.4	$ 100.2	$ 68.6	$ 266.4	$ 221.4	$ 694.3
2024	$ 0.2	$ 1.7	$ 2.1	$ 8.0	$ 19.5	$ 85.3	$ 58.8	$ 228.7	$ 190.2	$ 594.4	$ 0.1	$ 1.1	$ 1.3	$ 5.1	$ 12.5	$ 55.7	$ 38.6	$ 150.7	$ 125.3	$ 390.5	$ 0.3	$ 2.0	$ 2.4	$ 9.2	$ 22.4	$ 95.9	$ 65.6	$ 254.4	$ 211.5	$ 663.5
2025	$ 0.2	$ 1.6	$ 2.0	$ 7.7	$ 18.8	$ 82.3	$ 56.6	$ 220.0	$ 182.9	$ 572.3	$ 0.1	$ 1.1	$ 1.3	$ 5.0	$ 12.2	$ 54.4	$ 37.6	$ 146.7	$ 122.0	$ 380.6	$ 0.2	$ 1.9	$ 2.3	$ 8.8	$ 21.4	$ 91.5	$ 62.6	$ 242.5	$ 201.6	$ 632.7
2026	$ 0.2	$ 1.6	$ 1.9	$ 7.4	$ 18.1	$ 79.2	$ 54.3	$ 211.1	$ 175.5	$ 549.4	$ 0.1	$ 1.0	$ 1.3	$ 4.9	$ 12.0	$ 52.9	$ 36.6	$ 142.5	$ 118.5	$ 369.9	$ 0.2	$ 1.8	$ 2.2	$ 8.4	$ 20.4	$ 87.2	$ 59.6	$ 230.8	$ 191.9	$ 602.4
2027	$ 0.2	$ 1.5	$ 1.9	$ 7.1	$ 17.4	$ 75.9	$ 52.0	$ 202.1	$ 168.0	$ 526.2	$ 0.1	$ 1.0	$ 1.2	$ 4.8	$ 11.7	$ 51.4	$ 35.4	$ 138.1	$ 114.8	$ 358.6	$ 0.2	$ 1.7	$ 2.1	$ 8.0	$ 19.4	$ 83.0	$ 56.6	$ 219.4	$ 182.4	$ 572.7
2028	$ 0.2	$ 1.4	$ 1.8	$ 6.8	$ 16.4	$ 71.7	$ 49.1	$ 190.6	$ 158.5	$ 496.5	$ 0.1	$ 1.0	$ 1.2	$ 4.6	$ 11.2	$ 49.1	$ 33.9	$ 131.8	$ 109.6	$ 342.5	$ 0.2	$ 1.6	$ 1.9	$ 7.5	$ 18.2	$ 77.9	$ 53.1	$ 205.7	$ 170.9	$ 536.9
2029	$ 0.2	$ 1.4	$ 1.7	$ 6.4	$ 15.7	$ 68.4	$ 46.8	$ 181.5	$ 150.9	$ 472.8	$ 0.1	$ 0.9	$ 1.2	$ 4.4	$ 10.8	$ 47.4	$ 32.6	$ 126.9	$ 105.5	$ 330.0	$ 0.2	$ 1.5	$ 1.8	$ 7.1	$ 17.2	$ 73.8	$ 50.3	$ 194.7	$ 161.8	$ 508.3
Total	**$ 3.6**	**$ 28.1**	**$ 34.4**	**$ 131.8**	**$ 321.0**	**$ 1,422.6**	**$ 1,015.8**	**$ 4,035.2**	**$ 3,355.0**	**$ 10,347.4**	**$ 2.3**	**$ 17.9**	**$ 21.9**	**$ 84.0**	**$ 204.6**	**$ 948.7**	**$ 679.4**	**$ 2,702.3**	**$ 2,249.1**	**$ 6,910.3**	**$ 4.5**	**$ 35.2**	**$ 43.1**	**$ 165.2**	**$ 402.1**	**$ 1,771.4**	**$ 1,260.9**	**$ 5,000.7**	**$ 4,157.2**	**$ 12,840.2**
Ann.	**$ 0.3**	**$ 2.4**	**$ 3.0**	**$ 11.3**	**$ 27.5**	**$ 122.1**	**$ 87.2**	**$ 346.3**	**$ 287.9**	**$ 887.9**	**$ 0.2**	**$ 1.5**	**$ 1.9**	**$ 7.2**	**$ 17.6**	**$ 81.4**	**$ 58.3**	**$ 231.9**	**$ 193.0**	**$ 593.0**	**$ 0.4**	**$ 3.0**	**$ 3.7**	**$ 14.2**	**$ 34.5**	**$ 152.0**	**$ 108.2**	**$ 429.1**	**$ 356.7**	**$ 1,101.8**

Notes: Present values in millions of 2003 dollars. Estimates are discounted to 2005.
Ann. = value of total annualized at discount rate.
Detail may not add exactly to totals due to independent rounding.

Source: Derived from Exhibits F.21a through F.21i and F.21k through F.21s.

Appendix G

Illustrative Calculation for Quantifying Potential Reproductive/Developmental Benefits of the Stage 2 DBPR

Appendix G
Illustrative Calculation for Quantifying Potential Reproductive/Developmental Benefits of the Stage 2 DBPR

G.1 Introduction and Purpose

The purpose of this Appendix is to support Section 6.8.1 by providing details for an illustrative calculation that quantifies the potential benefits of reduced fetal losses (miscarriage and stillbirth) which may be attributable to the reduction in elevated disinfection byproduct (DBP) levels resulting from the Stage 2 Disinfection Byproduct Rule (DBPR). Human epidemiology studies and animal toxicology studies have examined associations between chlorinated drinking water or DBPs and reproductive and developmental health effects. Based on an evaluation of the available science, EPA believes the data suggest that exposure to DBPs is a potential reproductive and developmental health hazard.

Fetal loss was chosen from the reported reproductive and developmental health endpoints (including neural tube defects, low birth weight, cardiovascular effects, intrauterine growth retardation and cleft palate, etc.) because there are relatively more epidemiological data for it in comparison to the other endpoints and evidence is suggestive of an association between fetal loss and chlorinated water or DBP exposure. In addition, fetal loss occurs frequently in the United States, where approximately 1 in 6 of the 6 million pregnancies each year results in a fetal loss (Ventura et al. 2000). Consequently, even a small risk attributable to DBPs (e.g., 0.1 percent) may represent many fetal losses (n=1,000) and any reduction in fetal loss due to the Stage 2 DBPR would represent a significant benefit.

The existing epidemiological studies for fetal loss endpoints remain inconsistent as a whole, and the science on these effects as a result of DBP exposure is not strong enough to establish a causal relationship or quantify risk or benefits in the primary analysis. Nevertheless, given the widespread nature of exposure to DBPs, the importance our society places on reproductive and developmental health, and the large number of fetal losses experienced each year in the US, the Agency believes that it is important to provide some quantitative indication of the potential risk suggested by some of the published results on reproductive and developmental endpoints, despite the absence of a demonstrated causal link between disinfection byproducts and these risks.

Section G.2 describes the derivation of potential Population Attributable Risk (PAR) values relating fetal losses to DBP exposure. Section G.3 presents the calculation of potential fetal losses avoided as a result of the Stage 2 DBPR. Assumptions and uncertainties in these calculations are summarized in Section G.4.

G.2 Derivation of Illustrative PARs from Four Epidemiological Studies

Fetal losses potentially attributable to DBPs in drinking water were estimated using the PAR approach, similar to the approach used to quantify benefits associated with reduced incidence of bladder cancer cases in the main benefits analysis. PAR is the fraction of a disease that occurs in the population that is attributable to some specified risk factor. By extension, it also implies the fraction of that disease that would be eliminated from the population if the specified risk factor was eliminated.

To derive the PAR estimate, the Environmental Protection Agency (EPA) evaluated four published population-based human epidemiological studies:

- Savitz et al. 2005
- Waller et al. 2001
- King et al. 2000a
- Savitz et al. 1995

Exhibit G.1 summarizes the key characteristics of these studies. All four are considered high quality studies as they conform to the following criteria: 1) population-based-case-control or cohort study that ascertained exposure to chlorinated surface water (a chloramine residual disinfectant was used in the distribution system in two of the three study populations from Savitz et al. 2005), 2) high quality, well-designed study that had sufficient sample size, high response rate[1], and adjusted for known confounding factors, and 3) exposure assessment using information from water treatment data, residential histories, and trihalomethane (THM) measurement data. These are the same criteria used to select the bladder cancer studies for the primary benefits analysis for both Stage 1 and Stage 2 DBPR.

[1] *Note:* The Savitz et al. 1995 study had a response rate of 62 percent for miscarriage cases which is not unexpected due to the highly sensitive nature of this event.

Exhibit G.1 Summary of the Fetal Loss Human Epidemiological Studies

Study	Type of Study and Population	Exposure Assessment	Outcome	Potential Confounders Evaluated
Waller et al. 2001	Prospective cohort of 4,209 pregnant women in prepaid health plan in CA 1989-91	Used utility total trihalomethane (TTHM) data to estimate exposure via ingestion and showering during first trimester of pregnancy.	Spontaneous abortion (#20 weeks of gestation)	Gestational age at interview, maternal age, cigarette smoking, history of pregnancy loss, maternal race, employment during pregnancy
King et al. 2000a	Population-based retrospective cohort of 47,275 births in Nova Scotia, Canada 1988-1995	Linked mother's residence at time of delivery to the levels of specific TTHMs monitored in the distribution system of the utility and averaged predicted values of TTHM levels for all the months covering the pregnancy.	Stillbirth	Smoking, maternal age
Savitz et al. 1995	Population-based case-control study of 126 cases and 122 controls in NC 1988-91	Linked existing distribution system TTHM concentration data to maternal residence and water consumption data. Fourth week of pregnancy used to assign the reported quarterly average TTHM.	Spontaneous abortion	Maternal age, race, education, marital status, poverty level, smoking, alcohol use, nausea, employment
Savitz et al. 2005	Prospective cohort of 2413 pregnant women from 3 water systems in the U.S., 2000-2004	Weekly or biweekly distribution system DBP concentration data were collected and linked with maternal residence and water consumption data (during first and second trimesters). Periconceptual, early and late gestational exposure windows were examined.	Spontaneous abortion, including early (<12 wks) and late (>= 12 wks) fetal losses	Maternal age, tobacco use, race, ethnicity, education, marital status, income, alcohol use, caffeine consumption, body mass index, age at menarche, employment, diabetes, pregnancy history, prior fetal loss, induced abortion history, vitamin use

The PARs were derived using the Relative Risk (RR) measures such as the odds ratio and risk ratios from the four studies. To determine the fraction of cases within the exposed population that would be attributable to a specific exposure (i.e., PAR value), the proportion of exposed cases can be derived from either the study population or national occurrence information. To calculate a PAR value as a percent using the study-exposed fraction, Equation G.1 would be used. Equation G.2, which is mathematically equivalent to Equation G.1, would be used when adjusting the exposed fraction using the national occurrence data. RR refers to the relative risk estimates, P_c refers to the prevalence of exposure in the cases (the total number of exposed cases/total number of cases), and P_e refers to the fraction of the population that is exposed.

$$PAR(\%) = 100 \times P_c \times \frac{(RR-1)}{RR} \quad \text{(Equation G.1)}$$

$$PAR(\%) = 100 \times P_e \times \frac{P_e \times (RR-1)}{[P_e \times (RR-1)]+1} \quad \text{(Equation G.2)}$$

It is common practice to use the study population-derived exposed fraction of cases to calculate the PAR estimate (Equation G.1) by making the assumption that the study populations are representative of the general U.S. population. However, analysis of the 1998 Information Collection Rule (ICR) occurrence data show that study populations have higher DBP exposures than the general U.S. population. National DBP exposure estimates are compared to study population exposures in Section G.2.1. Section G.2.2 follows with a detailed derivation of PAR using Equation G.2 (adjusted to be more representative of national exposure levels).

G.2.1 DBP Exposure for Study Populations Compared to National Data

Section 5.6 provides a basis for why ICR data can be used to represent national exposure to DBPs. Below is a discussion of how EPA compared the ICR data to the exposure characterizations of the four epidemiology studies. The data are presented in a different manner than in 5.6.2 to reflect the specific methodologies used in the epidemiological studies to characterize exposure.

Summary of exposure characterizations from epidemiological studies

The four epidemiological studies used in this analysis differ in geographic location, health endpoint definitions, study type, and exposure classification. Major features of the studies are summarized in Exhibit G.1. Subjects from the four studies were assigned exposure scores based on distribution system THM concentrations and grouped into exposure categories. The most relevant categorizations were those most closely related to the Stage 2 DBPR maximum contaminant level (MCL) of 80 micrograms per liter (:g/L). Exhibits G.2 and G.3 presents the study data that are used to assess representativeness of national exposure in this appendix.

Exhibit G.2 DBP Exposure Data for Cohort Studies (Waller et al. 2001, King et al. 2000a, and Savitz et al. 2005)

Study	Exposure	Cases	Non-Cases	Percent of Population
Waller et al. 2001, Table 2	1st Trimester Mean TTHM > 80 :g/L	74	578	15.5% [1]
	1st Trimester Mean TTHM ≤ 80 μg/L	322	3,238	84.5%
King et al. 2000a, Table 3	Pregnancy Mean TTHM ≥ 75 :g/L	75	15,000 [2]	32% [3]
	Pregnancy Mean TTHM < 75 :g/L	122	32,000	68%
Savitz et al. 2005 [4]	1st Trimester Mean TTHM ≥ 75 :g/L	45	376	18.2%
	1st Trimester Mean TTHM < 75 :g/L	210	1681	81.8%

Notes:
1. As derived from original study data: (488+164)/(488+164+488+1139+715+654+564) =652/(652+3560)=15.5 percent
2. Non-cases were back-calculated from information provided in the paper. Total subjects at an exposure level was estimated by dividing the number of cases by the "Rate" from Table 3 of King et al., which is the ratio of cases to subjects. Non-cases equals the difference between total subjects and cases. Estimates above are shown to two significant figures because the Rates were only given to two significant figures.
3. As derived from original study data: (31+44+7350+7813)/(31+44+7350+7813+43+79+12987+18730)= 15,258/(15,258+31,840)=32.4 percent. Estimates are shown to two significant figures.
4. Personal communication, Richard MacLehose (University of North Carolina). Study population used in the analysis was similar to the exclusion criteria used in Waller et al. 1998.

Exhibit G.3 DBP Exposure Data for Savitz et al. (1995) Case-Control Study

Study	Exposure	Cases	Controls	Percent of Population [1]
Savitz et al. 1995, Table 2	1st Trimester Mean TTHM > 81 :g/L	46	43	35.2% [2]
	1st Trimester Mean TTHM ≤ 81 :g/L	80	79	64.8%

Notes:
1. For case-control studies, the distribution of population exposure is most appropriately represented by the control group only.
2. 43/(43+79) = 35.2 percent

Comparison of exposure between ICR data and study populations

EPA derived national exposure estimates based on the ICR data using the exposure study definitions by Waller et al. 2001, Savitz et al. 1995, King et al. 2000b, and Savitz et al. 2005. For the Waller et al. study, EPA used the first trimester utility wide average, rather than the closest-site estimate, as only this definition could be applied to the ICR data. This decision is supported by data from Waller et

al. 2001 indicating that there was little difference between the exposure estimates derived from the utility-wide average versus the closest-site estimates. In analyzing the ICR data for purpose of exposure comparison with the Waller et al. study, EPA considered the plants having data from at least three distribution system locations with at least three valid results for both total trihalomethanes (TTHM) and haloacetic acid (HAA5) during 1998, the final year of the ICR survey (i.e., ICR quarters 3, 4, 5, and 6). Among these plants, 336 of the 4,482 observations (7.5 percent) were greater than 80 μg/L, and therefore are categorized as high-exposure per Waller et al. The Savitz et al. 1995 and Savitz et al. 2005 studies also used utility wide averages as the basis for the first trimester exposure estimates. However, the Savitz et al. 1995 paper used 81 μg/L as their study population reference point. Since it is very close to 80 μg/L, EPA assumed the same percent observations as for Waller et al. Thus, the 7.5 percent exposure estimate for 80 μg/L is used to estimate the PAR value for the Savitz et al. 1995 study. To estimate the PAR value for the Savitz et al. 2005 study, EPA used the study's reference THM concentration of 75 μg/L since adjusted ORs for that concentration pertained to the first trimester calculation. The ICR data indicated that 399 of the 4,482 observations (8.9 percent) were greater than 75 μg/L. The basis for these calculations is shown in Section G.3.1

For the King et al. study, exposure was estimated by averaging predicted TTHM values for the months covering the duration of the mother's pregnancy and using 75 :g/L as the exposure concentration for comparisons. To relate the King et al. exposure estimate to the ICR data, EPA calculated locational nine month running averages based on 3 consecutive quarters of the ICR data. Each ICR plant location provided three or four nine-month running averages, taking quarters (3,4,5), (4,5,6), (5,6,3), or (6,3,4). Of the 3,679 location-nine-month averages from the ICR data, 222 (6.0 percent) exceeded 75 μg/L, and therefore are categorized as high-exposure per the King et al. study. See Section G.3.1 for these calculations.

Exhibit G.4 compares DBP exposures for the studies and ICR data using the study exposure definitions. The fraction of cases among the study population experiencing TTHM occurrences over 80 μg/L (current TTHM MCL) is 15 percent to 35 percent for Waller et al. and Savitz et al. 1995 respectively, while the fraction of cases over 75 μg/L is 32 percent for the King et al. study and 18 percent for the Savitz et al. 2005 study. National ICR DBP occurrence data indicate that approximately 7.5 percent of the U.S. population are potentially exposed to TTHM levels higher than the current MCL of 80 μg/L during any of the four quarters during the last 12 months of the ICR.

Exhibit G.4: Comparison of DBP Exposures: Fractions Exposed in Epidemiologic Studies and ICR Populations

Data Source	Waller et al. (1st trimester > 80 :g/L)	Savitz et al. 1995 (1st trimester > 81 :g/L)	King et al. (pregnancy mean > 75 :g/L)	Savitz et al. 2005 (1st trimester > 75 :g/L)
Study Population	15.5%	35.2%	32.4%	18.2% [1]
ICR Population	7.5%	7.5%	6.0%	8.9%

Notes:
1. Personal communication, Richard MacLehose (University of North Carolina) (MacLehose 2005).

G.2.2 PAR Results Using OR or RR and Scaling to National Exposure

PAR estimates were derived using risk estimates and odds ratios calculated from the studies (summarized in Exhibit G.5). Each study assigned pregnancies to multiple exposure categories, but the exposure category closest to the Stage 2 DBP TTHM MCL (80 µg/L) was used to calculate crude odds ratio and risk ratios. For the Waller et al. 2001 and Savitz et al. 1995 studies, persons with exposure to greater than or equal to 80 µg/L and 81 µg/L, respectively, were defined as "exposed." For the King et al. 2000 and Savitz et al. 2005 studies, the cut-off was established at 75 µg/L. In addition, to make the results from the Waller et al. 2001 study comparable to the other studies, the utility-wide, unweighted average TTHM concentrations were used. Individual water consumption data were not considered since these data were not collected in all of the studies under consideration. For this analysis, crude odds ratios and risk ratios were used because it was not possible to calculate relative risk estimates adjusted for the same confounders from the four studies. Regardless, when comparisons were made between crude and adjusted values, studies did not find a significant difference between the two estimates (e.g., King et al. 2000 and Savitz et al. 2005).

The crude odds and risk ratios were calculated from the reported number of cases and non-cases (or controls) at high and low exposure levels, except for the Savitz et al. 2005 study (which reported the odds ratio needed). The data summarized in Exhibit G.2 were used to derive the risk ratio. An example calculation using the Waller et al. cohort study follows:

a = cases among those exposed at the higher level = 74
b = cases among those exposed at the lower level = 322
c = non-cases among those exposed at the higher level = 578
d = non-cases among those exposed at the lower level = 3238
RR = risk ratio in equation G.3 and G.4.

$$RR = \frac{a}{a + c} \cdot \frac{b + d}{b} = 1.2548 \qquad \text{(Equation G.3)}$$

This estimate was then used to derive a PAR, given the ICR-based estimate of fraction exposed at the higher level, ICR_pe = 7.5%:

$$PAR_{ICR} = \frac{(RR - 1) \cdot ICR\_p_e}{(RR - 1) \cdot ICR\_p_e + 1} = 0.0188 \qquad \text{(Equation G.4)}$$

Calculations for the Savitz et al. 1995 case-control study were similar, but based on odds ratio rather than risk ratio:

a = cases exposed at the higher level
b = cases exposed at the lower level
c = controls exposed at the higher level
d = controls exposed at the lower level
OR = odds ratio

$$OR = \frac{a}{c} \cdot \frac{d}{b} \qquad \text{(Equation G.5)}$$

Confidence intervals for risk and odds ratios are based on likelihood functions (likelihood of the data, as a function of risk ratio or odds ratio). The 2.5th and 97.5th percentiles of the cumulative likelihood functions defined the 95% confidence intervals. In all four studies, the lower confidence bounds around the relative risk measures were less than 1.0, so the confidence bounds from the corresponding ICR-based PAR estimates included some values less than zero (which indicate that there may be no risk).

