"50 MGD For All Waterbodies" Option

OMB REVIEW DRAFT
SUPPORTING SPREADSHEETS
FOR
INFORMATION COLLECTION
COSTS FOR SECTION 316(b) PHASE III
EXISTING MANUFACTURERS

27-Oct-04

(APPENDIX A)

Exhibit A.50MGD.1

Facility Cost and Burden Estimates for NPDES Permit Application Activities

Exhibit A.50MGD.1a

Start-up Activities

					Facility Manager	Junior Technical	CAD Operator	Contracted Manager	Biologist	Statistician	Biological Technician		Burden Per	Labor Cost			Total Cost Per		
	Facil	lities (R	espond	lents)				Assumed Load					Facility	per Facility	Capital Costs	O&M Costs*	Facility	Total Burden (hrs.)	Total Initial Cost
	Year 1	Year 2	Year 3	Total	\$73	\$34	\$30	\$91	\$53	\$61	\$38	\$19		. ,			,		
Activity			A					Level of E	fort (hrs)				В	С	D	E	C+D+E	A*B	A*(C+D+E)
Read and Understand Rule	31	17	8	56	12	12	0	0	0	0	0	1	25	\$1,305	\$0	\$0		1,400	\$73,074
Mobilization/Planning	31	17	8	56	4	8	0	0	0	0	0	1	13	\$583	\$0	\$0)	728	\$32,665
Training	31	17	8	56	2	2	0	0	0	0	0	1	5	\$233	\$0	\$0)	280	\$13,042
Other Direct Costs	31	17	8	56	0	0	0	0	0	0	0	0	0	\$0	\$0	\$50)	-	\$2,800
Totals	31	17	8	56	18	22	0	0	0	0	0	3	43	\$2,121	\$0	\$50	\$2,171	2,408	\$121,582

Exhibit A.50MGD.1b

Permit Application Activities

					Facility	Junior	CAD	Contracted			Biological								
					Manager	Technical	Operator	Manager	Biologist	Statistician	Technician	Clerical	Burden Per	Labor Cost	Capital Costs	ORM Contot	Total Cost Per	Total Burden (hrs.)	Total Initial Coat
	Facil	ities (R	espond	ents)			- 1	Assumed Load	ed Hourly Ra	te			Facility	per Facility	Capital Costs	UMINI CUSIS	Facility	Total burden (nrs.)	TOTAL ILLIGIA COST
	Year 1	Year 2	Year 3	Total	\$73	\$34	\$30	\$91	\$53	\$61	\$38	\$19	_						
Activity			Α					Level of E	ffort (hrs)				В	С	D	E	C+D+E	A*B	A*(C+D+E)
Statement of Compliance Option Selected	31	17	8	56	1	0	0	0	0	0	0	1	2	\$92	\$0	\$0		112	\$5,135
Source Water Physical Data	31	17	8	56	2	16	40	0	0	0	0	0	58	\$1,902	\$0	\$0		3,248	\$106,534
Configuration and Location of CWIS	31	17	8	56	2	5	8	0	0	0	0	0	15	\$559	\$0	\$0		840	\$31,293
Facility Water Balance Diagram	31	17	8	56	1	1	1	0	0	0	0	0	3	\$138	\$0	\$0		168	\$7,700
CWIS Operation Narrative	31	17	8	56	16	40	0	0	0	0	0	0	56	\$2,531	\$0	\$0		3,136	\$141,747
CWS Operation Narrative	31	17	8	56	16	40	0	0	0	0	0	0	56	\$2,531	\$0	\$0		3,136	\$141,747
Engineering Calculations	31	17	8	56	8	32	0	0	0	0	0	0	40	\$1,674	\$0	\$0		2,240	\$93,722
Submit Materials for Review by State	31	17	8	56	0	0	0	0	0	0	0	6	6	\$111	\$0	\$0		336	\$6,216
Recordkeeping	31	17	8	56	2	5	2	0	0	0	0	2	11	\$414	\$0	\$0		616	\$23,184
Other Direct Costs	31	17	8	56	0	0	0	0	0	0	0	0	0	\$0	\$0	\$510		-	\$28,560
Totals	31	17	8	56						•			247	\$9,951	\$0	\$510	\$10,461	13,832	\$585,838

Water balance diagram is assumed to be taken from the facility design report. The hours reported here are for incorporation of the diagram(s) in the permit.