Exhibit G.5 RR, OR, and PAR Estimates for Four Epidemiological Studies [1]

Study	Crude Relative Risk Estimates [2]		Attributable Risk Estimates [3]	
	Odds Ratio/ Risk Ratio	95% Confidence Interval	PAR	95% Confidence Interval
Waller et al. 2001	RR = 1.25	(1.0, 1.6)	1.9 %	(0, 4) %
Savitz et al. 1995	OR = 1.06	(0.6, 1.8)	0.4 %	(-3, 6) % [4]
Savitz et al. 2005	OR = 0.96 [5]	(0.68, 1.35) [5]	0 %	(-3, 3) % [4]
King et al. 2000a	RR = 1.28	(1.0, 1.7)	1.7 %	(0, 4) %

Notes:
1. Estimates slightly differ from those of the Stage 2 Proposal because of minor adjustments to calculations and use of the new population exposure fractions shown in Exhibit G.4 and discussed in Section 5.6
2. With the exception of the Savitz et al. 2005 study which reported the appropriate OR and 95% confidence interval, crude odds ratios were calculated by EPA for high exposure levels as described in Section G.2.2
3. Based on Equation G.2: % PAR = 100% * (Pe)* (RR-1) / [(RR-1)* Pe + 1] where Pe is the fraction of the exposed population and RR is Risk Ratio or Odds Ratio
4. Lower confidence bounds below zero indicate that there may be no risk
5. Savitz et al. 2005, Table 6.1, page 75

G.3 Estimate of Potential Annual Fetal Losses Avoided as a Result of the Stage 2 DBPR

Three of the four epidemiological studies used for the PAR analysis covered exposure periods that occurred between 1988 and 1995, before implementation of the Stage 1 DBPR. The fourth study (Savitz et al. 2005) covered the period 2000 to 2004. Therefore, to calculate the number of fetal losses avoided for Stage 2, EPA calculated the potential losses avoided for Stage 1 first, then estimate the percent of remaining post-Stage 1 cases that could potentially avoided as a consequence of the Stage 2 DBPR

To estimate the percent reduction in peak exposure, EPA used the ICR Matrix Method to estimate the fraction peak TTHM observations for pre-Stage 1, pre-Stage 2 (post-Stage 1), and post-Stage 2 scenarios[1]. Because developmental and reproductive health data described in section 6.2 does not conclusively identify an exposure level of concern, several possible TTHM study levels (including concentrations of 80 and 75 :g/L to correlate with the available epidemiological study reference points)

[1]Note that EPA uses a 20% safety margin in the compliance forecast analysis for this illustrative calculation. By not incorporating the uncertainty in the impacts of the initial distribution system evaluation (IDSE), the results of this illustrative analysis are potentially biased downward.

were evaluated. From these fractions, the percent reduction in peak exposures attributed to the Stage 2 DBPR can be calculated. Section G.3.2 shows the derivation of these estimates

Section G.3.2 shows the derivation of fetal losses avoided as a result of the Stage 2 DBPR for a PAR value of 1.9 percent from the Waller et al. study, which represents the top value in the range. The same steps can be used to derive the results for the other fetal loss estimates. Results show that an approximate range of 0 to 3,700 fetal losses could potentially be avoided per year as a result of the Stage 2 DBPR. Section G.4 provides discussion of the assumptions and uncertainties for the derivation of potential fetal losses avoided as a result of the Stage 2 DBPR.

G.3.1 Reduction in Exposure to Peaks

This section summarizes the analysis of the reduced frequency of peak TTHM and HAA5 occurrences as a result of the Stage 1 and Stage 2 for observations and three-quarter averages. See section 5.6.1 for more details on the ICR Matrix Method approach for the reduction in peak values.

Characterization of peak TTHM and HAA5 levels for plants in each bin is shown in the tables on the right-hand side of Exhibits G.6a for observations and G.6b for three-quarter averages. The first column shows the total number of locations in the bin. Subsequent columns show the percent of the TTHM observations above study levels of 60, 75, 80, and 100 µg/L followed by the percent of HAA5 observations above 45, 60, and 75 µg/L. The subsequent columns for three-quarter averages show the number of three-quarter averages greater than 75 µg/L. Shaded rows represent those sampling locations associated with non-compliant plants that are expected to make treatment technology changes to meet Stage 1, then Stage 2 compliance.

Exhibit G.6a ICR Matrix Method for Peak Observations for the Stage 2 DBPR, 20 Percent Safety Margin, Large Surface and Ground Water Plants

Pre-Stage 1

		RAA	
		<64/48	>=64/48 (S1 non-compliant)
Max LRAA	<64/48	A1	
	>= 64/48 (S2 non-compliant)	A2	B2

Bin	Number of Observations	Observations with TTHM >60 ug/L	Observations with TTHM >75 ug/L	Observations with TTHM >80 ug/L	Observations with TTHM >100 ug/L	Observations with HAA5 >45 ug/L	Observations with HAA5 >60 ug/L	Observations with HAA5 >75 ug/L
A1	3,212	159	33	21	4	98	13	3
A2	555	169	87	69	18	132	37	9
B2	715	387	279	246	119	345	217	127
All Plants	4,482	715	399	336	141	575	267	139

Pre-Stage 2

		RAA	
		<64/48	>=64/48 (S1 non-compliant)
Max LRAA	<64/48	A1+B2	
	>= 64/48 (S2 non-compliant)	A2	

Bin	Number of Observations	Observations with TTHM >60 ug/L	Observations with TTHM >75 ug/L	Observations with TTHM >80 ug/L	Observations with TTHM >100 ug/L	Observations with HAA5 >45 ug/L	Observations with HAA5 >60 ug/L	Observations with HAA5 >75 ug/L
A1	3,212	159	33	21	4	98	13	3
A2	555	169	87	69	18	132	37	9
B2	715	49	5	1	0	26	2	0
All Plants	4,482	377	125	91	22	256	52	12

Post-Stage 2

		RAA	
		<64/48	>=64/48 (S1 non-compliant)
Max LRAA	<64/48	A1+B2+A2	
	>= 64/48 (S2 non-compliant)		

Bin	Number of Observations	Observations with TTHM >60 ug/L	Observations with TTHM >75 ug/L	Observations with TTHM >80 ug/L	Observations with TTHM >100 ug/L	Observations with HAA5 >45 ug/L	Observations with HAA5 >60 ug/L	Observations with HAA5 >75 ug/L
A1	3,212	159	33	21	4	98	13	3
A2	555	38	4	1	0	20	2	0
B2	715	49	5	1	0	26	2	0
All Plants	4,482	246	42	23	4	144	17	3

Notes: 1) In the Pre-Stage 1 tables, A1 through B2 are the number of locations for ICR plants that meet the criteria for each bin under pre-Stage 1 conditions. A total of 4,482 observations for 311 screened ICR surface and ground water plants were evaluated.
2) Each cell (bin) represents a range of the TTHM and HAA5 RAA concentrations and Maximum LRAA concentrations in :g/L (i.e., RAA <64/48 means the plant needs to have its TTHM RAA level below 64 µg/L and its HAA5 RAA level below 48 µg/L to be placed into the bin). The maximum TTHM or HAA5 result determines the bin placement. Note that bins are based on a 20 percent safety margin on the Stage 1 and Stage 2 MCLs.
3) Crossed-out bins represent plants that have moved from out of compliance bins to in compliance bins.
4) The gray bins on the right-hand side represents bins that have moved into compliance with pre-Stage 2 and post-Stage 2. The percent observations with TTHM and HAA5 concentrations above each study level is the percent of observations above the study level for those ICR plants that are compliant with Stage 1 and Stage 2 and use an advanced treatment technology and/or chloramines (as shown in Exhibit 5.26).

Exhibit G.6b ICR Matrix Method for Three-Quarter Averages Greater than 75 µg/L for the Stage 2 DBPR, 20 Percent Safety Margin, Large Surface and Ground Water Plants

Pre-Stage 1

		RAA	
		<64/48	>=64/48 (S1 non compliant)
Max LRAA	<64/48	A1	
	>= 64/48 (S2 non-compliant)	A2	B2

Bin	Number of Terms	Pregnancy Terms with mean TTHM >75 ug/L
A1	2,648	0
A2	433	28
B2	598	194
All Plants	3,679	222

Pre-Stage 2

		RAA	
		<64/48	>=64/48 (S1 non compliant)
Max LRAA	<64/48	A1+B2	
	>= 64/48 (S2 non-compliant)	A2	

Bin	Number of Terms	Pregnancy Terms with mean TTHM >75 ug/L
A1	2,648	0
A2	433	28
B2	598	0
All Plants	3,679	28

Post-Stage 2

		RAA	
		<64/48	>=64/48 (S1 non compliant)
Max LRAA	<64/48	A1+B2+A2	
	>= 64/48 (S2 non-compliant)		

Bin	Number of Terms	Pregnancy Terms with mean TTHM >75 ug/L
A1	2,648	0
A2	433	0
B2	598	0
All Plants	3,679	0

Notes: 1) In the Pre-Stage 1 tables, A1 through B2 are the number of three-quarter averages for ICR plants that meet the criteria for each bin under pre-Stage 1 conditions. A total of 3,679 three-quarter terms for 311 screened ICR surface and ground water plants were evaluated.
2) Each cell (bin) represents a range of the TTHM and HAA5 RAA concentrations and Maximum LRAA concentrations in **:**g/L (i.e., RAA <64/48 means the plant needs to have its TTHM RAA level below 64 µg/L and its HAA5 RAA level below 48 µg/L to be placed into the bin). The maximum TTHM or HAA5 result determines the bin placement. Note that bins are based on a 20 percent safety margin on the Stage 1 and Stage 2 MCLs.
3) Crossed-out bins represent plants that have moved from out of compliance bins to in compliance bins.
4) The gray bins on the right-hand side represents bins that have moved into compliance with pre-Stage 2 and post-Stage 2. The percent three-quarter averages with TTHM and HAA5 concentrations above each study level is the percent of three-quarter averages above the study level for those ICR plants that are compliant with Stage 1 and Stage 2 and use an advanced treatment technology and/or chloramines (as shown in Exhibit 5.26).

Similar to the method explained in Section 5.6.1, EPA used information on the occurrence of peaks for ICR plants using advanced treatment technologies and/or chloramines at the time of the ICR to estimate the occurrence of peaks for plants predicted to change treatment technology to comply with the Stage 1 and Stage 2 DBPRs. The results of the analysis of TTHM and HAA5 peaks for this subset of plants is summarized in Exhibits G.7a and G.7b. The frequency of peak TTHM and HAA5 observations in Exhibits G.7a are assumed to represent the frequency of peak TTHM and HAA5 observations for plants that will make treatment technology changes to meet the Stage 1 and Stage 2 rules (identified as shaded rows for the pre-Stage 2 and post-Stage 2 tables in Exhibits G.6a and G.6b). A similar analysis was used to determine the frequency of three-quarter averages greater than 75 µg/L in Exhibit G.7b.

Exhibits G.8a and G.8b summarize the results for each TTHM study level for observations and three-quarter averages. Using the ICR Matrix Method approach, the predicted percent of peak observations declines from 7.5 percent for pre-Stage 1 to 2.0 percent for pre-Stage 2 to 0.5 percent for post-Stage 2 DBPR conditions at a TTHM study level of 80 :g/L. For three-quarter averages greater than 75 :g/L, the percentage declines from 6.0 percent for pre-Stage 1 to 0.8 percent for pre-Stage 2 to 0 percent for post-Stage 2 DBPR conditions.

Exhibit G.7a Frequency of Occurrence of Peak Observations for ICR Surface and Ground Water Plants Using Chloramines and/or Advanced Treatment Technologies

Technology Category	Number of Observations	Percent of Observations with TTHM Peaks Above				Percent of Observations with HAA5 Peaks Above		
		60 µg/L	75 µg/L	80 µg/L	100 µg/L	45 µg/L	60 µg/L	75 µg/L
	A	C	D	E	F	I	J	K
Stage 2 Compliance Based on a 20 Percent Safety Margin								
CLM only	886	8.4%	0.8%	0.2%	0.0%	4.1%	0.5%	0.0%
Adv. tech with CLM	211	2.4%	0.5%	0.0%	0.0%	0.5%	0.0%	0.0%
Adv. tech w/o CLM	66	1.5%	0.0%	0.0%	0.0%	7.6%	0.0%	0.0%
All plants	**1,163**	**6.9%**	**0.7%**	**0.2%**	**0.0%**	**3.6%**	**0.3%**	**0.0%**
Stage 2 Compliance Based on a 25 Percent Safety Margin								
CLM only	829	5.7%	0.5%	0.2%	0.0%	2.5%	0.2%	0.0%
Adv. tech with CLM	211	2.4%	0.5%	0.0%	0.0%	0.5%	0.0%	0.0%
Adv. tech w/o CLM	50	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
All plants	**1,090**	**4.8%**	**0.5%**	**0.2%**	**0.0%**	**2.0%**	**0.2%**	**0.0%**

Notes: Advanced technologies include chlorine dioxide,ozone, GAC, and membranes. Advanced technologies DO NOT consider enhanced coagulation or enhanced softening.

The 25 percent safety margin results include ground water systems.

Source: ICR database (USEPA 2000h), analysis of 311 screened ICR surface and ground water plants.

Exhibit G.7b Frequency of Occurrence of Three-Quarter Averages Greater than 75 µg/L for ICR Surface and Ground Water Plants Using Chloramines and/or Advanced Treatment Technologies

Technology Category	Number of Terms	TTHM Pregnancy Means > 75 ug/L
	A	B
Compliance Based on a 20% SM		
CLM only	788	0.0%
Adv. tech with CLM	193	0.0%
Adv. tech w/o CLM	43	0.0%
All plants	**1,024**	**0.0%**
Compliance Based on a 25% SM		
CLM only	745	0.0%
Adv. tech with CLM	193	0.0%
Adv. tech w/o CLM	27	0.0%
All plants	**965**	**0.0%**

Notes: Advanced technologies include chlorine dioxide,ozone, GAC, and membranes. Advanced technologies DO NOT consider enhanced coagulation or enhanced softening.

The 25 percent safety margin results include ground water systems.

Source: ICR database (USEPA 2000h), analysis of 311 screened ICR surface and ground water plants.

Exhibit G.8a Predicted Percent of Distribution System Sampling Observations with Peaks for Pre-Stage 1, Pre-Stage 2, and Post-Stage 2 Conditions

TTHM Study Level Evaluated	Pre-Stage 1 Conditions			Pre-Stage 2 Conditions			Post-Stage 2 Conditions		
	Number of Observations Evaluated	Number of Observations with Peaks	Percent of Observations with Peaks	Number of Observations Evaluated	Number of Observations with Peaks	Percent of Observations with Peaks	Number of Observations Evaluated	Number of Observations with Peaks	Percent of Observations with Peaks
	A	B	C = B/A	D	E	F = E/D	G	H	I = H/G
60 µg/L	4,482	715	16.0%	4,482	377	8.4%	4,482	246	5.5%
75 µg/L	4,482	399	8.9%	4,482	125	2.8%	4,482	42	0.9%
80 µg/L	4,482	336	7.5%	4,482	91	2.0%	4,482	23	0.5%
100 µg/L	4,482	141	3.1%	4,482	22	0.5%	4,482	4	0.1%

Sources: (A), (D), and (G) are the number of distribution system observations evaluated for 311 screened ICR surface and ground water plants.

(B), (E), and (H) are number of observations over the TTHM study level as derived in Exhibits 5.25.

Exhibit G.8b Predicted Percent of Distribution System Three-Quarter Averages Greater than 75 µg/L for Pre-Stage 1, Pre-Stage 2, and Post-Stage 2 Conditions

TTHM Mean Over Pregnancy Term (3-Quarters)	Pre-Stage 1 Conditions			Pre-Stage 2 Conditions			Post-Stage 2 Conditions		
	Number of Pregnancy Terms Evaluated	Number of Pregnancy Terms Greater than TTHM Mean	Percent of Pregnancy Terms Greater than TTHM Mean	Number of Pregnancy Terms Evaluated	Number of Pregnancy Terms Greater than TTHM Mean	Percent of Pregnancy Terms Greater than TTHM Mean	Number of Pregnancy Terms Evaluated	Number of Pregnancy Terms Greater than TTHM Mean	Percent of Pregnancy Terms Greater than TTHM Mean
	A	B	C = B/A	D	E	F = E/D	G	H	I = H/G
75 µg/L	3,679	222	6.0%	3,679	28	0.8%	3,679	0	0.0%

Sources: (A), (D), and (G) are the number of distribution system pregnancy terms evaluated for 311 screened ICR surface and ground water plants.

(B), (E), and (H) are number of pregnancy terms with a TTHM mean greater than 75 µg/L.

G.3.2 Derivation of Fetal Losses Avoided based on Waller et al. (2001)

Step 1: Estimate the baseline number of fetal losses (pre-Stage 1 conditions) attributable to exposure to peak DBPs by multiplying the PAR value by the total number of fetal losses in the U.S. per year (983,000 from Ventura et al. 2000):

1.9% PAR x 983,000 = 18,677

Step 2: Estimate the percent of population exposed to peaks for Pre-Stage 1, Pre-Stage 2 and Post-Stage 2 conditions (derived in Section G.3.1). Results for a TTHM study level of 80 µg/L are shown in Exhibit G.9.

Step 3: Estimate the fetal losses remaining for Pre-Stage 2 conditions. First, estimate the fetal losses avoided by the Stage 1 DBPR by multiplying the Pre-Stage 1 cases by the percent reduction in peak DBP exposure as a result of the Stage 1 DBPR (shown in Exhibit G.9):

18,677x [7.5% - 2.0%]/7.5% = 13,696

Subtract the fetal losses avoided as a result of the Stage 1 DBPR from the pre-Stage 1 baseline number of fetal losses attributable to DBPs to produce the fetal losses remaining that are attributable to DBPs for Pre-Stage 2 conditions:

18,677 - 13,696 = 4,981

Step 4: Calculate the fetal losses avoided as a result of the Stage 2 DBPR. Similarly to Step 3, multiply the fetal losses remaining after the Stage 1 DBPR by the percent reduction in peak DBP exposure as a result of the Stage 2 DBPR (shown in Exhibit G.9):

4,981x[2.0% - 0.5%]/2.0% = **3,735**

Exhibit G.9 Exposure to Peak TTHM Levels (>80 :g/L) Based on ICR Data

	Pre-Stage 1	Pre-Stage 2 (Post-Stage 1)	Post-Stage 2[1]
Peaks / Observations	336/4,482	91/4,482	23/4,482
Prevalence of Exposure (Peaks / Observations)	7.5%	2.0%	0.5%

Source: Exhibit G.8a
Note: [1]Data is based on a 20 percent safety margin in the compliance forecast

G.4 Summary of Assumptions and Uncertainties

There are a number of uncertainties and assumptions associated with calculating PAR and deriving the estimate of fetal losses that could be attributable to DBP exposure. These include the following:

- DBPs may not be the causative agent for these fetal losses.
- The PAR estimates may not have captured the true PAR value since they are based on crude relative risk estimates rather than relative risk estimates adjusted for confounding.
- By using TTHM exposure estimates as a surrogate for exposure to chlorinated DBPs, EPA may not be capturing potential risks associated with individual THMs or other DBPs. Using THMs as a surrogate may either over- or under-represent the risk.
- The annual incidence for all fetal losses (n=983,000) was used to represent both spontaneous abortion and stillbirth because there is insufficient data to distinguish the number of miscarriages versus the number of stillbirths per year.
- TTHM occurrence for ICR plants evaluated are assumed to represent national occurrence data.
- Pregnancies are assumed to occur at equal rates throughout the year.

- The methodology for measuring exposure may not be the relevant exposure estimate.

These assumptions and uncertainties are not all specific to this analysis; they would be true for many environmental epidemiological studies and population attributable risk calculations.

There are other uncertainties and assumptions associated with calculating the reduction in potential fetal losses that could be attributable to the Stage 2 DBPR. To translate DBP occurrence to DBP exposure, two assumptions were used:

- For the studies that were based on first trimester exposure, each observation at an ICR plant-location (taken at any of the following locations: Distribution System Equivalent Sample Point [DSE], Average Sample Point Number 1 [AVG1], Average Sample Point Number 2 [AVG2], and Distribution System Maximum Sample Point [DS Maximum]) was assumed to represent an equal portion of the exposures to the pregnant population. Similarly, running nine-month averages of TTHM concentrations from the ICR plant data were assumed to represent exposure to pregnant women in the epidemiological study based on nine months of exposure (King et al. 2000).

- Peak DBP occurrence data for 311 large ICR plants evaluated are representative of DBP occurrence for all water treatment plant sizes.

Section 6.3.3.2 provides an assessment of the validity and impact of these assumptions.

Because DBP concentrations can be highly variable in distribution systems, it is possible that the exposure analysis in Section 6.3.3.2 does not capture the true variability in exposure to elevated DBP levels. Uncertainties with interpretation of the ICR data for the purposes of this exposure assessment include the following:

- The extent to which small system occurrence is represented

- Year to year variability of DBP occurrence data that might be affected by changes in source water quality (e.g., drought years versus non-drought years) may not be captured by year of ICR data used

- The extent to which each ICR measurement at sampling points represents equal fractions of the population served

- The extent to which ICR sampling locations represent compliance monitoring locations when trying to estimate reductions in exposure resulting from compliance with Stage 1 and Stage 2 DBPRs.

Appendix H

National Costs
for
Non-Treatment-Related Rule Activities

Appendix H
National Costs for Non-Treatment-Related Rule Activities

This appendix presents calculation summaries and cost tables for activities under the Stage 2 Disinfectants and Disinfection Byproducts Rule (DBPR) associated with rule implementation, Initial Distribution System Evaluations (IDSEs), Stage 2 DBPR monitoring plans, additional routine monitoring, and operational evaluations. It supports the discussion of these rule activities in Chapter 7. For systems, each activity is described separately in sections H.2 through H.6. A summary of all non-treatment activities and costs for systems is presented in H.7. State/Primacy Agency activities are described in section H.8.

Each cost summary presented in this appendix details the labor hours and corresponding labor costs for a given activity. The derivation of the public water system (PWS) and State labor rates used for each activity is discussed in further detail in Chapter 7 (section 7.2).

H.1 Derivation of the Stage 2 Monitoring Baseline

The Stage 2 DBPR monitoring requirements (both IDSE and compliance monitoring) are based on 8 surface water and 5 ground water population size categories. The Environmental Protection Agency (EPA) believes these to be more appropriate for specifying the numbers of samples per system than the standard nine system size categories that are used to generate treatment costs in this Economic Analysis (EA). Thus, a separate Stage 2 monitoring baseline for systems is needed. The final Stage 2 DBPR monitoring baseline, as presented in Column K in Exhibit H.1, is derived as described below.

Exhibit H.1 begins with the total number of systems according to the monitoring size categories. The data is obtained from the 2003 4th quarter Safe Drinking Water Information System (SDWIS) frozen database (USEPA 2003t), as explained in section 3.4 of this EA. Systems are categorized by source and system type as well as by purchasing and nonpurchasing systems. The purchasing or nonpurchasing designation is important because systems that purchase all their water may not have monitored for the Stage 1 DBPR, so they may not have the data available to take advantage of some IDSE options such as 40/30 certification or very small system waivers (see section 7.3 of this EA). The purchased designation in SDWIS, however, includes systems that treat their own water as well as purchase some of their water from another system. These producing systems would be required to monitor for the Stage 1 DBPR and so should be included with the nonpurchasing systems for determining which monitoring options are available to them. To estimate inputs for these types of systems separately, estimates of "100% purchasing" and "Producing" systems are needed.

To determine the percent of purchasing systems in SDWIS that purchase 100 percent of their water, EPA examined SDWIS purchasing system inventory data. As explained in Chapter 3 of this EA, in SDWIS and the Baseline Handbook (USEPA 2001c), systems are assigned a source type using the following hierarchy, in descending order: Surface water[1], Purchased Surface water, Ground Water, and Purchased Ground Water. The presence of the first source in this list determines the source assignment

[1] For the purposes of this EA, systems supplying ground water under the influence of surface water (GWUDI) are included with surface water systems. EPA also refers to the grouping of surface water and GWUDI systems as "subpart H" systems in the Stage 2 DBPR rule language. Surface water and GWUDI systems are grouped together because they fall under the same requirements in the Safe Drinking Water Act (SDWA) regulations.

for that system. As a result, all purchasing ground water community water systems (CWSs) and nontransient noncommunity water systems (NTNCWSs) are, by SDWIS definition, 100 percent purchasing systems.

Unlike purchasing ground water systems, purchasing surface water systems may have non-purchasing supplies. To determine how many purchasing surface water CWSs buy 100 percent of their water, EPA reviewed the results of the system linking exercise presented in section 3.4.2.2 of this EA. As explained in that section, the "linked" surface water system inventory was created by adding the population of 100 percent purchasing systems to their sellers and removing those systems from the inventory. A system was not "linked" to its seller if it had its own treatment plant or bought water from a system of a different type (e.g., a CWS buying water from a NTNCWS). Thus, remaining unlinked purchasing surface water systems (shown in Exhibit 3.2 of this EA, columns A and B) represent either systems that purchase finished water *and* have their own source, systems that buy from a different system type (e.g., a purchasing surface water plant that has its own ground water wells), or systems with missing seller information. In other words, those purchasing surface water systems that were able to be linked represents the minimum number of 100 percent purchasing systems. Using the percentage of purchasing systems that could be linked to estimate 100 percent purchasing systems may create a bias in the number of estimated 100 percent purchasing systems, but the error introduced is expected to be minimal since the number of remaining unlinked surface water CWSs is small.

From Exhibits 3.2 and 3.3 of this EA, the total number SDWIS purchasing surface water CWSs that could be linked is 5,124 (4130+994), and the percent of the total is 94 [5124/(4130+994+232+83)]. Note that this calculation was not performed for each Stage 2 DBPR monitoring size category because inventory data in Chapter 3 is organized according to the standard nine size categories (not the Stage 2 DBPR monitoring categories). The percentage of all purchasing surface water systems that could be linked (94 percent) was used in Exhibit H.1 to estimate the baseline number of purchasing surface water CWSs that buy 100 percent of their water (see column D).

A large portion of NTNCWSs could not be linked because they purchase water from different system types (in many cases, a NTNCWS purchases water from a CWS and was therefore, not linked). Therefore, a different methodology was used to estimate the percent of purchasing surface water NTNCWS that buy 100 percent of their water. All NTNCWSs are assumed to have just one entry point per system (as explained in section 3.4.2.2, these systems are most often a single building or located in a small area). Following this logic, a purchasing surface water NTNCWS is unlikely to have a second treated source—all are assumed to be 100 percent purchasing systems.

Only systems that disinfect or deliver disinfected water will be required to meet the requirements of the Stage 2 DBPR. Therefore, to determine the appropriate baseline for nontreatment costs, the number of disinfecting systems is determined. As with the treatment plant baseline, all surface water systems are assumed to be disinfecting. The percent of disinfecting ground water systems was obtained from the Third Edition of the Baseline Handbook, which is derived from the 1995 Community Water Systems Survey (CWSS). Column H of Exhibit H.1 displays the percentage disinfecting.

Exhibit H.1 Baseline Number of Disinfecting Systems by Monitoring Size Categories

Size Category	Number of Systems			Percent of Purchased Systems that Purchase 100% of Their Water	Number of Systems			Percent Disinfecting	Number of Disinfecting Systems		
	Purchased	Nonpurchased	Total		100% Purchasing	Producing	Total		100% Purchasing	Producing	Total
	A	B	C	D	E = A*D	F = C - E	G = E + F	H	I = E*H	J = F*H	K = I + J
Surface Water and Mixed CWSs											
<500	2,191	1,106	3,297	94.00%	2,060	1,237	3,297	100.00%	2,060	1,237	3,297
500-3,300	2,531	1,527	4,058	94.00%	2,379	1,679	4,058	100.00%	2,379	1,679	4,058
3,301-9,999	1,001	1,041	2,042	94.00%	941	1,101	2,042	100.00%	941	1,101	2,042
10,000-49,999	795	978	1,773	94.00%	747	1,026	1,773	100.00%	747	1,026	1,773
50,000-249,999	188	346	534	94.00%	177	357	534	100.00%	177	357	534
250,000-999,999	9	72	81	94.00%	8	73	81	100.00%	8	73	81
1,000,000-4,999,999	-	17	17	94.00%	0	17	17	100.00%	0	17	17
≥5 M	-	1	1	94.00%	0	1	1	100.00%	0	1	1
National Totals	**6,715**	**5,088**	**11,803**		**6,312**	**5,491**	**11,803**		**6,312**	**5,491**	**11,803**
Disinfecting Ground Water Only CWSs											
<500	1,127	25,501	26,628	100.00%	1,127	25,501	26,628	66.68%	752	17,005	17,756
500-9,999	976	12,390	13,366	100.00%	976	12,390	13,366	82.67%	807	10,243	11,050
10,000-99,999	41	1,381	1,422	100.00%	41	1,381	1,422	95.48%	39	1,319	1,358
100,000-499,999	1	61	62	100.00%	1	61	62	96.40%	1	59	60
> 500,000	-	6	6	100.00%	0	6	6	98.19%	0	6	6
National Totals	**2,145**	**39,339**	**41,484**		**2,145**	**39,339**	**41,484**		**1,598**	**28,631**	**30,229**
Surface Water and Mixed NTNCWSs											
<500	126	422	548	100.00%	126	422	548	100.00%	126	422	548
500-3,300	55	144	199	100.00%	55	144	199	100.00%	55	144	199
3,301-9,999	11	13	24	100.00%	11	13	24	100.00%	11	13	24
10,000-49,999	4	1	5	100.00%	4	1	5	100.00%	4	1	5
50,000-249,999	1	-	1	100.00%	1	0	1	100.00%	1	0	1
250,000-999,999	-	-	-	100.00%	0	0	0	100.00%	0	0	0
1,000,000-4,999,999	-	-	-	100.00%	0	0	0	100.00%	0	0	0
≥5 M	-	-	-	100.00%	0	0	0	100.00%	0	0	0
National Totals	**197**	**580**	**777**		**197**	**580**	**777**		**197**	**580**	**777**
Disinfecting Ground Water Only NTNCWSs											
<500	55	15,882	15,937	100.00%	55	15,882	15,937	29.00%	16	4,606	4,622
500-9,999	25	2,933	2,958	100.00%	25	2,933	2,958	29.00%	7	851	858
10,000-99,999	3	9	12	100.00%	3	9	12	29.00%	1	3	3
100,000-499,999	-	1	1	100.00%	0	1	1	29.00%	0	0	0
> 500,000	-	-	-	100.00%	0	0	0	29.00%	0	0	0
National Totals	**83**	**18,825**	**18,908**		**83**	**18,825**	**18,908**		**24**	**5,459**	**5,483**
Grand Totals	**9,140**	**63,832**	**72,972**		**8,737**	**64,235**	**72,972**		**8,132**	**40,161**	**48,293**

Sources:

(A), (B) 2003 4th quarter SDWIS frozen database (USEPA 2003t).

(D) Percentage of purchased systems that are 100% purchasing is estimated from SDWIS data

(H) Percent disinfecting is estimated from the Third Edition of the Baseline Handbook (Table B1.3.3) originally derived from the 1995 CWSS.

H.2 Rule Implementation Activities for Systems

Exhibit H.2 presents the costs and burden[2] for systems to perform implementation activities associated with the Stage 2 DBPR. These costs represent the labor hours incurred by PWSs to read the appropriate Stage 2 DBPR documents and train staff in their requirements. All systems subject to the Stage 2 DBPR are expected to undertake these implementation activities. Exhibit H.2 presents estimates of implementation hours and costs by system type, system size, and source water type.

[2] Burden means the total time, effort, or resources expended by persons to generate, maintain, retain, disclose, or provide information to or for a federal agency. This includes the time needed to review instructions; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

Exhibit H.2 Rule Implementation Burden and Costs for Systems

Size Category	Total Number of Systems	Read Hours per PWS	Train Hours per PWS	Cost per Labor Hour	Total Cost	Total Burden (Hours)	Total Burden (FTEs)
	A	B	C	D	E = A*(B+C)*D	F = A*(B+C)	G = F/2,080
Surface Water and Mixed CWSs							
<500	3,297	8	2	$ 22.55	$ 743,375	32,970	15.85
500-3,300	4,058	8	2	$ 24.74	$ 1,003,949	40,580	19.51
3,301-9,999	2,042	8	2	$ 30.51	$ 623,055	20,420	9.82
10,000-49,999	1,773	20	2	$ 31.08	$ 1,212,306	39,006	18.75
50,000-249,999	534	20	2	$ 32.64	$ 383,467	11,748	5.65
250,000-999,999	81	20	4	$ 35.25	$ 68,522	1,944	0.93
1,000,000-4,999,999	17	20	4	$ 35.25	$ 14,381	408	0.20
≥5 M	1	20	4	$ 35.25	$ 846	24	0.01
National Totals	**11,803**				**$ 4,049,902**	**147,100**	**70.72**
Disinfecting Ground Water Only CWSs							
<500	17,756	8	1	$ 22.35	$ 3,572,101	159,807	76.83
500-9,999	11,050	8	1	$ 24.86	$ 2,472,179	99,446	47.81
10,000-99,999	1,358	20	1	$ 31.08	$ 886,174	28,513	13.71
100,000-499,999	60	20	1	$ 35.25	$ 44,241	1,255	0.60
> 500,000	6	20	1	$ 35.25	$ 4,361	124	0.06
National Totals	**30,229**				**$ 6,979,054**	**289,145**	**139.01**
Surface Water and Mixed NTNCWSs							
<500	548	8	1	$ 22.39	$ 110,450	4,932	2.37
500-3,300	199	8	1	$ 24.74	$ 44,309	1,791	0.86
3,301-9,999	24	8	1	$ 30.51	$ 6,591	216	0.10
10,000-49,999	5	20	1	$ 31.08	$ 3,263	105	0.05
50,000-249,999	1	20	1	$ 35.25	$ 740	21	0.01
250,000-999,999	-	20	2	N/A	$ -	-	-
1,000,000-4,999,999	-	20	2	N/A	$ -	-	-
≥5 M	-	20	2	N/A	$ -	-	-
National Totals	**777**				**$ 165,353**	**7,065**	**3.40**
Disinfecting Ground Water Only NTNCWSs							
<500	4,622	8	1	$ 22.20	$ 923,423	41,596	20.00
500-9,999	858	8	1	$ 24.76	$ 191,118	7,720	3.71
10,000-99,999	3	20	1	$ 31.08	$ 2,271	73	0.04
100,000-499,999	0.3	20	1	$ 35.25	$ 215	6	0.00
500,000-1,499,999	-	20	1	N/A	$ -	-	-
National Totals	**5,483**				**$ 1,117,027**	**49,395**	**23.75**
Grand Totals	**48,293**				**$ 12,311,336**	**492,705**	**236.88**

Notes: Detail may not add due to independent rounding.

1 FTE=2,080 hours (40 hours/week; 52 weeks/year).

Sources: (A) Number of disinfecting systems (column K) from Exhibit H.1.

(B and C) Hours for reading the rule and training appropriate personel are estimated based on EPA experience implementing previous regulations.

(D) Labor rates from the *Labor Costs for National Drinking Water Rules* (USEPA, 2003s). An 80:20 split between technical and managerial labor rates was assumed, except for systems serving 500 or fewer people, for which only a technical rate was applied.

H.3 IDSE Activities for Systems

The purpose of the IDSE is to aid PWSs in identifying sample locations for Stage 2 compliance monitoring that represent distribution system sites with high TTHM and HAA5 levels. Some systems are not subject to IDSE requirements or may receive waivers. The first step in estimating costs for the IDSE is to categorize the systems into one of the five IDSE options listed below.

Systems Performing the IDSE:

- Systems conducting standard monitoring
- Systems using system specific studies (SSS)

Systems Not Performing the IDSE:

- All NTNCWSs serving fewer than 10,000 people.
- Systems serving fewer than 500 people that receive a very small system waiver.
- Systems eligible for the 40/30 certification.

Costs and burden associated with IDSE activities differ depending on whether or not the system performs the IDSE and, if so, which option a system chooses. All systems performing the IDSE are expected to incur some costs, as are those that are eligible for the 40/30 certification.

Section H.3.1 describes the assumptions for allocating systems to the five categories. Section H.3.2 provides cost estimates for those systems performing the IDSE (Standard Monitoring or SSS option). Section H.3.3 provides the rationale and, if appropriate, cost estimates for systems not performing the IDSE (NTNCWSs serving < 10,000; systems serving < 500 that receive a waiver; and systems that qualify for the 40/30 certification).

H.3.1 Categorization of Systems

Exhibits H.3a and H.3b summarize the percentages and estimated number of systems that will conduct each IDSE activity for 100 percent purchasing and producing systems, respectively. The percentages associated with each IDSE activity, listed in columns B-D of these exhibits, have been derived for the total population served in each size category, but are applied to the number of systems in a size category sequentially. For example, the very small system waiver is applied to the total number of systems (3,297); then the percentage of systems qualifying for the 40/30 certification is applied to the remaining systems; finally, the percentage of systems conducting an SSS is applied to the systems that cannot be granted either the waiver or certification. The assumptions underlying the percentages are discussed in detail in the remainder of this section. The number of systems in the IDSE categories that are expected to incur system costs (standard monitoring, SSS, and 40/30 certification) are presented in the last three columns of these exhibits.

NTNCWSs Serving < 10,000 People

None of the NTNCWSs serving fewer than 10,000 people are subject to the IDSE requirements. The exhibits in this appendix note "N/A" for these NTNCWS population categories.

Exhibit H.3a Percent and Number of 100 Percent Purchasing Systems in Each IDSE Category

Size Category	Total Number of 100% Purchasing Systems	Percentage Receiving a Very Small System Waiver	Percentage Having Concentrations Less than or Equal to 40/30	Percentage Using Studies	Systems Conducting IDSE Standard Monitoring	Systems Receiving the 40/30 Certification	Systems Using Studies
	A	B	C	D	E=A*(1-B)-F-G	F=Round [A*(1-B)*C]	G=Round [A*(1-B)*(1-C)*D]
Surface Water and Mixed CWSs							
<500	2,060	0%	0%	0%	2,060	-	-
500-3,300	2,379	0%	0%	0%	2,379	-	-
3,301-9,999	941	0%	0%	0%	941	-	-
10,000-49,999	747	0%	14%	0%	642	105	-
50,000-249,999	177	0%	14%	5%	144	25	8
250,000-999,999	8	0%	14%	10%	6	1	1
1,000,000-4,999,999	-	0%	14%	10%	-	-	-
≥5 M	-	0%	14%	10%	-	-	-
National Totals	**6,312**				**6,172**	**131**	**9**
Disinfecting Ground Water Only CWSs							
<500	752	0%	0%	0%	752	-	-
500-9,999	807	0%	0%	0%	807	-	-
10,000-99,999	39	0%	82%	0%	7	32	-
100,000-499,999	1	0%	66%	10%	-	1	-
> 500,000	-	0%	79%	10%	-	-	-
National Totals	**1,598**				**1,566**	**33**	**0**
Surface Water and Mixed NTNCWSs							
<500	126	N/A	N/A	N/A	N/A	N/A	N/A
500-3,300	55	N/A	N/A	N/A	N/A	N/A	N/A
3,301-9,999	11	N/A	N/A	N/A	N/A	N/A	N/A
10,000-49,999	4	0%	14%	0%	3	1	-
50,000-249,999	1	0%	14%	0%	1	-	-
250,000-999,999	-	0%	14%	0%	-	-	-
1,000,000-4,999,999	-	0%	14%	0%	-	-	-
≥5 M	-	0%	14%	0%	-	-	-
National Totals	**197**				**4**	**1**	**0**
Disinfecting Ground Water Only NTNCWSs							
<500	16	N/A	N/A	N/A	N/A	N/A	N/A
500-9,999	7	N/A	N/A	N/A	N/A	N/A	N/A
10,000-99,999	1	0%	92%	0%	-	1	-
100,000-499,999	-	0%	92%	0%	-	-	-
> 500,000	-	0%	92%	0%	-	-	-
National Totals	**24**				**0**	**1**	**0**
Grand Totals	**8,132**				**7,742**	**166**	**9**

Notes: Detail may not add due to independent rounding.

Results in columns F and G are rounded to whole systems.

Column C is percent of systems with TTHM concentrations less than or equal to 40 ug/L and HAA5 concentrations less than or equal to 30 ug/L for Stage 1 DBPR monitoring.

Sources: (A) Number of disinfecting 100% purchasing systems (Exhibit H.1, column I).

(B)-(C) 100% purchasing systems may not have DBP data with which to qualify for the waiver or certification. As a conservative assumption, 0% is used.

(D) Percentage of systems able to use historical data based on expert opinion.

Exhibit H.3b Percent and Number of Producing Systems in Each IDSE Category

Size Category	Total Number of Producing Systems	Percentage Receiving a Very Small System Waiver	Percentage Having Concentrations Less than or Equal to 40/30	Percentage Using Studies	Systems Conducting IDSE Standard Monitoring	Systems Receiving the 40/30 Certification	Systems Using Studies
	A	B	C	D	E=A*(1-B)-F-G	F=Round [A*(1-B)*C]	G=Round [A*(1-B)*(1-C)*D]
Surface Water and Mixed CWSs							
<500	1,237	100%	0%	0%	-	-	-
500-3,300	1,679	0%	14%	0%	1,444	235	-
3,301-9,999	1,101	0%	14%	0%	947	154	-
10,000-49,999	1,026	0%	14%	0%	882	144	-
50,000-249,999	357	0%	14%	5%	292	50	15
250,000-999,999	73	0%	14%	10%	57	10	6
1,000,000-4,999,999	17	0%	14%	10%	14	2	1
≥5 M	1	0%	14%	10%	1	-	-
National Totals	**5,491**				**3,636**	**595**	**22**
Disinfecting Ground Water Only CWSs							
<500	17,005	100%	0%	0%	-	-	-
500-9,999	10,243	0%	89%	0%	1,149	9,094	-
10,000-99,999	1,319	0%	82%	0%	233	1,086	-
100,000-499,999	59	0%	66%	10%	18	39	2
> 500,000	6	0%	79%	10%	1	5	-
National Totals	**28,631**				**1,400**	**10,224**	**2**
Surface Water and Mixed NTNCWSs							
<500	422	N/A	N/A	N/A	N/A	N/A	N/A
500-3,300	144	N/A	N/A	N/A	N/A	N/A	N/A
3,301-9,999	13	N/A	N/A	N/A	N/A	N/A	N/A
10,000-49,999	1	0%	14%	0%	1	-	-
50,000-249,999	-	0%	14%	0%	-	-	-
250,000-999,999	-	0%	14%	0%	-	-	-
1,000,000-4,999,999	-	0%	14%	0%	-	-	-
≥5 M	-	0%	14%	0%	-	-	-
National Totals	**580**				**1**	**0**	**0**
Disinfecting Ground Water Only NTNCWSs							
<500	4,606	N/A	N/A	N/A	N/A	N/A	N/A
500-9,999	851	N/A	N/A	N/A	N/A	N/A	N/A
10,000-99,999	3	0%	92%	0%	1	2	-
100,000-499,999	0	0%	92%	0%	0	-	-
> 500,000	-	0%	92%	0%	-	-	-
National Totals	**5,459**				**1**	**2**	**0**
Grand Totals	**40,161**				**5,038**	**10,821**	**24**

Notes: Detail may not add due to independent rounding.

Results in columns F and G are rounded to whole systems.
Column C is percent of systems with TTHM concentrations less than or equal to 40 ug/L and HAA5 concentrations less than or equal to 30 ug/L for Stage 1 DBPR monitoring.

Sources: (A) Number of producing disinfecting systems (Exhibit H.1, column J).

(B) The percentage of small systems to receive a very small system waiver is an assumption based on EPA experience with small systems. 100% purchasing systems may not have DBP data with which to qualify for small system waivers. As a conservative estimate 0% is assumed.

(C) Percentage of systems with all data less than or equal to 40/30 for Surface Water and Mixed systems based on ICR and NRWA data.

(D) Percentage of systems able to use historical data based on expert opinion.

Systems Receiving a Very Small System Waiver

Systems serving fewer than 500 people that have conducted Stage 1 monitoring are eligible for a very small system waiver from the IDSE requirements. These systems must conduct IDSE monitoring or an SSS, however, if they have not monitored for Stage 1 or if the State directs them to do so. It is assumed that no small 100 percent purchasing systems are eligible for the very small system waiver. This is a conservative estimate, as some States may have already required these systems to monitor disinfection byproduct (DBPs).

Because all systems with data will receive the waiver unless the State notifies them otherwise, it is assumed all producing systems will receive the very small system waiver. Although this may be a slight overestimate, it is believed that very few of these systems will be required to monitor by the State.

Systems Receiving the 40/30 Certification

To be eligible for the 40/30 certification, systems must certify to the State/Primacy Agency that each individual sample collected for the Stage 1 DBPR is no more than 40 micrograms per liter (µg/L) for TTHM and 30 µg/L for HAA5, and that there were no TTHM or HAA5 monitoring violations during the same period. Small systems that purchase 100 percent of their water may not have the Stage 1 DBPR monitoring data needed in order to apply for a 40/30 certification. Although this is a conservative estimate, it is assumed that no small 100 percent purchasing systems can receive a 40/30 certification.