Exhibit A.50MGD.1c

Proposal for Collection of Information for Comprehensive Demonstration Study

	_											,							
					Facility	Junior	CAD	Contracted			Biological								
					Manager	Technical	Operator	Manager	Biologist	Statistician	Technician	Clerical	Burden Per	Labor Cost	Capital Costs	ORM Cocte*	Total Cost Per	Total Burden (hrs.)	Total Initial Cost
	Facil	ities (R	espond	ents)				Assumed Load	ed Hourly Ra	ite			Facility	per Facility	Capital Custs	Odivi Custs	Facility	Total Burdell (IIIS.)	Total Illitial Cost
	Year 1	Year 2	Year 3	Total	\$73	\$34	\$30	\$91	\$53	\$61	\$38	\$19					_		
Activity			4					Level of E	ffort (hrs)				В	С	D	E	C+D+E	A*B	A*(C+D+E)
Description of Historical Studies that will be Used	27	10	6	43	20	40	0	0	0	C	0) 2	62	\$2,861	\$0	\$0		2,666	\$123,023
Description of Proposed and/or Implemented Technologies	27	10	6	43	8	20	0	0	0	C	0	0	28	\$1,266	\$0	\$0		1,204	\$54,421
Develop Source Water Sampling Plan	27	10	6	43	40	60	8	8	0	C	0) 4	120	\$6,012	\$0	\$0)	5,160	\$258,499
Submit Data and Plans for Review	27	10	6	43	0	0	0	0	0	C	0	12	12	\$222	\$0	\$0)	516	\$9,546
Revise Based on State Review	27	10	6	43	8	16	4	0	0	C	0) 4	32	\$1,325	\$0	\$0		1,376	\$56,966
Recordkeeping	27	10	6	43	3	5	1	1	0	C	0) 8	18	\$659	\$0	\$0		774	\$28,328
Other Direct Costs	27	10	6	43	0	0	0	0	0	C	0) (0	\$0	\$0	\$770		-	\$33,110
Totals	27	10	6	43									272	\$12,344	\$0	\$770	\$13,114	11,696	\$563,893

Exhibit A.50MGD.1d

Source Water Body Flow Information

Course Water Body Flow Information																			
					Facility	Junior	CAD	Contracted	D: 1 · · ·		Biological	a			Capital Costs		T		
					Manager	Technical	Operator	Manager	Biologist	Statistician	Technician	Clerical	Buraen Per	Labor Cost	Canital Costs	O&M Costs*	Total Cost Per	Total Burden (hrs.)	Total Initial Cost
	Fac	ilities (R	espond	ents)			- 1	Assumed Load	ed Hourly Ra	ite			Facility	per Facility	oupitui oosts	Odivi Oosts	Facility	Total Baracii (ili 3.)	rotal lilitial oost
	Year 1	1 Year 2	Year 3	Total	\$73	\$34	\$30	\$91	\$53	\$61	\$38	\$19					_		
Activity			Α					Level of E	ffort (hrs)				В	С	D	E	C+D+E	A*B	A*(C+D+E)
Gather Information to Characterize Flow (FW River/Stream)	4	6	5	15	0	32	0	C) 0	(0	0	32	\$1,088	\$0	\$0		480	\$16,320
Water Body Thermal Stratification Narrative (Lake/Reservoir)	1	0	1	2	4	40	0	C) 0	(0	0	44	\$1,653	\$0	\$0)	88	\$3,306
Perform Engineering Calculations	5	6	6	17	8	32	0	C) 0	(0	0	40	\$1,674	\$0	\$0)	680	\$28,451
Submit Data and Analysis for Review	5	6	6	17	0	0	0	C	0	(16	16	\$296	\$0	\$0		272	\$5,032
Recordkeeping	5	6	6	17	1	3	0	C) 0	(0	8	12	\$323	\$0	\$0)	204	\$5,494
Other Direct Costs	5	6	6	17	0	0	0	C	0	(0	0	0	\$0	\$0	\$200)	-	\$3,400
Totals	5	6	6	17									101	3447	\$0	\$200	\$3,647	1,724	\$62,003

Exhibit A.50MGD.1e

Design and Construction Technology Plan

zeeign and construction recinicity rian																			
					Facility	Junior	CAD	Contracted			Biological								
					Manager	Technical	Operator	Manager	Biologist	Statistician	Technician	Clerical	Burden Per	Labor Cost	Capital Costs	O&M Costs*	Total Cost Per	Total Burden (hrs.)	Total Initial Cost
			espond				, l	Assumed Loade	d Hourly Ra	ite			Facility	per Facility	Capital Costs	Odivi Costs	Facility	Total Durden (ilis.)	Total Illitial Cost
	Year 1	Year 2	Year 3	Total	\$73	\$34	\$30	\$91	\$53	\$61	\$38	\$19					_		
Activity			Α					Level of Ef	fort (hrs)				В	С	D	E	C+D+E	A*B	A*(C+D+E)
Delineate Hydraulic Zone of Influence	11	14	8	33	2	5	8	0	0	0	0	(15	\$559	\$0	\$0		495	\$18,440
Develop Narrative Description of Technologies (Impingement)	9	14	8	31	5	11	0	0	0	0	0	C	16	\$740	\$0	\$0)	496	\$22,940
Perform Engineering Calculations (Impingement)	9	14	8	31	3	12	0	0	0	0	0	C	15	\$628	\$0	\$0)	465	\$19,456
Develop Narrative Description of Technologies (Entrainment)	7	9	4	20	5	11	0	0	0	0	0	C	16	\$740	\$0	\$0)	320	\$14,800
Perform Engineering Calculations (Entrainment)	7	9	4	20	3	12	0	0	0	0	0	C	15	\$628	\$0	\$0		300	\$12,552
Submit Data and Analysis for Review	11	14	8	33	0	0	0	0	0	0	0	6	6	\$111	\$0	\$0		198	\$3,663
Recordkeeping	11	14	8	33	1	2	0	0	0	0	0	ϵ	9	\$252	\$0	\$0)	297	\$8,323
Other Direct Costs	11	14	8	33	0	0	0	0	0	0	0		0	\$0	\$0	\$380)	-	\$12,540
Totals	11	14	8	33									80	\$3,118	\$0	\$380	\$3,498	2,571	\$112,714