EPA used various data sources to estimate the percentage of producing systems that could potentially qualify for the 40/30 certification. Based on analysis of the last 4 quarters of Information Collection Rule (ICR) data[3], it was estimated that 14 percent of large and medium surface water systems could show that all compliance monitoring data were less than or equal to 40 µg/L for TTHM and 30 µg/L for HAA5. While this may be an underestimate because it is based on pre-Stage 1 data, few additional systems will make changes to meet Stage 1 requirements that will result in all of their samples being less than or equal to 40/30. In the absence of other information, however, EPA believes that 14 percent is the best estimate of large and medium surface water systems that could meet the 40/30 certification requirements.

For small surface water systems, analysis of National Rural Water Association (NRWA) Winter and Summer data indicates that 12 percent could quality for the 40/30 certification. However, small systems have a later start date for the IDSE, and some systems will most likely make treatment technology changes to meet the Stage 1 DBPR before the start of the IDSE. Therefore, the percent with all compliance data less than or equal to 40/30 for small systems is estimated to be the same as for large systems (i.e., 14 percent). EPA assumed that no very small systems will qualify for the 40/30 certification since very small systems with data will receive a very small system waiver instead.

For all ground water systems, ICR data were used to estimate the percentage that could qualify for the 40/30 certification. Approximately 24 percent of ICR ground water systems are located in Florida where total organic carbon (TOC) levels (and consequently DBP levels) are high. Appendix B describes the analysis of Florida and non-Florida ICR data, which shows that 18 percent of Florida systems have all TTHM and HAA5 concentrations less than or equal to 40/30 respectively and 92 percent of non-Florida systems have all concentrations less than or equal to 40/30. These percentages were applied to the Florida

[3]At least 3 of 4 quarters must have TTHM and HAA5 data for at least 3 of 4 distribution system locations (TTHM and HAA5 data do not have to be present at the same location, however) for a plant to be included in this analysis.

and non-Florida systems in each system size category, respectively to produce the percent estimates in column C of Exhibit H.3a and H.3b.

Conducting an SSS

An SSS based on hydraulic modeling or existing monitoring data can be used instead of standard monitoring. EPA estimates that 10 percent of the surface water and disinfecting ground water systems serving more than 100,000 people and 5 percent of surface water systems serving 50,000 to 100,000 people will complete an SSS in lieu of monitoring. EPA assumed that surface water systems serving fewer than 50,000 people and ground water systems serving fewer than 100,000 people will not have adequate historical data or models to meet the SSS requirements.

Conducting Standard Monitoring

All systems that do not receive a waiver, do not quality for the 40/30 certification, or cannot use an SSS are required to perform standard monitoring. Standard monitoring involves selecting specific types of sample sites in the distribution system (e.g., maximum TTHM sites, sites near the entry point) and monitoring at those sites for 1 year. The number and type of required samples are based on system size, source water type, and residual disinfectant type. The system must prepare a report summarizing the results of the standard monitoring and justifying selection of Stage 2 compliance monitoring sites.

H.3.2 Costs for Systems Performing the IDSE

Systems Conducting Standard Monitoring

Standard monitoring consists of three activities—preparing an IDSE monitoring plan, monitoring, and reporting. Costs associated with preparing the IDSE monitoring plan result from the labor effort required to evaluate the distribution system, select the sites, and layout where and when the system will collect and analyze samples. Labor hours are estimated on a per-system basis and vary by system size, with the assumption that larger systems need more time to select sites. The labor hour estimates for monitoring plan preparation are based on EPA's experience with other rules.

Monitoring costs include labor for sample collection and laboratory costs for sample analysis. These costs are estimated from the number of samples required. EPA estimates that systems will spend an average of 1 hour to collect one sample. Laboratory costs include $200 for analysis of TTHM and HAA5 paired samples. A shipping cost of $40 for systems serving fewer than 10,000 is included to reflect that these systems are unlikely to have in-house laboratory facilities and are less likely to be able to take advantage of bulk rate discounts. For systems serving 10,000 or more people, a shipping cost of $10 is added to reflect that many of them have in-house laboratories and can take advantage of bulk rates. These costs represent averages obtained from the ICR (see Chapter 7, section 7.1.1 for more information on laboratory cost assumptions). Costs per sample for ground and surface water plants are not expected to differ substantially.

As noted in section H.1, the total number of sampling sites and frequency of sampling for systems is a function of system size (population served) and source water type, <u>not</u> the number of plants. Larger systems must sample at more sites and more frequently than smaller ones, which typically have shorter and less complex distribution systems. Surface water sources generally have higher DBP precursor levels than ground water sources; therefore, they have a greater potential for high DBP occurrence.

Reporting costs reflect the labor required for systems to prepare and submit a report to their State/Primacy Agency on IDSE results and their proposed Stage 2 DBPR compliance monitoring sites.

These costs are estimated on a per system basis for all systems. The reporting labor rate is the same rate used for preparation of the IDSE monitoring plan.

Exhibit H.4 shows the calculations and estimated costs and burden for systems expected to monitor for the IDSE.

Systems Performing an SSS

Cost estimates for systems conducting an SSS consist of preparing a study plan, conducting the study, and reporting results. The labor hours required for the study plan and report are similar to the hours required for the standard monitoring plan and report for systems performing the standard monitoring. A uniform value of 20 hours was used for all large systems, as it is the average of the reporting costs in the three largest size categories for systems doing an IDSE report for the standard monitoring. Conducting the SSS study was estimated to take 40 hours of labor. The estimate is based on EPA's best professional judgement and its experience with similar programs. Exhibit H.5 shows the calculations and estimated costs and burden for systems completing an SSS in lieu of standard monitoring to fulfill IDSE requirements.

Exhibit H.4 IDSE Costs for Systems Using Standard Monitoring

Size Category	Total Number of Systems that Monitor	Develop IDSE monitoring plan and report			Sampling				Total Cost	Total Burden (Hours)	Total Burden (FTEs)
		Preparation of IDSE Monitoring Plan	Preparation of IDSE Report	Reporting Cost per Labor Hour	Number of Dual Sample Sets per System	Hours per Sample	Sampling Cost per Labor Hour	Laboratory Cost per Sample			
	A	B	C	D	E	F	G	H	I=A*((B+C)*D+E*(F*G+H))	J=A*(B+C+E*F)	K=J/2,080
Surface Water and Mixed CWSs											
<500	2,060	4	2	$ 22.55	2	1	$ 22.55	$ 240	$ 1,360,071	16,476	7.9
500-3,300	3,823	4	2	$ 24.74	8	1	$ 24.74	$ 240	$ 8,664,294	53,522	25.7
3,301-9,999	1,888	4	2	$ 30.51	16	1	$ 25.34	$ 240	$ 8,361,031	41,536	20.0
10,000-49,999	1,524	8	4	$ 31.08	48	1	$ 26.05	$ 210	$ 17,835,921	91,440	44.0
50,000-249,999	436	8	8	$ 32.64	96	1	$ 28.00	$ 210	$ 10,189,487	48,832	23.5
250,000-999,999	63	12	12	$ 35.25	144	1	$ 31.26	$ 210	$ 2,242,006	10,584	5.1
1,000,000-4,999,999	14	16	24	$ 35.25	192	1	$ 31.26	$ 210	$ 668,246	3,248	1.6
≥5 M	1	24	24	$ 35.25	240	1	$ 31.26	$ 210	$ 59,594	288	0.1
National Totals	**9,809**								**$ 49,380,649**	**265,926**	**127.8**
Disinfecting Ground Water Only CWSs											
<500	752	4	2	$ 22.35	2	1	$ 22.35	$ 240	$ 495,114	6,012	2.9
500-9,999	1,956	4	2	$ 24.86	8	1	$ 24.86	$ 240	$ 4,435,321	27,378	13.2
10,000-99,999	240	8	8	$ 31.08	24	1	$ 26.05	$ 210	$ 1,477,430	9,590	4.6
100,000-499,999	18	12	12	$ 35.25	32	1	$ 31.26	$ 210	$ 152,514	997	0.5
> 500,000	1	16	24	$ 35.25	48	1	$ 31.26	$ 210	$ 11,576	78	0.0
National Totals	**2,966**								**$ 6,571,956**	**44,056**	**21.2**
Surface Water and Mixed NTNCWSs											
<500	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
500-3,300	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3,301-9,999	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10,000-49,999	4	8	4	$ 31.08	48	1	$ 26.05	$ 210	$ 46,813	240	0.1
50,000-249,999	1	8	8	$ 35.25	96	1	$ 31.26	$ 210	$ 23,725	112	0.1
250,000-999,999	0	12	12	N/A	144	1	N/A	$ 210	$ -	-	-
1,000,000-4,999,999	0	16	24	N/A	192	1	N/A	$ 210	$ -	-	-
≥5 M	0	24	24	N/A	240	1	N/A	$ 210	$ -	-	-
National Totals	**5**								**$ 70,538**	**352**	**0.2**
Disinfecting Ground Water Only NTNCWSs											
<500	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
500-9,999	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10,000-99,999	1	8	8	$ 31.08	24	1	$ 26.05	$ 210	$ 3,759	24	0.0
100,000-499,999	0	12	12	$ 35.25	32	1	$ 31.26	$ 210	$ 2,484	16	0.0
> 500,000	0	16	24	N/A	48	1	N/A	$ 210	$ -	-	-
National Totals	**1**								**$ 6,243**	**41**	**0.0**
Grand Totals	**12,780**								**$ 56,029,386**	**310,375**	**149.2**

Notes: Detail may not add due to independent rounding.

Shaded areas represent systems that are not subject to IDSE requirements.

1 FTE=2,080 hours (40 hours/week; 52 weeks/year).

Sources: (A) From Exhibits H.3a and H.3b, column E.

(B and C) Labor hours for site selection and reporting based on expert opinion received during regulatory development process.

(D) Site selection and reporting labor rates estimated based on labor rates from *Labor Costs for National Drinking Water Rules (USEPA 2003s)* . An 80:20 split between technical and managerial labor rates was assumed, except for systems serving 500 or fewer people, for which only a technical rate was applied.

(E) Number of IDSE samples per system based on rule requirements for conducting IDSE monitoring. Column E in Exhibit 1.2. (Number of sites multiplied by frequency of samples

(F) Labor hours per sample reflect EPA estimate.

(G) Sampling labor rates estimated based on technical labor rates from the *Labor Costs for National Drinking Water Rules (USEPA 2003s)* .

(H) Laboratory cost for TTHM and HAA5 analyses per sample based on costs incurred for the ICR. $10 Shipping is added for large systems as many large systems have in-house capacity and will not have to ship. $40 is added for small systems because of higher shipping charges and fewer samples (no bulk discounts).

Exhibit H.5 IDSE Costs for Systems Using SSSs

Size Category	Number of Systems Qualifying for SSS	Preparation of IDSE Study Plan	Conduct Study	Preparation of IDSE Study Report	Cost per Labor Hour	Total Cost	Total Burden (Hours)	Total Burden (FTEs)
	A	B	C	D	E	F = A*(B+C+D)*E	G = A*(B+C+D)	H = G/2,080
Surface Water and Mixed CWSs								
<500	-	-	-	-	-	$ -	-	0.00
500-3,300	-	-	-	-	-	$ -	-	0.00
3,301-9,999	-	-	-	-	-	$ -	-	0.00
10,000-49,999	-	-	-	-	-	$ -	-	0.00
50,000-249,999	23	20	40	20	$ 32.64	$ 60,060	1,840	0.88
250,000-999,999	7	20	40	20	$ 35.25	$ 19,739	560	0.27
1,000,000-4,999,999	1	20	40	20	$ 35.25	$ 2,820	80	0.04
≥5 M	-	-	-	-	-	$ -	-	0.00
National Total	**31**					**$ 82,618**	**2,480**	**1.19**
Disinfecting Ground Water Only CWSs								
<500	-	-	-	-	-	$ -	-	0.00
500-9,999	-	-	-	-	-	$ -	-	0.00
10,000-99,999	-	-	-	-	-	$ -	-	0.00
100,000-499,999	2	20	40	20	$ 35.25	$ 5,640	160	0.08
> 500,000	-	-	-	-	-	$ -	-	0.00
National Total	**2**					**$ 5,640**	**160**	**0.08**
Surface Water and Mixed NTNCWSs								
<500	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
500-3,300	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3,301-9,999	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10,000-49,999	-	-	-	-	-	$ -	-	0.00
50,000-249,999	-	-	-	-	-	$ -	-	0.00
250,000-999,999	-	-	-	-	-	$ -	-	0.00
1,000,000-4,999,999	-	-	-	-	-	$ -	-	0.00
≥5 M	-	-	-	-	-	$ -	-	0.00
National Total	**-**					**$ -**	**-**	**0.00**
Disinfecting Ground Water Only NTNCWSs								
<500	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
500-9,999	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10,000-99,999	-	-	-	-	-	$ -	-	0.00
100,000-499,999	-	-	-	-	-	$ -	-	0.00
> 500,000	-	-	-	-	-	$ -	-	0.00
National Total	**-**					**$ -**	**-**	**0.00**
Grand Totals	**33**					**$ 88,258**	**2,640**	**1.27**

Notes: Detail may not add due to independent rounding.

Shaded areas represent systems that are not subject to IDSE requirements.

SSS stands for Systems using System Specific Studies.

Sources: (A) Number of systems using studies to satisfy IDSE requirements from Exhibits H.3a and H.3b, column G.

(B), (C), (D) Reporting hours required per system based on expert opinion.

(E) Labor rates from *Labor Costs for National Drinking Water Rules (USEPA, 2003s*). An 80:20 split between technical and managerial labor rates was assumed, except for systems serving 500 or fewer people, for which only a technical rate was applied.

H.3.3 Costs for Systems Not Performing the IDSE

As noted in the beginning of section H.3, there are three types of systems that do not have to perform the IDSE:

- All NTNCWSs serving fewer than 10,000 people (they are not subject to IDSE requirements)
- Systems receiving the very small system waiver
- Systems qualifying for the 40/30 certification (all TTHM and HAA5 compliance monitoring data must be less than or equal to 40/30 µg/L, respectively)

Since NTNCWSs serving fewer than 10,000 people are not subject to IDSE requirements, they bear no costs. EPA estimates a minimal burden for systems receiving a very small system waiver, given that they are automatically covered by the waiver if they have Stage 1 monitoring data unless the State requires otherwise. Therefore, this EA does not include costs for systems receiving the very small system waiver.

Systems qualifying for the 40/30 certification are expected to bear a small cost for reviewing monitoring data and preparing a certification letter to send to the State. Cost calculations are shown in Exhibit H.7. For CWS systems serving fewer than 10,000 people, reporting hours for 40/30 certification reports were estimated to be one hour. For systems serving at least 10,000 people certification reports were estimated to be 2 hours.

EPA also considers costs for those systems that receive the 40/30 certification and do not have to perform the IDSE, but must select additional Stage 2 sites compared to Stage 1 DBPR requirements. The number of those systems with additional sites is based on a comparison of Stage 2 population-based monitoring requirements to an analysis of Stage 1 plant-based requirements multiplied by the average number of plants per system. This analysis is shown in Section H.5. A minimal burden of one hour is estimated for very small systems, as only one additional site will be selected and the distribution systems are generally small. For larger systems the hours are estimated to be similar to the hours required to prepare the standard monitoring plan.

Exhibit H.6 IDSE Costs for Systems Receiving the 40/30 Certification

	Selecting Additional Sites		Preparing IDSE Certification					
Size Category	Systems Receiving 40/30 Certification but Adding Stage 2 site(s)	Hours per System	Number of Systems Receiving 40/30 Certification	Reporting Hours per System	Cost per Labor Hour	Total Cost	Total Burden (Hours)	Total Burden (FTEs)
	A	B	C	D	E	F = (A*B+C*D)*E	G = A*B+C*D	H = G/2,080
Surface Water and Mixed CWSs								
<500	-	1	-	1	$ 22.55	$ -	-	-
500-3,300	-	3	235	1	$ 24.74	$ 5,814	235	0.1
3,301-9,999	154	3	154	1	$ 30.51	$ 18,795	616	0.3
10,000-49,999	-	8	249	2	$ 31.08	$ 15,478	498	0.2
50,000-249,999	75	8	75	2	$ 32.64	$ 24,481	750	0.4
250,000-999,999	11	8	11	2	$ 35.25	$ 3,877	110	0.1
1,000,000-4,999,999	2	8	2	2	$ 35.25	$ 705	20	0.0
≥5 M	-	8	-	2	$ 35.25	$ -	-	-
National Total	**242**		**726**			**$ 69,150**	**2,229**	**1.1**
Disinfecting Ground Water Only CWSs								
<500	-	1	-	1	$ 22.35	$ -	-	-
500-9,999	9,094	3	9,094	1	$ 24.86	$ 904,287	36,376	17.5
10,000-99,999	1,118	8	1,118	2	$ 31.08	$ 347,474	11,180	5.4
100,000-499,999	-	8	40	2	$ 35.25	$ 2,820	80	0.0
> 500,000	-	8	5	2	$ 35.25	$ 352	10	0.0
National Total	**10,212**		**10,257**			**$ 1,254,934**	**47,646**	**22.9**
Surface Water and Mixed NTNCWSs								
<500	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
500-3,300	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3,301-9,999	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10,000-49,999	-	8	1	2	$ 31.08	$ 62	2	0.0
50,000-249,999	-	8	-	2	$ 35.25	$ -	-	-
250,000-999,999	-	8	-	2	N/A	$ -	-	-
1,000,000-4,999,999	-	8	-	2	N/A	$ -	-	-
≥5 M	-	8	-	2	N/A	$ -	-	-
National Total	**-**		**1**			**$ 62**	**2**	**0.0**
Disinfecting Ground Water Only NTNCWSs								
<500	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
500-9,999	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10,000-99,999	3	8	3	2	$ 31.08	$ 932	30	0.0
100,000-499,999	-	8	-	3	$ 35.25	$ -	-	-
> 500,000	-	8	-	6	N/A	$ -	-	-
National Total	**3**		**3**			**$ 932**	**30**	**0.0**
Grand Totals	**10,457**		**10,987**			**$ 1,325,079**	**49,907**	**24.0**

Notes: Shaded areas represent systems that are not subject to IDSE requirements.

Sources: (A) Number of systems less than or equal to 40/30 from Exhibit H.3a and H.3b (column F) for only those system size categories that are predicted to have additional routine monitoring from Stage 1 to Stage 2 (see Exhibit H.8a, column I).

(B) Hours per system required to select new sites for Stage 2 based on expert opinion.

(C) Number of systems that qualify for 40/30 certification from Exhibit H.3a and H.3b, column F.

(D) Reporting hours are based on best professional judgement and experience with similar rules.

(E) Labor rates from *Labor Costs for National Drinking Water Rules (USEPA, 2003s)* . An 80:20 split between technical and managerial labor rates was assumed, except for systems serving 500 or fewer people, for which only a technical rate was applied.

H.4 Developing a Stage 2 Monitoring Plan

This section presents the costs for systems to develop a monitoring plan for the Stage 2 DBPR. Prior to the beginning of compliance sampling, systems must prepare a monitoring plan describing how the system intends to comply with the monitoring requirements. The plan must contain the sites where the samples will be taken, based on data gathered in the IDSE and Stage 1 compliance monitoring, the month(s) in which samples will be taken, and other information. Surface water systems serving more than 3,300 people must submit their plans to the State.

For systems that perform the IDSE (SSS or standard monitoring), most of the information in the monitoring plan is required in the IDSE report. Most of the work required for the monitoring plan will be consulting with and making modifications suggested by the State/Primacy Agency. Therefore the labor hours required for the monitoring plan will be less than those required for the IDSE report. EPA assumes that for the purposes of this EA, the monitoring plans will take half the time estimated for systems to complete the IDSE report. Very small systems obtaining waivers will not be required to submit a monitoring plan and therefore do not have a burden. Small NTNCWS which do not receive very small system waivers will need to update their Stage 1 monitoring plan. A minimal burden of two hours is assumed for this. Exhibit H.7 displays the burden and costs associated with monitoring plan preparation.

Ground water systems that add chemical disinfection as a result of the Ground Water Rule (GWR) will have to prepare monitoring plans[4]. The GWR was proposed in 2000 but has not been finalized. Therefore, EPA used information from the impact analysis prepared for the proposed GWR EA (USEPA 2000g) and system inventory data from SDWIS to estimate the number of systems that will add disinfection as a result of the GWR Assumptions for labor hours for these systems are similar to the assumptions listed above for other systems subject to the Stage 2 DBPR.

[4] EPA assumes that systems adding disinfection for the GWR will have to prepare a monitoring plan and conduct compliance monitoring. The IDSE requirement, however, will likely be completed before these systems add disinfection, so this EA does not include costs for newly disinfecting ground water systems to conduct an IDSE.