Exhibit A.50MGD.1f

Impingement Mortality Study and/or Entrainment Characterization Study

					Facility	Junior	CAD	Contracted	D: 1 : 1		Biological	01 : 1	Max.	Max. Labor	Max. Capital	Max. O&M	Avg. Iotal	T. 15 1 (1)	T
					Manager	Technical	Operator				Technician	Cierical	Burden Per	Cost per	Cost per	Cost per	Cost Per	Total Burden (hrs.)	
-		ies (Res			672	624		Assumed Loade			#20	\$19	Facility	Facility for 3	Facility for 3	,	Facility over 3	for ICR period	(\$) for ICR perio
	Year I	Year 2 \	ear 3	rotai	\$73	\$34	\$30	\$91 Level of Ef	\$53 fort (bro)	\$61	\$38	\$19	over 3 yrs B	yrs	yrs D	yrs F	yrs C+D+E	A*B	A*(C+D+E)
ctivity		A	1														C+D+E		
Implement Offshore Freshwater Sampling	11	17	12	23	6	52	0	100	2080	67	2080	34	4419	\$205,099	\$0	\$0		88,380	\$4,101,97
Other Direct Costs for Offshore Freshwater Sampling	11	17	12	23	0	0	0	0	0	0	0	0	0	\$0	\$0	\$3,076		-	\$61,53
Impingement Monitoring Freshwater	11	17	12	23	3	16	0	60	1040	33	1040	17	2209	\$103,088	\$0	\$0		44,180	\$2,061,75
Other Direct Costs for Impingement Monitoring Freshwater	11	17	12	23	0	0	0	0	0	0	0	0	0	\$0	\$0	\$1,546		-	\$30,92
Entrainment Monitoring Freshwater	2	4	2	4	3	16	0	60	780	33	780	17	1689	\$79,454	\$0	\$0		6,756	\$317,81
Other Direct Costs for Entrainment Monitoring Freshwater	2	4	2	4	0	0	0	0	0	0	0	0	0	\$0	\$0	\$1,192		-	\$4,76
Implement Offshore Marine Sampling	16	20	20	20	10	101	0	160	4056	100	4056	50	8533	\$394,445	\$0	\$0		159,123	\$7,355,6
Other Direct Costs for Offshore Marine Sampling	16	20	20	20	0	0	0	0	0	0	0	0	0	\$0	\$0	\$5,917		-	\$110,33
Impingement Monitoring Marine	14	16	16	16	4	31	0	80	2028	50	2028	25	4246	\$196,487	\$0	\$0		65,040	\$3,009,78
Other Direct Costs for Impingement Monitoring Marine	14	16	16	16	0	0	0	0	0	0	0	0	0	\$0	\$0	\$2,947		-	\$45,14
Entrainment Monitoring Marine	16	20	20	20	4	31	0	80	1521	50	1521	25	3232	\$150,400	\$0	\$0		60,270	\$2,804,66
Other Direct Costs for Entrainment Monitoring Marine	16	20	20	20	0	0	0	0	0	0	0	0	0	\$0	\$0	\$2,256		-	\$42,07
Biological Study Laboratory Analysis (Freshwater)	2	4	2	4	0	0	0	0	0	0	0	0	0	\$0	\$0	\$78,000		-	\$312,00
Biological Study Laboratory Analysis (Marine)	16	20	20	20	0	0	0	0	0	0	0	0	0	\$0	\$0	\$152,100			\$2,839,20
Profile of Source Water Biota	27	10	6	43	32	20	0	32	60	0	20	8	172	\$10,017	\$0	\$0		7,396	\$430,74
Identification of Critical Species	27	10	6	43	32	20	0	20	40	0	0	3	115	\$7,016	\$0	\$0		4,945	\$301,68
Description of Additional Stresses	27	10	6	43	16	10	0	16	30	0	10	4	86	\$5,009	\$0	\$0		3,698	\$215,37
Write Study based on Results and Submit for Review by State	11	14	8	33	80	160	0	16	8	8	0	8	280	\$13,812	\$0	\$0		9,240	\$455,79
Recordkeeping	11	14	8	33	6	12	0	6	12	3	0	24	63	\$2,656	\$0	\$0		2,079	\$87,65
Finalize study based on State review	11	14	8	33	16	32	0	0	0	0	0	8	56	\$2,407	\$0	\$0		1,848	\$79,43
Other Direct Costs for Study Report	11	14	8	33	0	0	0	0	0	0	0	0	0	\$0	\$0	\$614		-	\$20,25
Freshwater Totals	11	17	12	23									9,089	\$428,557	\$0			452,956	\$24,688,511
Marine Totals	16	20	20	20									16,783	\$782,249	\$0	\$163,834	\$946,083	102,000	ţ= :,300,0 i i