Exhibit H.7 Stage 2 Monitoring Plan Costs for Systems

Size Category	Number Systems Performing IDSE, SSS, or 40/30 Certification	Number of Systems Receiving Very Small System Waiver or Small NTNCWS	Number of Systems Adding Disinfection for the GWR Preparing Monitoring Plans	Hours to Prepare Stage 2 Monitoring Plan	Hours to Update Exisiting Stage 1 Monitoring Plan	Labor Cost	Total Cost	Total Burden (hours)	Total Burden (FTEs)
	A	B	C	D	E	F	G = F*((A+C)*D + B*E)	H = G/F	I = H/2080
Surface Water and Mixed CWSs									
<500	2,060	1,237	0	5	0	$ 22.55	$ 232,182	10,298	4.95
500-3,300	4,058	0	0	5	2	$ 24.74	$ 501,975	20,290	9.75
3,301-9,999	2,042	0	0	5	2	$ 25.34	$ 258,721	10,210	4.91
10,000-49,999	1,773	0	0	10	2	$ 26.05	$ 461,867	17,730	8.52
50,000-249,999	534	0	0	10	2	$ 28.00	$ 149,527	5,340	2.57
250,000-999,999	81	0	0	15	2	$ 31.26	$ 37,981	1,215	0.58
1,000,000-4,999,999	17	0	0	20	2	$ 31.26	$ 10,628	340	0.16
≥5 M	1	0	0	30	2	$ 31.26	$ 938	30	0.01
National Totals	**10,566**	**1,237**	**0**				**$ 1,653,819**	**65,453**	**31.47**
Disinfecting Ground Water Only CWSs									
<500	752	17,005	793	5	0	$ 22.35	$ 172,612	7,722	3.71
500-9,999	11,050	0	237	5	2	$ 24.86	$ 1,402,853	56,431	27.13
10,000-99,999	1,358	0	11	10	2	$ 26.05	$ 356,494	13,685	6.58
100,000-499,999	60	0	2	15	2	$ 31.26	$ 28,822	922	0.44
> 500,000	6	0	0	20	2	$ 31.26	$ 3,735	119	0.06
National Totals	**13,225**	**17,005**	**1,042**				**$ 1,964,515**	**78,880**	**37.92**
Surface Water and Mixed NTNCWSs									
<500	-	548	0	5	0	$ 22.39	$ -	0	0.00
500-3,300	-	199	0	5	2	$ 24.74	$ 9,847	398	0.19
3,301-9,999	-	24	0	5	2	$ 25.34	$ 1,216	48	0.02
10,000-49,999	5	0	0	10	2	$ 26.05	$ 1,303	50	0.02
50,000-249,999	1	0	0	10	2	$ 31.26	$ 313	10	0.00
250,000-999,999	-	0	0	15	2	N/A	$ -	0	0.00
1,000,000-4,999,999	-	0	0	20	2	N/A	$ -	0	0.00
≥5 M	-	0	0	30	2	N/A	$ -	0	0.00
National Totals	**6**	**771**	**0**				**$ 12,678**	**506**	**0.24**
Disinfecting Ground Water Only NTNCWSs									
<500	-	4,622	1,241	5	0	$ 22.20	$ 137,760	6,205	2.98
500-9,999	-	858	268	5	2	$ 24.76	$ 75,586	3,053	1.47
10,000-99,999	3	0	1	10	2	$ 26.05	$ 1,247	48	0.02
100,000-499,999	0	0	0	15	2	$ 31.26	$ 192	6	0.00
> 500,000	-	0	0	20	2	N/A	$ -	0	0.00
National Totals	**4**	**5,480**	**1,510**				**$ 214,785**	**9,313**	**4.48**
Grand Totals	**23,800**	**24,493**	**2,552**				**$ 3,845,797**	**154,152**	**74.11**

Notes: Detail may not add due to independent rounding.

1 FTE=2,080 hours (40 hours/week; 52 weeks/year).

Sources: (A) Exhibit H.1 Column K minus systems receiving small system waivers from column B in this Exhibit.

(B) From Exhibit H.3a and H.3b, colulmn A minus columns E, F, and G.

(C) Best estimate based on proposed Ground Water Rule

(D), (E) Labor hours based on a best professional judgement and experience with similar rules.

(F) Labor rates from *Labor Costs for National Drinking Water Rules* (USEPA, 2003s). An 80:20 split between technical and managerial labor rates was assumed, except for systems serving 500 or fewer people, for which only a technical rate was applied.

H.5 Additional Routine Monitoring

Because systems already sample for the Stage 1 DBPR, costs for additional routine monitoring are determined by the change in the number of samples collected from the Stage 1 to the Stage 2 DBPR.

The Stage 2 DBPR monitoring requirements are based only on population served and source water type. The Stage 1 DBPR requirements are based on number of treatment plants per system in addition to these characteristics. Depending on the number of plants in a given system, the number of Stage 2 compliance samples required per year can stay the same, decrease, or increase from Stage 1 requirements. For example, if a system has many plants, they must collect compliance samples for each plant under the Stage 1 DBPR. The sampling requirements for the Stage 2 DBPR, based on population served and not plants, will likely be lower than for Stage 1 for this system.

Exhibit H.8 summarizes the estimated change in number of samples required and the associated cost. An explanation of this exhibit is provided in the following paragraphs.

To compare plant-based Stage 1 to population-based Stage 2 monitoring requirements, an estimate of plants per system is needed for each of the monitoring size categories. Column B in Exhibit H.8a shows the mean number of plants per system for (1) surface water and all mixed systems, and (2) disinfecting ground water-only systems. This number is used to transform the system baseline to a plant baseline in order to calculate number of samples per system for Stage 1. The values are based on analysis of 2000 CWSS data, question 18.[5] EPA used the 2000 CWSS instead of the 1995 CWSS because the mean number of plants per system is key in defining new population-based monitoring requirements. EPA believes that the additional analyses needed to derive new estimates using 2000 CWSS data were warranted in this case. (As shown in Chapter 3 of this EA, all other baseline analyses were performed with 1995 CWSS data.)

Systems Using One Site to Represent Both High TTHM and HAA5

Column F shows the number of Stage 2 DBPR routine samples required per system. For surface water systems serving 3,300 or fewer people and disinfecting ground water systems serving fewer than 500 people, one sample is required unless the TTHM and HAA5 sites are at different locations in the distribution system. If this is the case, then the system must collect one TTHM sample at the high TTHM site, and one HAA5 sample at the high HAA5 site, which is equivalent to one dual sample. The only increase in burden is the extra sample collection time to visit two sites instead of one. (Note that for surface water systems serving 500 to 3,300 people, samples must be collected every 90 days, resulting in a total of 4 dual samples per system. Surface and ground water systems serving fewer than 500 people only have to collect one sample per year, resulting in one dual sample per system as shown in Exhibit H.8a).

EPA assumes that systems that receive a very small system waiver (i.e., all producing systems, see Exhibit H.3b) will use one site for high TTHM and HAA5 at the same location. ICR data was used to estimate the percent of producing systems that need two monitoring sites (instead of one) to represent both high TTHM and high HAA5 concentrations. For CWSs, EPA evaluated data from the last four quarters[6] of the ICR to estimate the percentage of systems that had their highest TTHM and HAA5 at

[5] Systems were considered outliers if their flow data were incomplete or if they had more than 100 entry points, or if they lacked other data for question 18 and were excluded from the analysis.

[6] At least 3 of 4 quarters must have TTHM and HAA5 data for at least 3 of 4 distribution system locations (TTHM and HAA5 data do not have to be present at the same location, however) for a plant to be included in this analysis.

different locations[7] and thus need to monitor at two sites. Results of this analysis show that approximately 51 percent of surface water and 44 percent of ground water plants have their high TTHM and HAA5 sites at different locations. Therefore the total percent that will monitor at two sites is:

(51%)*(2060))/3297 = 32% for surface water systems serving less than 500 people.

(51%)*(2379)/4058 = 30% for surface water systems serving between 500 and 3,300 people.

(44%)*(752)/17756 = 2% for ground water systems serving less than 500 people.

For NTNCWSs, high TTHM and HAA5 concentrations are more likely to be at the same location because these systems are typically small and have small distribution systems. Thus, EPA believes that all eligible NTNCWSs (surface water NTNCWSs serving fewer than 10,000 people and ground water NTNCWSs serving fewer than 500 people) will qualify for reduced sample sites.

Surface water systems serving 3,300 or fewer people and ground water systems serving fewer than 500 people required to monitor at two sites instead of a single site have an additional hour of labor to account for travel time to the additional site. However, no additional lab costs are added since the total number of samples is the same.

Effects of Reduced Monitoring

Both the Stage 1 and Stage 2 DBPRs have a provision for reduced monitoring if compliance monitoring results are below 40 µg/L for TTHM and 30 µg/L for HAA5. Although there may be a slight decrease in systems qualifying because of the change from RAA to LRAA, other systems may qualify as they install better treatment technologies. EPA believes monitoring costs incurred for the reduced monitoring systems from Stage 1 to Stage 2 are expected to change minimally. This EA does not calculate costs associated with changes in reduced monitoring status.

Increased Monitoring for Small Systems

Surface water systems serving fewer than 500 people and ground water systems serving fewer than 10,000 people are only required to monitor once a year. If one of these systems exceeds 80 µg/L for TTHM or 60 µg/L for HAA5, they are not in violation of the maximum contaminant level (MCL) immediately, but instead must increase their monitoring to quarterly. If quarterly monitoring produces a locational running annual average (LRAA) above 80 µg/L for TTHM or 60 µg/L for HAA5, then they are in violation of the MCL. If the LRAA is below 60 µg/L for TTHM or 45 µg/L for HAA5, the system may return to annual monitoring. Some systems will incur additional monitoring costs because of this requirement.

Increased monitoring costs for small systems are not explicitly calculated in this EA because all systems are assumed to apply an operational safety factor when assessing compliance with MCLs. Thus, they are not expected to experience concentrations over the MCLs in future years. This is particularly true for ground water systems since they tend to see less year-to-year variability in source water quality. Although surface water systems could potentially see higher year-to-year variability and be triggered into increased monitoring in the future, EPA expects very few systems to be affected.

[7] This was based on the average of four quarters of data for each of four distribution system sites (AVE1, AVE2, DSE, and MAX for plants with at least three quarters of data). Plants with the highest four quarter HAA5 average and highest four quarter TTHM average occurring at the same location were assumed to be able to qualify for a reduction in number of monitoring sites under the Stage 2 DBPR.

Calculation of systems which will face changes in sampling burden from Stage 1

As noted above, systems can face either an increase, decrease, or no change in number of dual samples required from the Stage 1 DBPR to the Stage 2 DBPR requirements. Exhibits H.8a through H.8c are based on national averages. To obtain a better estimate of the number and percent of systems that would be faced with either increases or decreases in sampling costs, 2000 CWSS data was examined. First systems with extraordinarily high flow or numbers of entry points were removed from the analysis. Based on the remaining systems a distribution of the number of treated entry points per system was calculated. From this point, the number of plants which a system would need to have for its Stage 1 DBPR and Stage 2 DBPR sampling requirements to be the same was calculated. Then using the distributions calculated from the 2000 CWSS, the percentage and number of systems with positive and negative changes in sampling burden from the Stage 1 DBPR to the Stage 2 DBPR was calculated. The results of this calculation are shown in Exhibit. H.8d.

Exhibit H.8a Additional Routine Monitoring Costs for Systems

Size Category	Total Systems	Stage 1 Sampling				Stage 2 Sampling	
		Plants Per System	Total Plants	Routine Dual Samples per System	Total Stage 1 Samples	Routine Dual Samples per System	Number of Stage 2 Samples
	A	B	C = A*B	D	E=C*D	F	G = A*F
Surface Water and Mixed CWSs							
<500	3,297	1.2	3,989	1	3,989	1	3,297
500-3,300	4,058	1.2	4,951	4	19,803	4	16,232
3,301-9,999	2,042	1.6	3,186	4	12,742	8	16,336
10,000-49,999	1,773	1.4	2,429	16	38,864	16	28,368
50,000-249,999	534	1.8	977	16	15,636	32	17,088
250,000-999,999	81	2.5	205	16	3,279	48	3,888
1,000,000-4,999,999	17	3.5	60	16	960	64	1,088
≥5 M	1	3.5	4	16	56	80	80
National Totals	**11,803**		**15,800**		**95,330**		**86,377**
Disinfecting Ground Water Only CWSs							
<500	17,756	1.0	17,756	1	17,756	1	17,756
500-9,999	11,050	1.5	16,795	1	16,795	2	22,099
10,000-99,999	1,358	3.9	5,336	4	21,344	16	21,724
100,000-499,999	60	7.3	438	4	1,752	24	1,434
> 500,000	6	17.0	100	4	401	32	189
National Totals	**30,229**		**40,426**		**58,048**		**63,202**
Surface Water and Mixed NTNCWSs							
<500	548	1.0	548	1	548	1	548
500-3,300	199	1.0	199	4	796	4	796
3,301-9,999	24	1.0	24	4	96	8	192
10,000-49,999	5	1.0	5	16	80	16	80
50,000-249,999	1	1.0	1	16	16	32	32
250,000-999,999	-	1.0	-	16	-	48	-
1,000,000-4,999,999	-	1.0	-	16	-	64	-
≥5 M	-	1.0	-	16	-	80	-
National Totals	**777**		**777**		**1,536**		**1,648**
Disinfecting Ground Water Only NTNCWSs							
<500	4,622	1.0	4,622	1	4,622	1	4,622
500-9,999	858	1.0	858	1	858	2	1,716
10,000-99,999	3	1.0	3	4	14	16	56
100,000-499,999	0	1.0	0	4	1	24	7
> 500,000	-	1.0	-	4	-	32	-
National Totals	**5,483**		**5,483**		**5,495**		**6,400**
Grand Totals	**48,293**		**62,487**		**160,409**		**157,627**

Notes: Detail may not added due to independent rounding.

Systems will incur routine monitoring costs only for sites and samples that are required beyond those required under the Stage 1 DBPR (i.e., systems that, as a result of the IDSE, only move sample sites will incur no additional costs).

1 FTE = 2,080 hours (40 hours/week; 52 weeks/year).

Sources: (A) Number of systems from Exhibit H.1 (column K).

(B) Number of plants per system based on 2000 CWSS question 18.

(D) Routine samples per plant from the Stage 1 Rule (USEPA 1998a).

(F) Number of routine samples per system based on Stage 2 rule requirements (population-based approach). Number of samples may be less for SW systems serving < 5,000 and GW systems serving < 500 if high TTHM and HAA5 locations are the same.

H.8a Additional Routine Monitoring Costs for Systems (continued)

Size Category	Additional Dual Samples Required for Stage 2 Monitoring	Hours per Sample	Percent of Systems with Separate TTHM and HAA5 sites	Sampling Cost per Labor Hour	Cost per Sample	Sampling Costs Based on Additional Monitoring	Additional Labor Costs for Small Systems with Two Sites	Total Cost	Total Burden (Hours)	Total Burden (FTEs)
	H=G-E	I	J	K	L	M = H*(I*K + L)	N = A*I*J*K	O = M + N	P=H*I + A*I*K	Q=P/2080
Surface Water and Mixed CWSs										
<500	(692)	1	32%	$ 22.55	$ 240	$ (181,780)	$ 23,455	$ (158,325)	348	0
500-3,300	(3,571)	1	30%	$ 24.74	$ 240	$ (945,397)	$ 29,730	$ (915,667)	(2,369)	(1)
3,301-9,999	3,594	1	0%	$ 25.34	$ 240	$ 953,611	$ -	$ 953,611	3,594	2
10,000-49,999	(10,496)	1	0%	$ 26.05	$ 210	$ (2,477,619)	$ -	$ (2,477,619)	(10,496)	(5)
50,000-249,999	1,452	1	0%	$ 28.00	$ 210	$ 345,692	$ -	$ 345,692	1,452	1
250,000-999,999	609	1	0%	$ 31.26	$ 210	$ 146,956	$ -	$ 146,956	609	0
1,000,000-4,999,999	128	1	0%	$ 31.26	$ 210	$ 30,843	$ -	$ 30,843	128	0
≥5 M	24	1	0%	$ 31.26	$ 210	$ 5,674	$ -	$ 5,674	24	0
National Totals	**(8,953)**					**$ (2,122,019)**	**$ 53,185**	**$ (2,068,834)**	**(6,711)**	**(3)**
Disinfecting Ground Water Only CWSs										
<500	0	1	2%	$ 22.35	$ 240	$ -	$ 8,485	$ 8,485	380	0
500-9,999	5,304	1	0%	$ 24.86	$ 240	$ 1,404,761	$ -	$ 1,404,761	5,304	3
10,000-99,999	380	1	0%	$ 26.05	$ 210	$ 89,739	$ -	$ 89,739	380	0
100,000-499,999	(318)	1	0%	$ 31.26	$ 210	$ (76,712)	$ -	$ (76,712)	(318)	(0)
> 500,000	(212)	1	0%	$ 31.26	$ 210	$ (51,167)	$ -	$ (51,167)	(212)	(0)
National Totals	**5,154**					**1,366,621**	**8,485**	**1,375,106**	**5,534**	**2.66**
Surface Water and Mixed NTNCWSs										
<500	0	1	0%	$ 22.39	$ 240	$ -	$ -	$ -	-	-
500-3,300	0	1	0%	$ 24.74	$ 240	$ -	$ -	$ -	-	-
3,301-9,999	96	1	0%	$ 25.34	$ 240	$ 25,473	$ -	$ 25,473	96	0
10,000-49,999	0	1	0%	$ 26.05	$ 210	$ -	$ -	$ -	-	-
50,000-249,999	16	1	0%	$ 31.26	$ 210	$ 3,860	$ -	$ 3,860	16	0
250,000-999,999	0	1	0%	N/A	$ 210	$ -	$ -	$ -	-	-
1,000,000-4,999,999	0	1	0%	N/A	$ 210	$ -	$ -	$ -	-	-
≥5 M	0	1	0%	N/A	$ 210	$ -	$ -	$ -	-	-
National Totals	**112**					**$ 29,333**	**$ -**	**$ 29,333**	**112**	**0.05**
Disinfecting Ground Water Only NTNCWSs										
<500	0	1	0%	$ 22.20	$ 240	$ -	$ -	$ -	-	-
500-9,999	858	1	0%	$ 24.76	$ 240	$ 227,112	$ -	$ 227,112	858	0
10,000-99,999	42	1	0%	$ 26.05	$ 210	$ 9,857	$ -	$ 9,857	42	0
100,000-499,999	6	1	0%	$ 31.26	$ 210	$ 1,399	$ -	$ 1,399	6	0
> 500,000	0	1	0%	N/A	$ 210	$ -	$ -	$ -	-	-
National Totals	**905**					**$ 238,369**	**$ -**	**$ 238,369**	**905**	**0**
Grand Totals	**(2,781)**					**(487,696)**	**61,670**	**(426,026)**	**(160)**	**(0)**

Notes: Detail may not added due to independent rounding.

Systems will incur routine monitoring costs only for sites and samples that are required beyond those required under the Stage 1 DBPR (i.e., systems that, as a result of the IDSE, only move sample sites will incur no additional costs).

FTE = 2,080 hours (40 hours/week; 52 weeks/year).

[1] Columns M and N for SW < 3,300 and GW < 500 adds in an hour extra sampling time for systems which only take 1 dual sample but at two different sites. This additional labor is calculated by A*J*K

Sources: (I) Labor hours per sample reflects EPA estimate.

(J) Estimated percent of systems that will have only one sampling site because their high TTHM and HAA5 site occur at the same location based on analysis of Information Collection Rule data from 4 distribution system locations .

(K) Technical labor rates from *Labor Costs for National Drinking Water Rules* (USEPA, 2003s).

(L) Laboratory cost for TTHM and HAA5 analyses per sample based on costs incurred for the ICR.

Monitoring for Systems Adding Disinfection to Comply with the Ground Water Rule (GWR)

Some ground water systems that do not currently disinfect may install disinfection to meet the requirements of the GWR. Because the GWR is expected to be promulgated within 8 months after the Stage 2 DBPR, EPA expects new systems adding disinfection to meet GWR requirements to simultaneously achieve compliance with Stage 2 MCLs. Therefore, as discussed in Chapter 3 of this EA, these systems are not included in the treatment baseline. Also, although these systems will be required to monitor for the first time under Stage 2, they will not be required to perform an IDSE since they will add disinfection after the IDSE is required.

Systems that begin to disinfect as a result of the GWR will, however, incur new costs for collecting and analyzing all of the required Stage 2 DBPR samples. These costs, which are only estimates and may be different from actual costs depending upon the details of the final GWR, are shown in Exhibit H.8b. Exhibit H.8c shows the sum of additional routine monitoring for disinfecting systems and new GWR disinfecting systems (sum of Exhibits H.8a - H.8b). Column A of this exhibit shows the total change in the number of samples required for each size category between the Stage 1 and Stage 2 compliance monitoring requirements. The rest of the exhibit displays total costs and burdens for Stage 2 DBPR monitoring requirements.

Exhibit H.8b Additional Routine Monitoring Costs for Systems Installing Disinfectant to Comply with the GWR

Size Category	Number of Systems Adding Disinfectant for GWR A	Number of Samples for Stage 2 DBPR B	Hours Per Sample C	Sampling Cost Per Labor Hour D	Cost Per Sample E	Total Costs F = A*B*(C*D+E)	Total Burden (Hours) G = A*B*C	Total Burden (FTEs) H = G/2080
Surface Water and Mixed CWSs								
<500	-	1	1	$ 22.55	$ 240	$ -	-	-
500-3,300	-	4	1	$ 24.74	$ 240	$ -	-	-
3,301-9,999	-	8	1	$ 25.34	$ 240	$ -	-	-
10,000-49,999	-	16	1	$ 26.05	$ 210	$ -	-	-
50,000-249,999	-	32	1	$ 28.00	$ 210	$ -	-	-
250,000-999,999	-	48	1	$ 31.26	$ 210	$ -	-	-
1,000,000-4,999,999	-	64	1	$ 31.26	$ 210	$ -	-	-
≥5 M	-	80	1	$ 31.26	$ 210	$ -	-	-
National Totals	**-**					**$ -**	**-**	**-**
Disinfecting Ground Water Only CWSs								
<500	793	1	1	$ 22.35	$ 240	$ 208,026	793	0.38
500-9,999	237	2	1	$ 24.86	$ 240	$ 125,379	473	0.23
10,000-99,999	11	16	1	$ 26.05	$ 210	$ 40,611	172	0.08
100,000-499,999	2	24	1	$ 31.26	$ 210	$ 9,834	41	0.02
> 500,000	0	32	1	$ 31.26	$ 210	$ 645	3	0.00
National Totals	**1,042**					**$ 384,494**	**1,482**	**0.71**
Surface Water and Mixed NTNCWSs								
<500	0	1	1	$ 22.39	$ 240	$ -	-	-
500-3,300	0	4	1	$ 24.74	$ 240	$ -	-	-
3,301-9,999	0	8	1	$ 25.34	$ 240	$ -	-	-
10,000-49,999	0	16	1	$ 26.05	$ 210	$ -	-	-
50,000-249,999	0	32	1	$ 31.26	$ 210	$ -	-	-
250,000-999,999	0	48	1	N/A	$ 210	$ -	-	-
1,000,000-4,999,999	0	64	1	N/A	$ 210	$ -	-	-
≥5 M	0	80	1	N/A	$ 210	$ -	-	-
National Totals	**-**					**$ -**	**-**	**-**
Disinfecting Ground Water Only NTNCWSs								
<500	1,241	1	1	$ 22.20	$ 240	$ 325,412	1,241	0.60
500-9,999	268	2	1	$ 24.76	$ 240	$ 141,666	535	0.26
10,000-99,999	1	16	1	$ 26.05	$ 210	$ 4,938	21	0.01
100,000-499,999	0	24	1	$ 31.26	$ 210	$ 686	3	0.00
> 500,000	0	32	1	N/A	$ 210	$ -	-	0.00
National Totals	**1,510**					**$ 472,703**	**1,800**	**0.87**
Grand Totals	**2,552**					**$ 857,197**	**3,282**	**1.58**

Sources:

(A) Best estimate based on proposed Ground Water Rule

(B) Number of routine samples per system, Exhibit H.8a Column F. Number of samples may be less for SW systems serving < 5,000 and GW systems serving < 500 if high TTHM and HAA5 locations are the same.