Exhibit A.50MGD.1g
Pilot Study for New Impingement & Entrainment Technology

						Facility	Junior	CAD	Contracted			Biological		Avg.	Avg. Labor			Avg. Total		
						Manager	Technical		Manager		Statistician	Technician	Clerical	Burden Per	Cost per	Avg. Capital	Avg. O&M	Cost Per	Total Burden (hrs.)	Total Initial Cost
			(Resp						ssumed Loade					Facility	Facility	Costs	Costs*	Facility	Total Baracii (183.)	Total lilitial Cost
	Year 1	Yea	r 2 Ye	ar 3	Total	\$73	\$34	\$30	\$91	\$53	\$61	\$38	\$19	- uomity		_		,		
Activity			Α						Level of Ef	tort (nrs)				В	C	D	Ł	C+D+E	A*B	A*(C+D+E)
Calculate Reduction in Impingement Mortality and Entrainment																				
	3	3	6	2	11	80	80	8	0	0	0	0	12		\$9,040		\$0		1,980	\$99,444
Perform Engineering Estimates of Efficacy	3	3	6	2	11	40	32	0	0	0	0	0	4	76	\$4,090	\$0	\$0		836	\$44,990
Purchase, Installation & Operation of Pilot Study Technology-																				
Freshwater)	1	0	1	0	0	0	0	0	0	0	0	0	\$0	\$804,252	\$0		-	\$804,252
Purchase, Installation & Operation of Pilot Study Technology-																				
Freshwater-Impingement Only	C)	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0	\$0		-	\$0
Purchase, Installation & Operation of Pilot Study Technology-																				
Marine	3	3	5	2	10	0	0	0	0	0	0	0	0	0	\$0	\$189,062	\$0		-	\$1,890,620
Purchase, Installation & Operation of Pilot Study Technology-																				
Marine- Impingement Only	C)	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$89,921	\$0		-	\$0
Perform Impingement Monitoring (Freshwater)	C)	1	0	1	16	25	0	80	240	40	240	20	661	\$33,927	\$0	\$0		661	\$33,927
Perform Entrainment Monitoring (Freshwater)	C)	1	0	1	16	25	0	80	180	40	180	20	541	\$28,473	\$0	\$0		541	\$28,473
Perform Impingement Monitoring (Marine)	3	3	5	2	10	16	33	0	80	312	52	312	26	831	\$41,572		\$0		8,305	\$415,724
Perform Entrainment Monitoring (Marine)	3	3	5	2	10	16	33	0	80	234	52	234	26	675	\$34,482		\$0		6,745	\$344,822
Pilot Study Entrainment Laboratory Analysis (Freshwater)	C)	1	0	1	0	0	0	0	0	0	0	0	0	\$0	\$0	\$6,000		-	\$6,000
Pilot Study Entrainment Laboratory Analysis (Marine)	3	3	5	2	10	0	0	0	0	0	0	0	0	0	\$0	\$0	\$7,800		-	\$78,000
Submit Data and Analysis for Review	3	3	6	2	11	8	10	0	8	6	4	0	16	52	\$2,512	\$0	\$0		572	\$27,628
Recordkeeping	3	3	6	2	11	4	8	0	4	8	2	0	20	46	\$1,845	\$0	\$0		506	\$20,293
Other Direct Costs	3	3	6	2	11	0	0	0	0	0	0	0	0	0	\$0	\$0	\$1,020		-	\$11,220
Totals	3	6		2	11									1,831	\$92,300	\$244,988	\$7,636	\$344,925	20,146	\$3,805,393

Exhibit A.50MGD.1h

Technology Installation and Operation Plan

reciniology installation and operation rian																			
		ilities (R						Contracted Manager Assumed Load	Biologist ed Hourly Ra		•		Burden Per Facility	Labor Cost per Facility	Capital Costs	O&M Costs*	Total Cost Per Facility	Total Burden (hrs.)	Total Initial Cost
	Year 1	Year 2	Year 3	Total	\$73	\$34	\$30	\$91	\$53	\$61	\$38	\$19							
Activity			Α					Level of E	ffort (hrs)				В	С	D	E	C+D+E	A*B	A*(C+D+E)
Installation & Maintenance Schedule	12	15	8	35	8	16	0) 0	0	0	0	24	\$1,130	\$0	\$0		840	\$39,536
Description of Proposed Monitoring Parameters	12	15	8	35	2	6	0) 0	0	0	0	8	\$350	\$0	\$0		280	\$12,264
List of Technology Assessment Activities	12	15	8	35	2	4	0		0	0	0	0	6	\$282	\$0	\$0		210	\$9,884
Schedule & Methodology of Assessment Activities		15	8	35	4	4	0		0	0	0	0	8	\$429	\$0	\$0		280	\$15,008
Submit Plan for Review	12	15	8	35	0	0	0		0	0	0	2	2	\$37	\$0	\$0		70	\$1,295
Recordkeeping	12	15	8	35	1	1	0) 0	0	0	2	4	\$144	\$0	\$0		140	\$5,047
Other Direct Costs	12	15	8	35	0	0	0) C	0	0	0	0	0	\$0	\$0	\$80		-	\$2,800
Totals	12	15	8	35								·	52	\$2,372	\$0	\$80	\$2,452	1,820	\$85,834

Exhibit A.50MGD.1i

Verification Monitoring Plan

vormoution monitoring rium																				
						Facility	Junior	CAD	Contracted	Biologist	Statistician	Biologica	I Clerical	Durdon Dor	Labor Cost			Total Cost Per		
	F	acilitie	es (Re	spone	lents)				Assumed Loa	ded Hourly R	ate			Facility	per Facility	Capital Costs	O&M Costs*	Facility	Total Burden (hrs.)	Total Initial Cost
	Ye	ar 1 Y	ear 2	Year 3	Total	\$73	\$34	\$30	\$91	\$53	\$61	\$38	\$19	racility	per racility			racility		
Activity			Α						Level of	Effort (hrs)				В	С	D	E	C+D+E	A*B	A*(C+D+E)
Develop Verification Monitoring	Plan	12	15	8	35	40	60	3	3	0 () (0 4	112	\$5,284	\$0	\$0		3,920	\$184,954
Submit Data and Plans for Re	iew	12	15	8	35	0	0	()	0 () (0 2	2	\$37	\$0	\$0)	70	\$1,295
Revise Based on State Re	iew	12	15	8	35	2	4		1	0 () (0 1	8	\$331	\$0	\$0)	280	\$11,592
Recordkee	ing	12	15	8	35	1	1	•	1	1 () (0 2	6	\$265	\$0	\$0		210	\$9,289
Other Direct C	osts	12	15	8	35	0	0	()	0 () (0 0	0	\$0	\$0	\$410		-	\$14,350
Tot	als 1	2	15	8	35			·				·		128	\$5,918	\$0	\$410	\$6,328	4,480	\$221,480

Total Labor Burden, Labor Cost, and ODCs for All NPDES Application Activities

Facilities (Respondents)				Total Durdon (hro.)	Total Initial Cost
Year 1 Year 2 Year 3 Total				Total Burden (hrs.)	Total Illitial Cost
Totals				511,633	\$30,247,248

^{*} The ODC estimate was not estimated for each activity, but rather as a lump sum for each provision of the rule.

Exhibit A.50MGD.2

Facility Cost and Burden Estimates for Annual Activities

Exhibit A.50MGD.2a

Annual Monitoring for Impingement (Freshwater)

Annual Monitoring for impingement (Freshwater)																	
					Facility Manager	Junior Technical	Contracted Manager	Biologist	Statistician	Biological Technician	Clerical	Totals P	er Facility in t	he ICR Approv	al Period		acilities in the ICR aval Period
	Fac	ilities (Re	esponde	nts)			Assur	ned Loaded Ho	urly Rate			Durdon /hro)	Lahar Caat	ORM Contot	Total Coata	Burden (hrs.)	Coot (t)
	Year 1	Year 2	Year 3	Total	\$73	\$34	\$91	\$53	\$61	\$38	\$19	burden (nrs)	Labor Cost	UMIVI CUSIS	TOTAL COSTS	burden (nrs.)	Cost (\$)
Activity		-	4				ı	evel of Effort (nrs)			В	С	D	C+D	A*B	A*(C+D)
Monthly Sample Collection	0	5	11	11	2	2 0) 4	72	0	72	C	150	\$7,055	\$0		2,400	\$112,877
Onsite Analysis of Samples	0	5	11	11	4	. 0) 12	. 72	0	72	C	160	\$7,928	\$0		2,560	\$126,854
Perform Statistical Analysis	0	5	11	11	8	3 4		0	32	0	C	44	\$2,680	\$0		704	\$42,880
Record Keeping	0	5	11	11	2	2 1	1	4	1	0	16	25	\$841	\$0		400	\$13,448
Other Direct Costs	0	5	11	11	0) 0) (0	0	0	Ċ	0	\$0	\$510		-	\$8,160
Totals	0	5	11	11	16	5 5	17	148	33	144	16	379	\$18,504	\$510	\$19,014	6,064	\$304,219

Exhibit A.50MGD.2b

Annual Monitoring for Impingement (Marine)

					Facility Manager	Junior Technical	Contracted Manager	Biologist	Statistician	Biological Technician	Clerical	Totals P	er Facility in ti	he ICR Approv	al Period		acilities in the ICR oval Period
	Fac	ilities (Re	esponde	nts)			Assun	ned Loaded Ho	urly Rate	•		Durdon (bro)	Labor Coat	ORM Contot	Total Coata	Burden (hrs.)	Cost (\$)
	Year 1	Year 2	Year 3	Total	\$73	\$34	\$91	\$53	\$61	\$38	\$19	burden (nrs)	Labor Cost	U&IVI CUSIS	TOTAL COSTS	Burden (nrs.)	COSI (\$)
Activity		A	4				L	evel of Effort (hrs)			В	С	D	C+D	A*B	A*(C+D)
Monthly Sample Collection	0	4	12	12	2	0	5	94	. 0	94	0	194	\$9,127	\$0		3,110	\$146,037
Onsite Analysis of Samples	0	4	12	12	4	0	16	94	0	94	0	207	\$10,219	\$0		3,309	\$163,505
Perform Statistical Analysis	0	4	12	12	8	4	0	0	42	0	0	54	\$3,268	\$0		858	\$52,280
Record Keeping	0	4	12	12	2	1	1	5	1	0	16	27	\$950	\$0		429	\$15,196
Other Direct Costs	0	4	12	12	0	0	0	0	0	0	0	0	\$0	\$660		-	\$10,560
Totals	0	4	12	12	16	5	22	192	43	187	16	482	\$23,564	\$660	\$24,224	7,706	\$387,578