(C) Labor hours per sample reflects EPA estimate.

(D) Technical labor rates from *Labor Costs for National Drinking Water Rules* (USEPA, 2003s).

(E) Laboratory cost for TTHM and HAA5 analyses per sample based on costs incurred for the ICR.

Exhibit H.8c Total Additional Routine Monitoring Costs

Size Category	Total Additional Compliance Samples per Year A	Total Labor Costs B	Total Sampling Costs C	Total Costs D	Total Burden (Hours) E	Total Burden (FTEs) F= E/2080
Surface Water and Mixed CWSs						
<500	(692)	$ 7,844	$ (166,169)	$ (158,325)	348	0.17
500-3,300	(3,571)	$ (58,617)	$ (857,050)	$ (915,667)	(2,369)	-1.14
3,301-9,999	3,594	$ 91,070	$ 862,541	$ 953,611	3,594	1.73
10,000-49,999	(10,496)	$ (273,425)	$ (2,204,194)	$ (2,477,619)	(10,496)	-5.05
50,000-249,999	1,452	$ 40,671	$ 305,021	$ 345,692	1,452	0.70
250,000-999,999	609	$ 19,041	$ 127,915	$ 146,956	609	0.29
1,000,000-4,999,999	128	$ 3,996	$ 26,846	$ 30,843	128	0.06
≥5 M	24	$ 735	$ 4,939	$ 5,674	24	0.01
National Totals	**(8,953)**	**$ (168,684)**	**$ (1,900,150)**	**$ (2,068,834)**	**(6,711)**	**(3.23)**
Disinfecting Ground Water Only CWSs						
<500	793	$ 26,209	$ 190,302	$ 216,511	1,173	0.56
500-9,999	5,777	$ 143,617	$ 1,386,523	$ 1,530,140	5,777	2.78
10,000-99,999	552	$ 14,385	$ 115,964	$ 130,349	552	0.27
100,000-499,999	(277)	$ (8,665)	$ (58,213)	$ (66,879)	(277)	-0.13
> 500,000	(209)	$ (6,546)	$ (43,976)	$ (50,522)	(209)	-0.10
National Totals	**6,636**	**$ 169,000**	**$ 1,590,600**	**$ 1,759,600**	**7,015**	**3.37**
Surface Water and Mixed NTNCWSs						
<500	0	$ 0	$ 0	$ 0	0	0.00
500-3,300	0	$ 0	$ 0	$ 0	0	0.00
3,301-9,999	96	$ 2,433	$ 23,040	$ 25,473	96	0.05
10,000-49,999	0	$ 0	$ 0	$ 0	0	0.00
50,000-249,999	16	$ 500	$ 3,360	$ 3,860	16	0.01
250,000-999,999	-	$ -	$ -	$ -	0	0.00
1,000,000-4,999,999	-	$ -	$ -	$ -	0	0.00
≥5 M	-	$ -	$ -	$ -	0	0.00
National Totals	**112**	**$ 2,933**	**$ 26,400**	**$ 29,333**	**112**	**0.05**
Disinfecting Ground Water Only NTNCWSs						
<500	1,241	$ 27,552	$ 297,860	$ 325,412	1,241	0.60
500-9,999	1,393	$ 34,481	$ 334,297	$ 368,779	1,393	0.67
10,000-99,999	63	$ 1,633	$ 13,163	$ 14,796	63	0.03
100,000-499,999	9	$ 270	$ 1,815	$ 2,085	9	0.00
> 500,000	-	$ -	$ -	$ -	0	0.00
National Totals	**2,705**	**$ 63,936**	**$ 647,135**	**$ 711,072**	**2,705**	**1.30**
Grand Totals	**500**	**$ 67,185**	**$ 363,986**	**$ 431,171**	**3,122**	**1.50**

Note: (A) Shows the difference in total compliance monitoring samples from Stage 1 to Stage 2 for disinfecting systems and systms predicted to install disinfection for the GWR. For disinfecting systems, derived from Exhibit H.8a, column I. For systems installing disinfection for the GWR, derived from Exhibit H.8b, product of columns A and B.

Sources: (A) sum of column I from Exhibit H.8a and column (A) times column (B) from Exhibit H.8b

(B) - (E) Summed from tables H.8a - H.8b.

Exhibit H.8d Percentage and Number of Plants with Changes in Sampling Burden

Size Category	Number of Systems	Plants per System	Stage 1 Samples per Plant	Average Stage 1 Samples per System	Stage 2 Samples per System	Number of Plants per System for No Change in Sampling Burden	Percent with Positive Sampling Burden	Percent with Zero Sampling Burden	Percent with Negative Sampling Burden	Number with Positive Sampling Burden	Number with Zero Sampling Burden	Number with Negative Sampling Burden
SW CWS	**A**	**B**	**C**	**D = B*C**	**E**	**F = E/C**	**G**	**H**	**I**	**K = G*A**	**L = H*A**	**M = I*A**
<500	3,297	1.21	1	1.2	1	1	0.0%	79.8%	20.2%	0	2,630	667
500-3,300	4,058	1.22	4	4.9	4	1	0.0%	84.8%	15.2%	0	3,441	617
3,301-9,999	2,042	1.56	4	6.2	8	2	65.6%	19.8%	14.6%	1,339	404	299
10,000-49,999	1,773	1.37	16	21.9	16	1	0.0%	73.6%	26.4%	0	1,304	469
50,000-249,999	534	1.83	16	29.3	32	2	52.3%	25.0%	22.6%	279	134	121
250,000-999,999	81	2.53	16	40.5	48	3	59.2%	23.3%	17.5%	48	19	14
1,000,000-4,999,999	17	3.53	16	56.5	64	4	44.4%	33.3%	22.2%	8	6	4
≥5 M	1	3.53	16	56.5	80	5	44.4%	33.3%	22.2%	0.4	0.3	0.2
National Totals	11,803	1.3	6.0	8.1	7.3	1.2	14.2%	67.3%	18.6%	1,675	7,938	2,190
GW CWS												
<500	17,756	1	1	1.0	1	1	28.3%	55.7%	16.0%	5,025	9,889	2,843
500-9,999	11,050	1.52	1	1.5	2	2	62.7%	15.8%	21.5%	6,928	1,742	2,379
10,000-99,999	1,358	3.93	4	15.7	16	4	57.5%	17.8%	24.8%	780	241	336
100,000-499,999	60	7.33	4	29.3	24	6	62.6%	8.1%	29.4%	37	5	18
> 500,000	6	17	4	68.0	32	8	33.3%	0.0%	66.7%	2	0	4
National Totals	30,229	1.3	1.4	1.9	2.1	1.5	42.3%	39.3%	18.5%	12,772	11,877	5,580
SW NTNCWS												
<500	548	1	1		1	1	0.0%	100.0%	0.0%	0	548	0
500-3,300	199	1	4		4	1	0.0%	100.0%	0.0%	0	199	0
3,301-9,999	24	1	4		8	2	100.0%	0.0%	0.0%	24	0	0
10,000-49,999	5	1	16		16	1	0.0%	100.0%	0.0%	0	5	0
50,000-249,999	1	1	16		32	2	100.0%	0.0%	0.0%	1	0	0
250,000-999,999	0	1	16		48	3	100.0%	0.0%	0.0%	0	0	0
1,000,000-4,999,999	0	1	16		64	4	100.0%	0.0%	0.0%	0	0	0
≥5 M	0	1	16		80	5	100.0%	0.0%	0.0%	0	0	0
National Totals	777	1.0	2.0	2.0	2.1	1.0	3.2%	96.8%	0.0%	25	752	0
GW NTNCWS												
<500	4,622	1	1		1	1	0.0%	100.0%	0.0%	0	4,622	0
500-9,999	858	1	1		2	2	100.0%	0.0%	0.0%	858	0	0
10,000-99,999	3	1	4		16	4	100.0%	0.0%	0.0%	3	0	0
100,000-499,999	0	1	4		24	6	100.0%	0.0%	0.0%	0	0	0
> 500,000	0	1	4		32	8	100.0%	0.0%	0.0%	0	0	0
National Totals	5,483	1.0	1.0	1.0	1.2	1.2	15.7%	84.3%	0.0%	862	4,622	0
Grand Totals	48,293	1.3	2.5	3.3	3.3	1.4	31.8%	52.2%	16.1%	15,333	25,189	7,771

Note:

Sources: (A) Exhibit H.8a column A
(B) Average number of plants per system based on 2000 CWSS question 18.
(C) Routine samples per plant from the Stage 1 Rule (USEPA 1998a).
(E) Number of routine samples per system based on Stage 2 rule requirements (population-based approach). Number of samples may be less for SW systems serving < 5,000 and GW systems serving < 500 if high TTHM and HAA5 locations are the same.
(G), (H), (I) Based on analyisis of 2000 CWSS question 18.

H.6 National Costs for Operational Evaluations

This section discusses the national costs of exceeding operational evaluation levels and the benefits that may occur by reducing them after implementing the Stage 2 DBPR.

- Section H.6.1 defines an operational evaluation.
- Section H.6.2 describes the evaluation procedure for systems that exceed operational evaluation levels.
- Section H.6.3 presents the costs associated with operational evaluations and the estimated number of systems affected.
- Section H.6.4 explains the benefits of operational evaluation requirements.

H.6.1 Definition of "Operational Evaluation Level"

Although the Stage 2 DBPR is expected to reduce the number and level of peak DBP events, EPA recognizes that levels above 80 :g/L for TTHM and 60 :g/L for HAA5 may still occur, even when systems are in full compliance with MCLs. An exceedance of the operational evaluation level is defined as a sample result, when multiplied by 2 and added to the previous two quarters and then divided by 4, that gives an LRAA over 80 μg/L for TTHM or 60 μg/L for HAA5. For example, if a system had a current quarter result of 100 μg/L and had first and second quarter TTHM results of 70 μg/L, the resulting calculation gives:

(2*(100 μg/L) + 70 μg/L + 70 μg/L)/4 = 85 μg/L

Therefore, an exceedance of the operational evaluation level would result from the above scenario.

H.6.2 System Requirements for Operational Evaluations

If a system exceeds an operational evaluation level, it must conduct a operational evaluation and submit a written report to the State no later than 90 days after being notified of the analytical result that exceeded the operational evaluation level. The evaluation must include an examination of system treatment and distribution operational practices, including storage tank operations, excess storage capacity, distribution system flushing, changes in sources or source water quality, and treatment technology changes or problems that may contribute to TTHM and HAA5 formation and what steps could be considered to minimize future excursions.

Exceeding an operational evaluation level, as defined in section H.6.1, is not a violation of the Stage 2 DBPR and does not require any public notification or explanation in Consumer Confidence Reports (CCR). Systems are not required to take any action to reduce DBP concentrations as a result of exceeding operational evaluation levels; however, reducing peaks is a primary objective of the Stage 2 DBPR and is an important goal in providing safe drinking water. EPA is providing guidance to systems on operational alternatives to reduce DBP peaks in the distribution system.

H.6.3 Cost Implications of Exceeding Operational Evaluation Levels

Each time an operational evaluation level is exceeded, it is expected to result in some labor costs for systems to evaluate the exceedance and prepare the operational evaluation report. To determine national costs for operational evaluations, this section presents an estimate of: (1) the percent of all sampling locations exceeding Stage 2 DBPR operational evaluation levels, and (2) the burden for each operational evaluation.

Percent of Locations That Are Peaks and Percent of Systems Experiencing Peaks

EPA examined ICR data to estimate the number of systems that might exceed an operational evaluation level. Because the ICR data were taken before both Stage 1 and Stage 2 requirements were in place, the data had to be adjusted to reflect changes that plants would make to meet Stage 1 and Stage 2 MCLs. EPA developed a method called the ICR matrix method, which is described in detail in Chapter 5 of this EA, to adjust the data.

Post-Stage 2 predicted occurrence of TTHM and HAA5 concentrations were evaluated to assess the potential frequency of operational evaluation level exceedances. Because the predicted occurrence was only based on 1 year of data, alternative sequences of samples were evaluated. For example, EPA

checked whether the 3rd quarter results would exceed an operational evaluation level following the 1st and 2nd quarter results. Next, EPA checked whether the 3rd quarter results would exceed an operational evaluation level following the 4th and 1st quarter results and the 4th and 2nd quarter results. This process continued until all possible combinations of quarters had been examined. However, no more than one excursion occurred for any given sample location. For each system size category, the number of exceedances of operational evaluation levels were estimated as a percent of locations exceeding these levels. The percent for each category was multiplied by the adjusted number of locations in that category to determine the total number of locations exceeding operational evaluation levels.

Individual monitoring locations were evaluated instead of plants so that the results could be extrapolated to systems with a different number of sites per system than the plants participating in the ICR. The 10 percent safety factor was chosen for the cost analysis for this rule activity, to more conservatively reflect the possibility of year to year variability from the ICR data. Exhibit H.9 displays the results of the analysis.

Exhibit H.9 Predicted Occurrence of Exceeding Operational Evaluation Levels in Large Systems

System Type	Number of Locations Evaluated	Number of Locations exceeding Operation Evaluational Levels	% of Locations exceeding Operational Evaluation Levels
	A	B	C = B/A
Post-Stage 2			
GW	327	0	0.00%
SW	851	12	1.41%
All	1,178	12	1.02%

Sources: (A) - (B) Analysis of Post-Stage 2 ICR data, developed using the ICR matrix method defined in Ch. 5.

To estimate the total number of operational evaluation level exceedances that will occur nationally, EPA assumed that results of the ICR location analysis represent, as a whole, the probability that any one treated-water location meeting the Stage 2 requirements will exceed an operational evaluation level. Those single-location probabilities are 1.4 percent (12/851) and 0 percent (0/327) for surface water and ground water sampling locations, respectively. EPA used the following procedure to calculate the probability of finding an operational evaluation level exceedance in 1 year. Assuming independence from one location to the next, EPA calculated the probability of at least one exceedance occurring for N locations from $1-(1-p)^N$, where p is the probability of observing a peak. In this calculation, (1-p) is the probability of not observing an operational evaluation level exceedance in any one location, and $(1-p)^N$ is the probability of not observing an exceedance after N locations. For example, it can be estimated that a surface water system monitoring at 4 locations has a probability of $(1-0.0141)^4 = 0.9448$ of not observing an operational evaluation level exceedance. Therefore, the probability of observing at least one exceedance is simply 1 minus that value, or 1 - 0.9448 = 0.0552 (5.52 percent). EPA used this approach to estimate the probability of observing an operational evaluation level exceedance in surface and ground water systems, as shown in Exhibit H.10. EPA assumed that two exceedances in a given location would not occur since systems are expected to address problems identified in the operational evaluation, making a recurrence unlikely.

The same percentages used for large systems were also used to estimate the occurrence of operational evaluation level exceedances for small and medium systems. EPA assumed that NTNCWSs would not exceed operational evaluation levels since these systems typically have very small distribution systems and have less variability in TTHM/HAA5 levels.

Exhibit H.10 Number of Locations and Systems Exceeding Operational Evaluation Levels

Size Category	No. of Systems	No. of Stage 2 Monitoring Locations/ System	Percent of Locations that exceed Operational Evaluation Levels	Estimated Number of Locations/Year that exceed Operational Evaluation Levels	Percent of Systems that do not exceed Operational Evaluation Levels	Percent of Systems with atleast one exceedance of Operational Evaluation Levels/yr	Predicted No. of Systems with atleast one exceedance of Operational Evaluation Levels/yr
	A	B	C	D = Round [A*B*C]	E = (1-C)^B	F = 1-E	G = Round [A*F]
Surface Water and Mixed CWSs							
<500	3,297	1	0.4%	**12**	99.65%	0.3%	12
500-3,300	4,058	1	0.7%	**28**	99.30%	0.7%	28
3,301-9,999	2,042	4	0.7%	**57**	97.23%	2.8%	57
10,000-49,999	1,773	8	1.4%	**199**	89.33%	10.7%	189
50,000-249,999	534	16	1.4%	**120**	79.68%	20.3%	109
250,000-999,999	81	24	1.4%	**27**	71.12%	28.9%	23
1,000,000-4,999,999	17	32	1.4%	**8**	63.48%	36.5%	6
≥5 M	1	40	1.4%	**1**	56.66%	43.3%	0
National Totals	**11,803**			**452**			**424**
Disinfecting Ground Water Only CWSs							
<500	17,756	1	0.0%	-	100.00%	0.0%	0
500-9,999	11,050	2	0.0%	-	100.00%	0.0%	0
10,000-99,999	1,358	6	0.0%	-	100.00%	0.0%	0
100,000-499,999	60	8	0.0%	-	100.00%	0.0%	0
> 500,000	6	12	0.0%	-	100.00%	0.0%	0
National Totals	**30,229**			**-**			**0**
Surface Water and Mixed NTNCWSs							
<500	548	1	0.0%	-	100.00%	0.0%	0
500-3,300	199	1	0.0%	-	100.00%	0.0%	0
3,301-9,999	24	4	0.0%	-	100.00%	0.0%	0
10,000-49,999	5	8	0.0%	-	100.00%	0.0%	0
50,000-249,999	1	16	0.0%	-	100.00%	0.0%	0
250,000-999,999	-	24	0.0%	-	100.00%	0.0%	0
1,000,000-4,999,999	-	32	0.0%	-	100.00%	0.0%	0
≥5 M	-	40	0.0%	-	100.00%	0.0%	0
National Totals	**777**			**-**			**0**
Disinfecting Ground Water Only NTNCWSs							
<500	4,622	1	0.0%	-	100.00%	0.0%	0
500-9,999	858	2	0.0%	-	100.00%	0.0%	0
10,000-99,999	3	6	0.0%	-	100.00%	0.0%	0
100,000-499,999	0	8	0.0%	-	100.00%	0.0%	0
> 500,000	-	12	0.0%	-	100.00%	0.0%	0
National Totals	**5,483**			**-**			**0**
Grand Totals	**48,293**			**452**			**424**

Notes: Detail may not add to totals due to independent rounding.
Sources: (A) Exhibit H.1, Column K.
(B) Stage 2 DBPR sample requirements presented in Chapter 1. Data shown are the total number of locations required per year.
(C) Exhibit H.9, column I for 10% safety factor.

Level of Effort Required for Operational Evaluations

EPA estimates that systems will spend 2 to 16 hours to perform an operational evaluation, depending on system size (large systems with more complex distribution systems are expected to spend 16 hours per exceedance, while small systems with simpler distribution systems are expected to spend 2 hours per exceedance). There may be reduced effort for systems that experience more than one

exceedance of operational evaluation levels yearly; however, this effect could not be quantified. EPA also expects the rate of exceedances to decrease over time as systems begin identifying the cause and working with their States/Primacy Agencies to reduce future exceedances.

Other Cost Implications

Although systems are not required to make changes as a result of exceeding operational evaluation levels, they may still decide to change their operations to reduce the likelihood of future exceedances of operational evaluation levels and potential MCL violations. These changes can range from minimal to significant depending on the nature of the solution and size of the system. Because changes are not required by EPA, the costs for responding to exceedances of operational evaluation levels are not included as part of the national costs of the Stage 2 DBPR; however, examples of typical system-level costs are provided below to show potential implications.

Systems have a number of operational and distribution system modification options available to reduce DBP concentrations and eliminate exceedances of operational evaluation levels. If a system determines that a storage tank is the cause of an exceedance, it may be possible to implement operational changes, such as lengthening drain/fill cycles or increasing the frequency of drain/fill cycles, to improve tank mixing. A system may also consider decommissioning excess storage, or maintaining excess storage for emergency use only. Generally, these options will require minimal additional expenditures by the system; however, in some cases their feasibility may depend on system pressure requirements. When excess storage is to be maintained for emergency use only, it is still important to maintain water quality in the storage tank. This may require periodic manual disinfection (i.e., addition of calcium hypochlorite tablets) to prevent significant microbiological activity in the storage tank. This can involve some chemical cost (chlorination tablets are available for about $65 per 25 pounds), as well as additional labor cost (e.g., a few hours for a two-person crew). When excess storage is to be maintained for emergency use only, it is important to adequately flush the system after the tank has been used.

If operational modifications fail to improve tank water quality, it may be necessary to make inlet/outlet piping modifications, install baffles, or add a recirculation system to improve tank mixing. The costs for these types of improvements are widely variable and depend on the size and configuration of the existing tank. For example, capital costs for modifications to inlet/outlet piping in six standpipes (2 million gallon (MG) to 4 MG capacity) may range from $78,000 to $94,000 for one system. Costs for modifications to elevated tanks (all 1 MG capacity) may range from $19,000 to $90,000 for the same system. These costs do not include the installation of sample probes and temperature sensors used to verify proper tank mixing (estimated at $34,000 per tank including tie-in to an existing Supervisory Control and Data Acquisition (SCADA) system).

Another operational option available to systems is the use of flushing and blow-offs in high residence-time areas. Costs for these options can vary significantly from system to system depending on size, amount of labor involved, and if system modifications are required. Some large systems employ one or more flushing crews, whose sole responsibility is to flush system dead ends. For a two-person crew at a labor rate of $25 per hour (including fringe benefits), a system would incur a cost of over $100,000 per year. Assuming installation of a fire hydrant as a conservative estimate, the cost to add a dead end blow-off or flushing station could be $8,000 or more (RS Means 1999). Where runoff from blow-offs or flushing locations contains chloramines and may enter open waterways, neutralization of chloraminated discharges will be necessary. This can be done by laying burlap sacks filled with ammonium sulfate or sodium sulfite in the path of the runoff. Water losses may also be a concern in water scarce regions. The costs associated with water losses are system specific and no attempt has been made to quantify them here.

Exhibit H.11 Operational Evaluation Costs

Size Category	Estimated No. of Locations/yr that exceed Operational Evaluation Levels	Reporting Hours per Operational Evaluation	Cost per Labor Hour	Total Cost	Total Burden (Hours)	Total Burden (FTEs)
	A	B	C	D = A*B*C	E = A*B	F=E/2,080
Surface Water and Mixed CWSs						
<500	**12**	6	$ 22.55	**$ 1,623**	72	0.0
500-3,300	**28**	12	$ 24.74	**$ 8,313**	336	0.2
3,301-9,999	**57**	12	$ 30.51	**$ 20,870**	684	0.3
10,000-49,999	**199**	16	$ 31.08	**$ 98,959**	3,184	1.5
50,000-249,999	**120**	16	$ 32.64	**$ 62,671**	1,920	0.9
250,000-999,999	**27**	16	$ 35.25	**$ 15,227**	432	0.2
1,000,000-4,999,999	**8**	16	$ 35.25	**$ 4,512**	128	0.1
≥5 M	**1**	16	$ 35.25	**$ 564**	16	0.0
National Totals	**452**			**$ 212,739**	**6772**	**3.3**
Disinfecting Ground Water Only CWSs						
<500	-	6	$ 22.35	$ -	-	-
500-9,999	-	12	$ 24.86	$ -	-	-
10,000-99,999	-	16	$ 31.08	$ -	-	-
100,000-499,999	-	16	$ 35.25	$ -	-	-
> 500,000	-	16	$ 35.25	$ -	-	-
National Totals	-			$ -	-	-
Surface Water and Mixed NTNCWSs						
<500	-	6	$ 22.39	$ -	-	-
500-3,300	-	12	$ 24.74	$ -	-	-
3,301-9,999	-	12	$ 30.51	$ -	-	-
10,000-49,999	-	16	$ 31.08	$ -	-	-
50,000-249,999	-	16	$ 35.25	$ -	-	-
250,000-999,999	-	16		$ -	-	-
1,000,000-4,999,999	-	16		$ -	-	-
≥5 M	-	16		$ -	-	-
National Totals	-			$ -	-	-
Disinfecting Ground Water Only NTNCWSs						
<500	-	2	$ 22.20	$ -	-	-
500-9,999	-	2	$ 24.76	$ -	-	-
10,000-99,999	-	3	$ 31.08	$ -	-	-
100,000-499,999	-	3	$ 35.25	$ -	-	-
> 500,000	-	3		$ -	-	-
National Totals	-			$ -	-	-
Grand Totals	**452**			**$ 212,739**	**6,772**	**3.3**

Notes: Detail may not add to totals due to independent rounding.
1 FTE = 2,080 hours (40 hours/week; 52 weeks/year).

Sources: (A) Exhibit H.10, column D.
(B) Hours estimated by EPA to complete Operational Evaluations. EPA expects it to take less time for small systems given they have simpler distribution systems.
(C) Labor rates from the *Labor Costs for National Drinking Water Rules (USEPA, 2003s)* . An 80:20 split between technical and managerial labor rates was assumed, except for systems serving 500 or fewer people, for which only a technical rate was applied.

If long residence times in distribution system dead ends are the source of an exceedance of an operational evaluation level, then systems may be able to improve flow in dead-end areas and reduce water residence time by "looping" dead ends together. For looping to be effective, it is critical that sufficient demand exists in the looped area to create a flow pattern that eliminates the dead end, rather than creating a larger one. The costs associated with looping will vary from system to system, depending on the size and length of pipe involved. Based on cost data presented in RS Means (1999), the cost for looping may range from $3,500 per 100 feet for a 6-inch line to $20,000 per 100 feet for a 24-inch line.

Variability from system to system makes it difficult to quantify the possible costs associated with operational evaluation remedies. The most effective option will vary from system to system, as will the costs for similar types of improvements.

H.6.4 Benefits Implications of the Operational Evaluation Requirements

As discussed in detail in Chapter 5 of this EA, a primary objective of the Stage 2 DBPR is to reduce peak DBP occurrence, thereby reducing potential adverse developmental and reproductive health effects and cancers associated with DBPs. Although systems are not required to make changes in response to significant DBP excursions, EPA believes that the requirement to perform an operational evaluation will encourage attention to peak events and foster better understanding of peak TTHM and HAA5 occurrence in the distribution system.

H.7 Summary of Systems Costs for Non-Treatment-Related Rule Activities

This section summarizes the estimated number of systems performing various rule activities and their associated costs, derived previously in sections H.2 through H.6. Exhibit H.12a shows the number of systems performing each rule activity, and Exhibit H.12b shows the number of systems that will add disinfection for the GWR performing each rule activity. Exhibit H.13 shows costs for both the baseline systems and the GWR systems. The estimates in Exhibits H.12a, H.12b, and H.13 are broken out by the Stage 2 DBPR monitoring size categories. To combine system and cost breakouts with comparable treatment costs (derived in Chapter 7 of this EA), the results in Exhibits H.12 and H.13 were transformed into EPA's standard nine system size categories. Exhibit H.14 (the baseline adjustment matrix) shows the percentage of systems from each of the Stage 2 DBPR monitoring size categories that is in each of EPA's nine standard size categories (see section H.1 for an additional description of this calculation). Data in Exhibit H.14 are derived from SDWIS 4th Quarter Frozen Database (USEPA 2003t). EPA multiplied the results from Exhibits H.12 and H.13 by the baseline adjustment matrix in Exhibit H.14 to produce system and cost results in EPA's nine standard size categories (Exhibits H.15a, H.15b, and H.16).

Exhibit H.12a Systems Performing Various Rule Activities, by Stage 2 Monitoring Size Categories

System Size (Population Served)	Baseline No. of Systems	Implemen-tation	IDSE	Stage 2 Monitoring Plans	Additional Routine Monitoring	Operational Evaluations
	A	B = A	C	D	E	F
Surface Water and Mixed CWSs						
<500	3,297	3,297	2,060	2,060	0	12
500-3,300	4,058	4,058	3,823	4,058	0	28
3,301-9,999	2,042	2,042	1,888	2,042	2,042	57
10,000-49,999	1,773	1,773	1,524	1,773	0	189
50,000-249,999	534	534	436	534	534	109
250,000-999,999	81	81	63	81	81	23
1,000,000-4,999,999	17	17	14	17	17	6
≥5 M	1	1	1	1	1	0
National Totals	**11,803**	**11,803**	**9,809**	**10,566**	**2,675**	**424**
Disinfecting Ground Water Only CWSs						
<500	17,756	17,756	752	752	0	0
500-9,999	11,050	11,050	1,956	11,050	11,050	0
10,000-99,999	1,358	1,358	240	1,358	1,358	0
100,000-499,999	60	60	18	60	0	0
> 500,000	6	6	1	6	0	0
National Totals	**30,229**	**30,229**	**2,966**	**13,225**	**12,407**	**0**
Surface Water and Mixed NTNCWSs						
<500	548	548	-	0	0	0
500-3,300	199	199	-	0	0	0
3,301-9,999	24	24	-	0	24	0
10,000-49,999	5	5	4	5	0	0
50,000-249,999	1	1	1	1	1	0
250,000-999,999	0	0	0	0	0	0
1,000,000-4,999,999	0	0	0	0	0	0
≥5 M	0	0	0	0	0	0
National Totals	**777**	**777**	**5**	**6**	**25**	**0**
Disinfecting Ground Water Only NTNCWSs						
<500	4,622	4,622	-	0	0	0
500-9,999	858	858	-	0	858	0
10,000-99,999	3	3	1	3	3	0
100,000-499,999	0	0	0	0	0	0
> 500,000	0	0	0	0	0	0
National Totals	**5,483**	**5,483**	**1**	**4**	**862**	**0**
Grand Totals	**48,293**	**48,293**	**12,780**	**23,800**	**15,969**	**424**

Note: Detail may not add due to independent rounding.

Non-treatment-Related Rule Activities, in addition to those shown in the table, also include routine compliance monitoring. Some systems are expected to take more samples and some are expected to take less from Stage 1 to Stage 2 depending on the number of plants in their systems. Overall, the Stage 2 DBPR results in an increase in the total number of compliance samples taken from the Stage 1 DBPR. See Exhibit H.8a for column I, for the change in total samples for different system size categories.

Sources:
(A) and (B) Exhibit H.1 (column K).
(C)Exhibits H.3a and b (column E).
(D) Exhibit H.7 (column A).
(E) Exhibit H.8a (column A).
(F) Exhibit H.10 (column G).

Exhibit H.12b Non-Treatment Related Rule Activities for Systems Adding Disinfection to Comply with the GWR

System Size (Population Served)	Baseline No. of Systems Adding Disinfectant for the GWR	Number Preparing Stage 2 Monitoring Plans	Percent Preparing Monitoring Plans	Number Performing Additional Routine Monitoring	Percent Performing Additional Routine Monitoring
	A	B	C = B/A	D	E = D/A
Surface Water and Mixed CWSs					
<500	0	0	0%	0	0%
500-3,300	0	0	0%	0	0%
3,301-9,999	0	0	0%	0	0%
10,000-49,999	0	0	0%	0	0%
50,000-249,999	0	0	0%	0	0%
250,000-999,999	0	0	0%	0	0%
1,000,000-4,999,999	0	0	0%	0	0%
≥5 M	0	0	0%	0	0%
National Totals	**0**	**0**		**0**	
Disinfecting Ground Water Only CWSs					
<500	793	793	100%	793	100%
500-9,999	237	237	100%	237	100%
10,000-99,999	11	11	100%	11	100%
100,000-499,999	2	2	100%	2	100%
> 500,000	0	0	100%	0	100%
National Totals	**1,042**	**1,042**		**1,042**	
Surface Water and Mixed NTNCWSs					
<500	0	0	0%	0	0%
500-3,300	0	0	0%	0	0%
3,301-9,999	0	0	0%	0	0%
10,000-49,999	0	0	0%	0	0%
50,000-249,999	0	0	0%	0	0%
250,000-999,999	0	0	0%	0	0%
1,000,000-4,999,999	0	0	0%	0	0%
≥5 M	0	0	0%	0	0%
National Totals	**0**	**0**		**0**	0
Disinfecting Ground Water Only NTNCWSs					
<500	1,241	1,241	100%	1,241	100%
500-9,999	268	268	100%	268	100%
10,000-99,999	1	1	100%	1	100%
100,000-499,999	0	0	100%	0	100%
> 500,000	0	0	0%	0	0%
National Totals	**1,510**	**1,510**		**1,510**	
Grand Total	**2,552**	**2,552**		**2,552**	

Note: Detail may not add due to independent rounding.

Non-treatment-Related Rule Activities, in addition to those shown in the table, include routine compliance monitoring for all systems.

Sources: (A) Exhibit 8.b

(B) Exhibits H.7 (column C).

(D) Exhibit H.8b (column A).

Exhibit H.13 Non-Treatment Cost Summary, by Stage 2 Monitoring Size Categories

System Size (Population Served)	Implementation A	IDSE B	Stage 2 Monitoring Plans C	Additional Routine Monitoring D	Operational Evaluations E
Surface Water and Mixed CWSs					
<500	$ 743,375	$ 1,360,071	$ 232,182	$ (158,325)	$ 1,623
500-3,300	$ 1,003,949	$ 8,670,108	$ 501,975	$ (915,667)	$ 8,313
3,301-9,999	$ 623,055	$ 8,379,826	$ 258,721	$ 953,611	$ 20,870
10,000-49,999	$ 1,212,306	$ 17,851,398	$ 461,867	$ (2,477,619)	$ 98,959
50,000-249,999	$ 383,467	$ 10,274,027	$ 149,527	$ 345,692	$ 62,671
250,000-999,999	$ 68,522	$ 2,265,622	$ 37,981	$ 146,956	$ 15,227
1,000,000-4,999,99	$ 14,381	$ 671,771	$ 10,628	$ 30,843	$ 4,512
[3]5 M	$ 846	$ 59,594	$ 938	$ 5,674	$ 564
National Totals	$ 4,049,902	$ 49,532,418	$ 1,653,819	$ (2,068,834)	$ 212,739
Disinfecting Ground Water Only CWSs					
<500	$ 3,572,101	$ 495,114	$ 172,612	$ 216,511	$ -
500-9,999	$ 2,472,179	$ 5,339,608	$ 1,402,853	$ 1,530,140	$ -
10,000-99,999	$ 886,174	$ 1,824,904	$ 356,494	$ 130,349	$ -
100,000-499,999	$ 44,241	$ 160,973	$ 28,822	$ (66,879)	$ -
> 500,000	$ 4,361	$ 11,929	$ 3,735	$ (50,522)	$ -
National Totals	$ 6,979,054	$ 7,832,529	$ 1,964,515	$ 1,759,600	$ -
Surface Water and Mixed NTNCWSs					
<500	$ 110,450	$ -	$ -	$ -	$ -
500-3,300	$ 44,309	$ -	$ 9,847	$ -	$ -
3,301-9,999	$ 6,591	$ -	$ 1,216	$ 25,473	$ -
10,000-49,999	$ 3,263	$ 46,876	$ 1,303	$ -	$ -
50,000-249,999	$ 740	$ 23,725	$ 313	$ 3,860	$ -
250,000-999,999	$ -	$ -	$ -	$ -	$ -
1,000,000-4,999,99	$ -	$ -	$ -	$ -	$ -
[3]5 M	$ -	$ -	$ -	$ -	$ -
National Totals	$ 165,353	$ 70,601	$ 12,678	$ 29,333	$ -
Disinfecting Ground Water Only NTNCWSs					
<500	$ 923,423	$ -	$ 137,760	$ 325,412	$ -
500-9,999	$ 191,118	$ -	$ 75,586	$ 368,779	$ -
10,000-99,999	$ 2,271	$ 932	$ 1,247	$ 14,796	$ -
100,000-499,999	$ 215	$ -	$ 192	$ 2,085	$ -
> 500,000	$ -	$ -	$ -	$ -	$ -
National Totals	$ 1,117,027	$ 932	$ 214,785	$ 711,072	$ -
Grand Totals	$ 12,311,336	$ 57,436,480	$ 3,845,797	$ 431,171	$ 212,739

Notes: Detail may not add to totals due to independent rounding.

Costs for Stage 2 monitoring plans and additional routine monitoring include those costs for systems that are projected to add disinfection to comply with the GWR.

Sources:
(A) Exhibit H.2 (column E).
(B) Sum of Exhibit H.4 (column I) , Exhibit H.5 (column F), and H.6(column F).
(C) Exhibit H.7 (column G).
(D) Exhibit H.8c (column D).
(E) Exhibit H.11 (Column D).

Exhibit H.14 Baseline Adjustment Matrix from Stage 2 Monitoring Categories to Standard Nine Categories

Stage 2 Monitoring Size Categories (Population Served)	Standard Size Categories (Population Served)								
	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	> 1,000,000
SW-CWS									
<500	32.9%	67.1%							
500-3,300			36.2%	63.8%					
3,301-9,999					100.0%				
10,000-49,999						100.0%			
50,000-249,999							62.5%	37.5%	
250,000-999,999								100.0%	
1,000,000-4,999,999									100.0%
≥5 M									100.0%
SW-NTNCWS									
<500	42.2%	57.8%							
500-3,300			53.3%	46.7%					
3,301-9,999					100.0%				
10,000-49,999						100.0%			
50,000-249,999							0.0%	100.0%	
250,000-999,999								100.0%	
1,000,000-4,999,999									100.0%
≥5 M									100.0%

Stage 2 Monitoring Categories (Population Served)	Standard Size Categories (Population Served)								
	<100	100-499	500-999	1,000-3,299	3,300-9,999	10,000-49,999	50,000-99,999	100,000-999,999	> 1,000,000
GW-CWS									
<500	44.7%	55.3%							
500-9,999			36.2%	43.9%	19.9%				
10,000-99,999						90.0%	10.0%		
100,000-499,999								100.0%	
≥500,000								50.0%	50.0%
GW-NTNCWS									
<500	53.9%	46.1%							
500-9,999			68.7%	28.8%	2.5%				
10,000-99,999						91.7%	8.3%		
100,000-499,999								100.0%	
≥500,000									

Source: SDWIS 2003 4th quarter frozen database (USEPA 2003t)

Exhibit H.15a Systems Performing Various Rule Activities, Standard Nine Size Categories

System Size (Population Served)	Baseline Number of Systems	Implementation	IDSE	Stage 2 Monitoring Plans	Operational Evaluations	Additional Routine Monitoring
	A	B=A	C	D	E	F
Surface Water and Mixed CWSs						
<100	1,085	1,085	678	678	4	-
100-499	2,212	2,212	1,382	1,382	8	-
500-999	1,470	1,470	1,385	1,470	10	-
1,000-3,299	2,588	2,588	2,438	2,588	18	-
3,300-9,999	2,042	2,042	1,888	2,042	57	2,042
10,000-49,999	1,773	1,773	1,524	1,773	189	-
50,000-99,999	334	334	273	334	68	334
100,000-999,999	281	281	226	281	64	281
≥ 1,000,000	18	18	15	18	6	18
National Totals	**11,803**	**11,803**	**9,809**	**10,566**	**424**	**2,675**
Disinfecting Ground Water Only CWSs						
<100	7,935	7,935	336	336	-	-
100-499	9,821	9,821	416	416	-	-
500-999	3,998	3,998	708	3,998	-	3,998
1,000-3,299	4,852	4,852	859	4,852	-	4,852
3,300-9,999	2,200	2,200	389	2,200	-	2,200
10,000-49,999	1,222	1,222	216	1,222	-	1,222
50,000-99,999	136	136	24	136	-	136
100,000-999,999	63	63	18	63	-	-
≥ 1,000,000	3	3	0	3	-	-
National Totals	**30,229**	**30,229**	**2,966**	**13,225**	**-**	**12,407**
Surface Water and Mixed NTNCWSs						
<100	231	231	-	-	-	-
100-499	317	317	-	-	-	-
500-999	106	106	-	-	-	-
1,000-3,299	93	93	-	-	-	-
3,300-9,999	24	24	-	-	-	24
10,000-49,999	5	5	4	5	-	-
50,000-99,999	-	-	-	-	-	-
100,000-999,999	1	1	1	1	-	1
≥ 1,000,000	-	-	-	-	-	-
National Totals	**777**	**777**	**5**	**6**	**-**	**25**
Disinfecting Ground Water Only NTNCWSs						
<100	2,493	2,493	-	-	-	-
100-499	2,129	2,129	-	-	-	-
500-999	589	589	-	-	-	589
1,000-3,299	247	247	-	-	-	247
3,300-9,999	21	21	-	-	-	21
10,000-49,999	3	3	1	3	-	3
50,000-99,999	0	0	0	0	-	0
100,000-999,999	0	0	0	0	-	0
≥ 1,000,000	-	-	-	-	-	-
National Totals	**5,483**	**5,483**	**1**	**4**	**-**	**862**
Grand Totals	**48,293**	**48,293**	**12,780**	**23,800**	**424**	**15,969**

Notes: Detail may not add to totals due to independent rounding.

Non-treatment-Related Rule Activities, in addition to those shown in the table, also include routine compliance monitoring. Some systems are expected to take more samples and some are expected to take less from Stage 1 to Stage 2 depending on the number of plants in their systems. Overall, the Stage 2 DBPR results in an increase in the total number of compliance samples taken from the Stage 1 DBPR. See Exhibit H.8a for column I, for the change in total samples for different system size categories.

Source: Derived by multiplying results in H.13 by the baseline adjustment matrix in H.14.

Exhibit H.15b Non-Treatment Related Rule Activities for Systems Adding Disinfection to Comply with the GWR, Standard Nine Size Categories

System Size (Population Served)	Baseline Number of Systems Adding Disinfectant for the GWR	Number Preparing Stage 2 Monitoring Plans	Percent Preparing Monitoring Plans	Number Performing Additional Routine Monitoring	Percent Performing Additional Routine Monitoring
	A	B	C = B/A	D	E
Surface Water and Mixed CWSs					
<100	-	-	-	-	-
100-499	-	-	-	-	-
500-999	-	-	-	-	-
1,000-3,299	-	-	-	-	-
3,300-9,999	-	-	-	-	-
10,000-49,999	-	-	-	-	-
50,000-99,999	-	-	-	-	-
100,000-999,999	-	-	-	-	-
≥ 1,000,000	-	-	-	-	-
National Totals	**-**	**-**		**-**	
Disinfecting Ground Water Only CWSs					
<100	354	354	100%	354	100%
100-499	439	439	100%	439	100%
500-999	86	86	100%	86	100%
1,000-3,299	104	104	100%	104	100%
3,300-9,999	47	47	100%	47	100%
10,000-49,999	10	10	100%	10	100%
50,000-99,999	1	1	100%	1	100%
100,000-999,999	2	2	100%	2	100%
≥ 1,000,000	0	0	100%	0	100%
National Totals	**1,042**	**1,042**		**1,042**	
Surface Water and Mixed NTNCWSs					
<100	-	-	-	-	-
100-499	-	-	-	-	-
500-999	-	-	-	-	-
1,000-3,299	-	-	-	-	-
3,300-9,999	-	-	-	-	-
10,000-49,999	-	-	-	-	-
50,000-99,999	-	-	-	-	-
100,000-999,999	-	-	-	-	-
≥ 1,000,000	-	-	-	-	-
National Totals	**-**	**-**		**-**	
Disinfecting Ground Water Only NTNCWSs					
<100	669	669	100%	669	100%
100-499	572	572	100%	572	100%
500-999	184	184	100%	184	100%
1,000-3,299	77	77	100%	77	100%
3,300-9,999	7	7	100%	7	100%
10,000-49,999	1	1	100%	1	100%
50,000-99,999	0	0	100%	0	100%
100,000-999,999	0	0	100%	0	100%
≥ 1,000,000	-	-	0%	-	0%
National Totals	**1,510**	**1,510**		**1,510**	
Grand Totals	**2,552**	**2,552**		**2,552**	

Notes: Detail may not add to totals due to independent rounding.