Exhibit A.50MGD.2c

Annual Monitoring for Entrainment (Freshwater)

Allitual Monitoring for Entrainment (Freshwater)																	
					Facility Manager	Junior Technical	Contracted Manager	Biologist	Statistician	Biological Technician	Clerical	Totals P	er Facility in th	ne ICR Approv	al Period		acilities in the ICR val Period
	Fac	ilities (R	esponde	nts)			Assun	ned Loaded Ho	urly Rate			Duralon (hao)	Labor Coat	OOM Contot	Total Coata	Burden (hrs.)	Annual Cost
	Year 1	Year 2	Year 3	Total	\$73	\$34	\$91	\$53	\$61	\$38	\$19	burden (nrs)	Labor Cost	U&IVI COSIS	TOTAL COSTS	burden (nrs.)	Annual Cost
Activity		-	Α .				L	evel of Effort (I	nrs)			В	С	D	C+D	A*B	A*(C+D)
Biweekly Sample Collection	0	2	4	4	4	0	12	156	0	156	0	328	\$15,564	\$0		1,968	\$93,384
Handling and Preparation of Samples	0	2	4	4	4	0	12	78	0	78	0	172	\$8,474	\$0		1,032	\$50,843
Identify & Enumerate Entrained Freshwater Biota	0	2	4	4	0	0	0	0	0	0	0	0	\$0	\$7,800		-	\$46,800
Perform Statistical Analysis	0	2	4	4	16	4	0	0	64	0	0	84	\$5,224	\$0		504	\$31,344
Recordkeeping	0	2	4	4	2	1	1	8	2	0	16	30	\$1,114	\$0		180	\$6,682
Other Direct Costs	0	2	4	4	0	0	0	0	0	0	0	-	\$0	\$510		-	\$3,060
Totals	0	2	4	4	26	5	25	242	66	234	16	614	\$30,376	\$8,310	\$38,686	3,684	\$232,113

Exhibit A.50MGD.2d

Annual Monitoring for Entrainment (Marine)

Annual Monitoring for Entrainment (Marine)																	
					Facility Manager	Junior Technical	Contracted Manager	Biologist	Statistician	Biological Technician	Clerical	Totals P	er Facility in t	ne ICR Approv	al Period		acilities in the ICR oval Period
	Fac	cilities (Re	esponde	nts)			Assun	ned Loaded Ho	urly Rate			Durdon /hro)	Lahar Caat	ORM Contot	Total Coata	Duralen (hree)	Annual Coat
	Year 1	Year 2	Year 3	Total	\$73	\$34	\$91	\$53	\$61	\$38	\$19	Burden (nrs)	Labor Cost	O&M Costs	Total Costs	Burden (hrs.)	Annual Cost
Activity		F					L	evel of Effort (nrs)			В	С	D	C+D	A*B	A*(C+D)
Biweekly Sample Collection	C) 6	14	14	4	0	12	203	0	203	0	422	\$19,836	\$0		8,440	\$396,726
Handling and Preparation of Samples	C	6	14	14	4	0	12	101	0	101	0	218	\$10,565	\$0		4,360	\$211,290
Identify & Enumerate Entrained Marine Biota	C	6	14	14	. 0	0	0	0	0	0	0	0	\$0	\$10,140		-	\$202,800
Perform Statistical Analysis	C	6	14	14	16	4	0	0	83	0	0	103	\$6,387	\$0		2,060	\$127,736
Recordkeeping	C	6	14	14	. 2	1	1	10	3	0	16	33	\$1,281	\$0		660	\$25,618
Other Direct Costs	C	6	14	14	. 0	0	0	0	0	0	0	-	\$0	\$660		-	\$13,200
Totals	0	6	14	14	26	5	25	314	86	304	16	776	\$38,069	\$10,800	\$48,869	15,520	\$977,370

Exhibit A.50MGD.2e

Biannual Status Report Activities

					Facility Manager	Junior Technical	Contracted Manager	Biologist	Statistician	Biological Technician	Clerical	Totals P	er Facility in t	he ICR Approv	al Period		acilities in the ICR val Period
			esponde					ned Loaded Ho				Burden (hrs)	Labor Cost	O&M Costs*	Total Costs	Burden (hrs.)	Annual Cost
	Year 1	Year 2	Year 3	Total	\$73	\$34	\$91	\$53	\$61	\$38	\$19	,				, ,	
Activity		-	4				L	evel of Effort (h	nrs)			В	С	D	C+D	A*B	A*(C+D)
Report on Inspection and Maintenance	0	12	15	27	16	16	0	0	0	0	0	32	\$1,715	\$0		864	\$46,310
Detail Biological Monitoring Results	0	12	15	27	24	32	4	4	24	0	0	88	\$4,889	\$0		2,376	\$132,008
Compile and Submit Report	0	12	15	27	80	80	0	0	0	0	16	176	\$8,872	\$0		4,752	\$239,544
Recordkeeping	-	12	15	27	8	12	0	0	0	0	8	28	\$1,142	\$0		756	\$30,823
Other Direct Costs	0	12	15	27	0	0	0	0	0	0	0	-	\$0	\$770		-	\$20,790
Totals	0	12	15	27	128	140	4	4	24	. 0	24	324	\$16,618	\$770	\$17,388	8,748	\$469,476

Exhibit A.50MGD.2f Verification Study

volument etally																	
					Facility Manager	Junior Technical	Contracted Manager	Biologist	Statistician	Biological Technician	Clerical	Totals P	er Facility in t	he ICR Approv	al Period		acilities in the ICR val Period
	Fac	ilities (Re	esponde	nts)			Assur	ned Loaded Hou	ırly Rate							Burden	T-4-1 O4 (6)
	Year 1	Year 2	Year 3	Total	\$73	\$34	\$91	\$53	\$61	\$38	\$19	Burden (hrs)	Labor Cost	O&M Costs*	Total Costs	(hrs.)	Total Cost (\$)
Activity		A	١				l	evel of Effort (h	rs)			В	С	D	C+D	A*B	A*(C+D)
Perform Statistical Analysis	0	12	15	27	25	30	15	15	25	0	1	111	\$6,557	\$0		2,997	\$177,039
Submit Monitoring Results & Study Analysis	0	0	0	0	0	0	0	0	0	0	4	4	\$74	\$0		-	\$0
Record Keeping	0	12	15	27	1	2	0	0	0	0	4	7	\$215	\$0		189	\$5,810
Other Direct Costs	0	12	15	27	0	0	0	0	0	0	0	-	\$0	\$510		-	\$13,770
Totals	0	12	15	27	26	32	15	15	25	0	9	122	\$6,846	\$510	\$7,356	3,186	\$196,619

Total Burden and Cost for All Annual Activities

Total Barden and Gost for All Allinda Activities								
	Facil	lities (Res	sponder	nts)			Total Burden	
	Year 1	Year 2	Year 3	Total			(hrs.)	Total Cost
Totals		•					44,908	\$2,567,376

Exhibit A.50MGD.3 Director Burden and Cost Estimates for Activities

Exhibit A.50MGD.3a Director Start-up Activities

	Directors (Responses)	Senior Technical Assumed	Junior Technical Loaded Hour	Clerical ly Rate	Burden Per Director	Labor Cost per Director	O&M Costs*	Total Cost Per Director	Total Burden (hrs.)	Total Initial Cost
		\$50	\$32	\$24	20010.	200.0.		20010.	(0.)	
Activity	Α	Leve	el of Effort (hr	s)	В	С	D	C+D	A*B	A*(C+D)
Read and Understand Rule	46	12	12	0	24	\$977	\$0		1,104	\$44,933
Mobilization/Planning	46	24	16	0	40	\$1,698	\$0		1,840	\$78,126
Training	-10	4	32	0	36	\$1,219	\$0		1,656	\$56,065
Other Direct Costs	46	0	0	0	-	\$0	\$50		-	\$2,300
Totals	46	40	60	0	100	\$3,894	\$50	\$3,944	4,600	\$181,424