Non-treatment-Related Rule Activities, in addition to those shown in the table, also include routine compliance monitoring. Some systems are expected to take more samples and some are expected to take less from Stage 1 to Stage 2 depending on the number of plants in their systems. Overall, the Stage 2 DBPR results in an increase in the total number of compliance samples taken from the Stage 1 DBPR. See Exhibit H.8a for column I, for the change in total samples for different system size categories.

Source: Derived by multiplying results in H.12b by the baseline adjustment matrix in H.14.

Exhibit H.16 Non-Treatment Cost Summary, Standard Nine Size Categories

System Size (Population Served)	Implementation	IDSE	Stage 2 Monitoring Plans	Additional Routine Monitoring	Operational Evaluations
	A	B	C	D	E
Surface Water and Mixed CWSs					
<100	$ 244,635	$ 447,582	$ 76,408	$ (52,103)	$ 534
100-499	$ 498,740	$ 912,489	$ 155,774	$ (106,222)	$ 1,089
500-999	$ 363,678	$ 3,140,721	$ 181,839	$ (331,698)	$ 3,011
1,000-3,299	$ 640,272	$ 5,529,388	$ 320,136	$ (583,969)	$ 5,301
3,300-9,999	$ 623,055	$ 8,379,826	$ 258,721	$ 953,611	$ 20,870
10,000-49,999	$ 1,212,306	$ 17,851,398	$ 461,867	$ (2,477,619)	$ 98,959
50,000-99,999	$ 239,846	$ 6,426,075	$ 93,524	$ 216,219	$ 39,199
100,000-999,999	$ 212,143	$ 6,113,574	$ 93,984	$ 276,429	$ 38,699
≥ 1,000,000	$ 15,227	$ 731,365	$ 11,566	$ 36,517	$ 5,076
National Totals	**$ 4,049,902**	**$ 49,532,418**	**$ 1,653,819**	**$ (2,068,834)**	**$ 212,739**
Disinfecting Ground Water Only CWSs					
<100	$ 1,596,365	$ 221,266	$ 77,140	$ 96,758	$ -
100-499	$ 1,975,736	$ 273,849	$ 95,472	$ 119,753	$ -
500-999	$ 894,469	$ 1,931,945	$ 507,572	$ 553,626	$ -
1,000-3,299	$ 1,085,531	$ 2,344,617	$ 615,991	$ 671,883	$ -
3,300-9,999	$ 492,179	$ 1,063,047	$ 279,290	$ 304,631	$ -
10,000-49,999	$ 797,681	$ 1,642,671	$ 320,895	$ 117,333	$ -
50,000-99,999	$ 88,492	$ 182,233	$ 35,599	$ 13,017	$ -
100,000-999,999	$ 46,421	$ 166,938	$ 30,689	$ (92,140)	$ -
≥ 1,000,000	$ 2,180	$ 5,964	$ 1,868	$ (25,261)	$ -
National Totals	**$ 6,979,054**	**$ 7,832,529**	**$ 1,964,515**	**$ 1,759,600**	**$ -**
Surface Water and Mixed NTNCWSs					
<100	$ 46,558	$ -	$ -	$ -	$ -
100-499	$ 63,891	$ -	$ -	$ -	$ -
500-999	$ 23,602	$ -	$ 5,245	$ -	$ -
1,000-3,299	$ 20,707	$ -	$ 4,602	$ -	$ -
3,300-9,999	$ 6,591	$ -	$ 1,216	$ 25,473	$ -
10,000-49,999	$ 3,263	$ 46,876	$ 1,303	$ -	$ -
50,000-99,999	$ -	$ -	$ -	$ -	$ -
100,000-999,999	$ 740	$ 23,725	$ 313	$ 3,860	$ -
≥ 1,000,000	$ -	$ -	$ -	$ -	$ -
National Totals	**$ 165,353**	**$ 70,601**	**$ 12,678**	**$ 29,333**	**$ -**
Disinfecting Ground Water Only NTNCWSs					
<100	$ 498,070	$ -	$ 74,304	$ 175,519	$ -
100-499	$ 425,353	$ -	$ 63,456	$ 149,893	$ -
500-999	$ 131,289	$ -	$ 51,924	$ 253,333	$ -
1,000-3,299	$ 55,048	$ -	$ 21,771	$ 106,220	$ -
3,300-9,999	$ 4,781	$ -	$ 1,891	$ 9,226	$ -
10,000-49,999	$ 2,082	$ 855	$ 1,143	$ 13,563	$ -
50,000-99,999	$ 189	$ 78	$ 104	$ 1,233	$ -
100,000-999,999	$ 215	$ -	$ 192	$ 2,085	$ -
≥ 1,000,000	$ -	$ -	$ -	$ -	$ -
National Totals	**$ 1,117,027**	**$ 932**	**$ 214,785**	**$ 711,072**	**$ -**
Grand Totals	**$ 12,311,336**	**$ 57,436,480**	**$ 3,845,797**	**$ 431,171**	**$ 212,739**

Notes: Detail may not add to totals due to independent rounding.

Costs for Stage 2 monitoring plans and additional routine monitoring include those costs for systems that are projected to add disinfection to comply with the GWR.

Source: Derived by multiplying results in H.12 by the baseline adjustment matrix in H.14.

H.8 Cost & Burden Estimates for States/Primacy Agency Action

To estimate State/Primacy Agency costs, the estimated number of full-time equivalents (FTEs) required per activity is multiplied by the number of labor hours per FTE, the State/Primacy Agency hourly wage, and the number of States/Primacy Agencies. EPA estimated the number of FTEs required per activity based on experience implementing previous rules, such as the Stage 1 DBPR. The number of States/Primacy Agencies is the sum of the 50 States, six territories, and one tribal government (57 total). Labor costs attributable to States for administrative tasks are based on an average annual FTE labor cost, including overhead and fringe benefits, of $65,255 (2001$). This rate was established based on data from the 2001 State Drinking Water Needs Analysis (ASDWA 2001). For use in the Stage 2 EA analyses, the $65,255 annual rate was updated to a year 2003 price level ($70,132) using the ECI and converted to an hourly basis (1 FTE = 2,080 hours) to establish a State rate of $33.60 per hour.

Implementation Activities

States/Primacy Agencies incur labor costs for adopting the regulation and developing a program for implementation, providing initial public notification, training State staff, training PWS staff, providing technical assistance, and updating their data management systems. Exhibit H.17 presents the calculations and estimated costs and burden for these activities. Note that this EA does not include initial State costs for laboratory certification because EPA assumes that these activities occurred under the Stage 1 DBPR and were captured in the Stage 1 DBPR Regulatory Impact Analysis (RIA) (USEPA 1998a).

IDSE Activities for States/Primacy Agencies

States/Primacy Agencies will also incur costs as a result of the IDSE. EPA estimated the number of FTEs required per activity based on experience with previous rules, such as the Stage 1 DBPR. States/Primacy Agencies are expected to work with the small systems that conduct IDSEs to review data and make compliance determinations. State/Primacy Agency activities include analyzing IDSE reports and approving new or revised monitoring sites, responding to PWSs, and keeping records. All the costs for the IDSE activities were conservatively attributed to States/Primacy Agencies although it is possible that some of them may not have primacy before the IDSEs begin. Exhibit H.18 shows the calculations and estimated costs and burden associated with the IDSE for States/Primacy Agencies.

Because systems receiving the very small system waivers do not have to submit an IDSE report, EPA assumes that minimal state time will be needed for these systems.

Monitoring Plans

States/Primacy Agencies will incur costs to review the monitoring plans. States/Primacy Agencies are expected to review the monitoring plans for PWSs and approve them. States will only have to review monitoring plans for subpart H systems serving more than 3,300 people. EPA estimated the effort at four hours per monitoring plan for small systems and 8 hours for large systems, based on experience with previous rules, such as the Stage 1 DBPR. Exhibit H.19 shows the calculations and estimated costs and burden associated with the IDSE for States/Primacy Agencies.

Additional Routine Monitoring for States/Primacy Agencies

States/Primacy Agencies will incur costs to review and monitor PWSs' routine monitoring for TTHM and HAA5. States/Primacy Agencies are expected to incur costs for tracking PWS monitoring data and updating records. EPA estimated that 0.40 FTE's will be needed per State/Primacy agency for this activity, which is equivalent to 832 hours per State/Primacy Agency or 47,424 hours total (57x832).

Operational Evaluations

States/Primacy Agencies will incur costs to review operational evaluations made by PWSs. It is estimated that States/Primacy Agencies will use 1 hour to review each report and consult with the PWS. Exhibit H.20 shows estimated costs and burdens for operational evaluations for States/Primacy Agencies.

Summary

Exhibit H.21 shows a summary of all State/Primacy Agency costs.

Exhibit H.17 State/Primacy Agency Costs for Implementation and Additional Routine Monitoring Activities

	Cost per Labor Hour	FTEs per State	Hours per State	Cost per State	National Total FTEs	National Total Hours	National Total Cost
	A	B	C=B*2,080	D=A*C	E=B*57	F=C*57	G=D*57
Implementation Activities							
Public Notification	$ 33.60	0.10	208	$ 6,989	5.70	11,856	$ 398,362
Regulation Adoption and Program Development	$ 33.60	0.50	1,040	$ 34,944	28.50	59,280	$ 1,991,808
Training State Staff	$ 33.60	0.25	520	$ 17,472	14.25	29,640	$ 995,904
Training PWS Staff and Technical Assistants	$ 33.60	1.00	2,080	$ 69,888	57.00	118,560	$ 3,983,616
Updating Data Management System	$ 33.60	0.10	208	$ 6,989	5.70	11,856	$ 398,362
Totals		**1.95**	**4,056**	**$ 136,282**	**111**	**231,192**	**$ 7,768,051**
Additional Routine Monitoring Activities							
Recordkeeping and Compliance Tracking	$ 33.60	0.40	832	$ 27,955	22.80	47,424	$ 1,593,446
Totals		**0.40**	**832**	**$ 27,955**	**22.80**	**47,424**	**$ 1,593,446**
Grand Totals		**2.35**	**4,888**	**164,237**	**134**	**278,616**	**9,361,498**

Notes: All states/primacy agencies are assumed to incur some costs for each activity.

Sources: (A) State labor rates based on the State Workload Model, updated to year 2003 dollar values.
(B) FTEs per State/Primacy Agency based on EPA experience with previous regulations.

Exhibit H.18 State/Primacy Agency Costs for the IDSE

Size Category	Number of Systems Conducting IDSE, by Category			Number of Hours to Work with Systems on IDSE and Review IDSE Reports			Average State Employee Hourly Wage	Average Total Costs to States	Average Total Costs per State	Total Burden	Average Burden/ State
	Standard Monitoring	System-Specific Study	40/30 Certification	Standard Monitoring	System-Specific Study	40/30 Certification					
	A	B	C	D	E	F	G	H = G * (A*D+B*E+C*F)	I = H / 57	J = A*D + B*E + C*F	K = J/57
Surface Water and Mixed CWSs											
<500	2,060	0	0	4	4	0.5	$ 33.60	$ 276,802	$ 4,856	8238.16	144.5
500-3,300	3,823	0	235	4	4	0.5	$ 33.60	$ 517,759	$ 9,083	15409.5	270.3
3,301-9,999	1,888	0	154	4	4	0.5	$ 33.60	$ 256,334	$ 4,497	7629	133.8
10,000-49,999	1,524	0	249	8	8	0.5	$ 33.60	$ 413,834	$ 7,260	12316.5	216.1
50,000-249,999	436	23	75	8	8	0.5	$ 33.60	$ 124,639	$ 2,187	3709.5	65.1
250,000-999,999	63	7	11	10	12	0.5	$ 33.60	$ 24,175	$ 424	719.5	12.6
1,000,000-4,999,999	14	1	2	12	16	0.5	$ 33.60	$ 6,216	$ 109	185	3.2
≥5 M	1	0	0	12	16	0.5	$ 33.60	$ 403	$ 7	12	0.2
National Totals	**9,809**	**31**	**726**					**$ 1,620,164**	**$ 28,424**	**48,219**	**846.0**
Ground Water Only CWSs											
<500	752	0	0	4	4	0.5	$ 33.60	$ 101,004	$ 1,772	3,006	52.7
500-9,999	1,956	0	9,094	4	4	0.5	$ 33.60	$ 415,609	$ 7,291	12,369	217.0
10,000-99,999	240	0	1,118	8	8	0.5	$ 33.60	$ 83,226	$ 1,460	2,477	43.5
100,000-499,999	18	2	40	8	8	0.5	$ 33.60	$ 5,995	$ 105	178	3.1
> 500,000	1	0	5	12	16	0.5	$ 33.60	$ 443	$ 8	13	0.2
National Totals	**2,966**	**2**	**10,257**					**$ 606,278**	**$ 10,636**	**18,044**	**316.6**
Surface Water and Mixed NTNCWSs											
<500	-	-	-	-	-	-	-	-	-	-	-
500-3,300	-	-	-	-	-	-	-	-	-	-	-
3,301-9,999	-	-	-	-	-	-	-	-	-	-	-
10,000-49,999	4	0	1	8	8	0.5	$ 33.60	$ 1,092	$ 19	33	0.6
50,000-249,999	1	0	0	8	8	0.5	$ 33.60	$ 269	$ 5	8	0.1
250,000-999,999	0	0	0	10	12	0.5	$ 33.60	$ -	$ -	0	0.0
1,000,000-4,999,999	0	0	0	12	16	0.5	$ 33.60	$ -	$ -	0	0.0
≥5 M	0	0	0	12	16	0.5	$ 33.60	$ -	$ -	0	0.0
National Totals	**5**	**0**	**1**					**$ 1,361**	**$ 24**	**41**	**0.7**
Disinfecting Ground Water Only NTNCWSs											
<500	-	-	-	-	-	-	-	-	-	-	-
500-9,999	-	-	-	-	-	-	-	-	-	-	-
10,000-99,999	1	0	3	8	8	0.5	$ 33.60	$ 214	$ 4	6	0.1
100,000-499,999	0	0	0	8	8	0.5	$ 33.60	$ 78	$ 1	2	0.0
> 500,000	0	0	0	12	16	0.5	$ 33.60	$ -	$ -	0	0.0
National Totals	**1**	**0**	**3**					**$ 292**	**$ 5**	**9**	**0.2**
Grand Totals	**12,780**	**33**	**10,987**					**$ 2,228,095**	**$ 39,089**	**66,312**	**1,163.4**

Sources: (A, B, C) From columns E, F, and G in Exhibits H.3a and H.3b.
(D, E, F) From EPA experience with other regulations.

Exhibit H.19 State/Primacy Agency Monitoring Plan Costs

Size Category	Number of Systems Conducting Monitoring Plan, by Category	Number of Hours to Review Monitoring Plans per System	Average State Employee Hourly Wage	Average Total Costs to States	Average Total Costs per State	Total Burden
	A	B	C	D = A*B*C	E = D/57	F = A*B
Surface Water and Mixed CWSs						
<500	2,060	0	$ 33.60	$ -	$ -	0
500-3,300	4,058	0	$ 33.60	$ -	$ -	0
3,301-9,999	2,042	4	$ 33.60	$ 274,445	$ 4,815	8,168
10,000-49,999	1,773	8	$ 33.60	$ 476,582	$ 8,361	14,184
50,000-249,999	534	8	$ 33.60	$ 143,539	$ 2,518	4,272
250,000-999,999	81	8	$ 33.60	$ 21,773	$ 382	648
1,000,000-4,999,999	17	8	$ 33.60	$ 4,570	$ 80	136
≥5 M	1	8	$ 33.60	$ 269	$ 5	8
National Totals	**10,566**	**-**	**-**	**$ 921,178**	**$ 16,161**	**27,416**
Ground Water Only CWSs						
<500	1,544	0	$ 33.60	$ -	$ -	0
500-9,999	11,286	0	$ 33.60	$ -	$ -	0
10,000-99,999	1,368	0	$ 33.60	$ -	$ -	0
100,000-499,999	61	0	$ 33.60	$ -	$ -	0
> 500,000	6	0	$ 33.60	$ -	$ -	0
National Totals	**14,267**	**-**	**-**	**$ -**	**$ -**	**0**
Surface Water and Mixed NTNCWSs						
<500	0	0	$ 33.60	$ -	$ -	0
500-3,300	0	0	$ 33.60	$ -	$ -	0
3,301-9,999	24	4	$ 33.60	$ 3,226	$ 57	96
10,000-49,999	5	8	$ 33.60	$ 1,344	$ 24	40
50,000-249,999	1	8	$ 33.60	$ 269	$ 5	8
250,000-999,999	0	8	$ 33.60	$ -	$ -	0
1,000,000-4,999,999	0	8	$ 33.60	$ -	$ -	0
≥5 M	0	8	$ 33.60	$ -	$ -	0
National Totals	**30**	**-**	**-**	**$ 4,838**	**$ 85**	**48**
Disinfecting Ground Water Only NTNCWSs						
<500	1,241	0	$ 33.60	$ -	$ -	0
500-9,999	268	0	$ 33.60	$ -	$ -	0
10,000-99,999	5	0	$ 33.60	$ -	$ -	0
100,000-499,999	0	0	$ 33.60	$ -	$ -	0
> 500,000	0	0	$ 33.60	$ -	$ -	0
National Totals	**1,514**	**-**	**-**	**$ -**	**$ -**	**0**
Grand Totals	**26,376**	**-**	**-**	**$ 926,016**	**$ 16,246**	**27,464**

Notes:

Sources: (A) From columns A, B, and C in Exhibit H.7

(B) From EPA experience with other regulations.

(C) State labor rates based on the State Workload Model, updated to year 2003 dollar values.

Exhibit H.20 State/Primacy Agency Operational Evaluation Costs

Size Category	Number of times Operational Evaluation Levels are exceeded per Year	Number of Hours to Review Operational Evaluations per System	Average State Employee Hourly Wage	Average Total Costs to States	Average Total Costs per State	Total Burden
	A	B	C	D = A*B*C	E = D/57	F = A*B
Surface Water and Mixed CWSs						
<500	12	4	$ 33.60	$ 1,613	$ 28	48
500-3,300	28	6	$ 33.60	$ 5,645	$ 99	168
3,301-9,999	57	6	$ 33.60	$ 11,491	$ 202	342
10,000-49,999	199	8	$ 33.60	$ 53,491	$ 938	1,592
50,000-249,999	120	8	$ 33.60	$ 32,256	$ 566	960
250,000-999,999	27	8	$ 33.60	$ 7,258	$ 127	216
1,000,000-4,999,999	8	8	$ 33.60	$ 2,150	$ 38	64
≥5 M	1	8	$ 33.60	$ 269	$ 5	8
National Totals	**452**	**-**	**-**	**$ 114,173**	**$ 2,003**	**3,398**
Ground Water Only CWSs						
<500	0	4	$ 33.60	$ -	$ -	0
500-9,999	0	6	$ 33.60	$ -	$ -	0
10,000-99,999	0	8	$ 33.60	$ -	$ -	0
100,000-499,999	0	8	$ 33.60	$ -	$ -	0
> 500,000	0	8	$ 33.60	$ -	$ -	0
National Totals	**0**	**-**	**-**	**$ -**	**$ -**	**0**
Surface Water and Mixed NTNCWSs						
<500	0	4	$ 33.60	$ -	$ -	0
500-3,300	0	6	$ 33.60	$ -	$ -	0
3,301-9,999	0	6	$ 33.60	$ -	$ -	0
10,000-49,999	0	8	$ 33.60	$ -	$ -	0
50,000-249,999	0	8	$ 33.60	$ -	$ -	0
250,000-999,999	0	8	$ 33.60	$ -	$ -	0
1,000,000-4,999,999	0	8	$ 33.60	$ -	$ -	0
≥5 M	0	8	$ 33.60	$ -	$ -	0
National Totals	**0**	**-**	**-**	**$ -**	**$ -**	**0**
Disinfecting Ground Water Only NTNCWSs						
<500	0	4	$ 33.60	$ -	$ -	0
500-9,999	0	6	$ 33.60	$ -	$ -	0
10,000-99,999	0	8	$ 33.60	$ -	$ -	0
100,000-499,999	0	8	$ 33.60	$ -	$ -	0
> 500,000	0	8	$ 33.60	$ -	$ -	0
National Totals	**0**	**-**	**-**	**$ -**	**$ -**	**0**
Grand Totals	**452**	**-**	**-**	**$ 114,173**	**$ 2,003**	**3,398**

Sources: (A) From column D in Exhibit H.10

(B) From EPA experience with other regulations.

(C) State labor rates based on the State Workload Model, updated to year 2003 dollar values.

Exhibit H.21 State/Primacy Agency Cost Summary

	Total Hours	Average Hours per State	Cost/Labor Hour	Total Cost	Cost per State
	A	B = A/57	C	D	E = D/57
Implementation Activities					
Public Notification	11,856	208	$ 33.60	$ 398,362	$ 6,989
Regulation Adoption and Program Development	59,280	1,040	$ 33.60	$ 1,991,808	$ 34,944
Training State Staff	29,640	520	$ 33.60	$ 995,904	$ 17,472
Training PWS Staff and Technical Assistants	118,560	2,080	$ 33.60	$ 3,983,616	$ 69,888
Updating Data Management System	11,856	208	$ 33.60	$ 398,362	$ 6,989
Subtotal	**231,192**	**4,056**		**$ 7,768,051**	**$ 136,282**
Monitoring Plan Activities					
Monitoring Plans	27,464	482	$ 33.60	$ 926,016	$ 16,246
IDSE Activities					
IDSE Monitoring	66,312	1,163	$ 33.60	$ 2,228,095	$ 39,089
Additional Routine Monitoring Activities					
Recordkeeping and Compliance Tracking	47,424	832	$ 33.60	$ 1,593,446	$ 27,955
Operational Evaluation Costs	3,398	60	$ 33.60	$ 114,173	$ 2,003
Subtotal	**50,822**	**892**		**$ 1,707,619**	**$ 29,958**
Grand Totals	**375,790**	**6,593**		**$ 12,629,781**	**$ 221,575**

Notes: All states/primacy agencies are assumed to incur some costs for each activity.

Sources: (A) Exhibits H.17 to H.20.

(B) Exhibits H.17 to H.20.

(C) State labor rates based on the State Workload Model, updated to year 2003 dollar values.