Exhibit A.50MGD.3b Director Permit Issuance Activities

	Directors (Responses)	Senior Technical	Junior Technical	Clerical	Burden Per	Labor Cost per	O&M	Total Cost	Total Burden	Total Initial
	(Responses)		Loaded Hour		Permit	Permit	Costs*	Per Permit	(hrs.)	Cost*
	_	\$50	\$32	\$24				0.5	4.00	1 ± (0 D)
Activity Review Source Water Physical Data	Α		l of Effort (hrs	s)	В	С	D	C+D	A*B	A*(C+D)
Review Source Water Priysical Data			6	0	8	\$290	\$0		448	\$16,262
Review CWS Operation Narrative	00		18 18	0	24 24	\$871 \$871	\$0 \$0		1,344	\$48,787 \$48,787
Review Proposal for Collection of Information for Comprehensive Demonstration Study	43		16	0	32	\$1,302	\$0 \$0		1,344 1,376	\$46,767 \$56,003
Review Source Water Body Flow Information			6	0		\$1,302			1,376	*
Review Design and Construction Technology Plan			8	0	8	\$290 \$1,443	\$0 \$0			\$4,937
37				0	32		\$0		1,056	\$47,626
Review Impingement Mortality Monitoring Results		80	10	0	90	\$4,279	\$0		2,790	\$132,649
Review Entrainment Characterization Monitoring Results			10	0	90	\$4,279	\$0		1,800	\$85,580
Review Baseline Characterization Monitoring Results and Study Findings			25	0	265	\$12,678	\$0		8,745	\$418,358
Review Pilot Study for New Impingement & Entrainment Technology	11	_	16	0	32	\$1,302	\$0		352	\$14,326
Review Restoration Measures	6	400	100	0	500	\$22,990	\$0		2,800	\$128,744
Review Information to Support Site-Specific Determination of BTA	18	800	200	0	1,000	\$45,980	\$0		18,000	\$827,640
Review Technology Installation and Operation Plan & Verification Monitoring Plan	35	16	8	0	24	\$1,047	\$0		840	\$36,652
Determine Monitoring Frequency	56	2	6	0	8	\$290	\$0		448	\$16,262
Determine Record keeping and Reporting Frequency	56	2	6	0	8	\$290	\$0		448	\$16,262
Establish Requirements for Site-Specific Technology	18	8	24	0	32	\$1,162	\$0		576	\$20,909
Considering Public Comments	56	16	16	0	32	\$1,302	\$0		1,792	\$72,934
Issuing Permit	56	1	6	1	8	\$265	\$0		448	\$14,846
Permit Record Keeping	56	1	1	2	4	\$130	\$0		224	\$7,269
Other Direct Costs	56	0	0	0	-	\$0	\$310		-	\$17,360
Totals	56	1718	500	3	810	36,282	\$310	\$36,592	44,967	\$2,032,194

Exhibit A.50MGD.3c Verification Study Review

vermouten etady keview										
	Directors	Senior Technical	Junior Technical	Clerical	Burden Per	Labor Cost per	O&M	Total Cost	Total Burden	Total Initial
	(Responses)	Assumed	Loaded Hour	ly Rate	Permit	Permit	Costs*	Per Permit	(hrs.)	Cost
		\$50	\$32	\$24						
Activity	Α	Leve	of Effort (hr	s)	В	С	D	C+D	A*B	A*(C+D)
Review of Verification Studies	0	2	4	0	6	\$227	\$0		-	\$0
Permit Modification Due to Unfavorable Results	0	4	10	0	14	\$517	\$0		-	\$0
Record Keeping	v	0	0	1	1	\$24	\$0		-	\$0
Other Direct Costs	0	0	0	0	-	\$0	\$10		-	\$0
Totals	0	6	14	1	21	\$768	\$10	\$778	0	\$0

Exhibit A.50MGD.3e Annual Director Activities

	Directors (Responses)	Senior Technical Assumed \$50	Junior Technical Loaded Hour \$32	Clerical ly Rate \$24	Burden Per Permit	Labor Cost per Permit		Total Cost Per Permit	Total Burden (hrs.)	Total Annual Cost
Activity	Α	Leve	l of Effort (hr	s)	В	С	D	C+D	A*B	A*(C+D)
Review of Biannual Status Report	27	6	12	0	18	\$680	\$0		486	\$18,355
Compliance Tracking	27	4	12	0	16	\$581	\$0		432	\$15,682
Determination on Monitoring Frequency Reduction	27	4	8	0	12	\$453	\$0		324	\$12,236
Record Keeping	27	1	2	1	4	\$138	\$0		108	\$3,713
Other Direct Costs	27	0	0	0	-	\$0	\$30		-	\$810
Totals	27	15	34	1	50	\$1,851	\$30	\$1,881	1,350	\$50,795

Total Burden and Cost for All Director Activities

		Total Burden (hrs.)	Total Initial Cost
Totals		50,917	\$2,264,413

Exhibit A.50MGD.4 Federal Burden and Cost Estimates for Activities

Exhibit A.50MGD.4a Federal Permit Program Oversight Activities

	Federal	Senior Technical	Junior Technical	Clerical	Burden per	Labor Cost	ODCs lump	Total Cost	Total Burden	Total Initial
	(Responses)		d Loaded Hourly R		Review	Review	sum*	Review	(hrs.)	Cost *
		\$50	\$32	\$24						
Activity	Α	Lev	el of Effort (hrs)		В	С	D	C+D	A*B	A*(C+D)
Review Source Water Physical Data	56	1	3	0	4	\$145	\$0		224	\$8,131
Review CWIS Data	56	1	2	0	3	\$113	\$0		168	\$6,345
Review CWS Operation Narrative	56	1	2	0	3	\$113	\$0		168	\$6,345
Review Proposal for Collection of Information for Comprehensive										
Demonstration Study	43	1	2	0	3	\$113	\$0		129	\$4,872
Review Source Water Body Flow Information	17	1	2	0	3	\$113	\$0		51	\$1,926
Review Design and Construction Technology Plan	33	1	3	0	4	\$145	\$0		132	\$4,792
Impingement Mortality Study and/or Entrainment Characterization Study	31	3	6	0	9	\$340	\$0		279	\$10,537
Review Pilot Study for New Impingement & Entrainment Technology	11	1	2	0	3	\$113	\$0		33	\$1,246
Review Restoration Measures	6	3	6		9	\$340	\$0		50	\$1,903
Review Information to Support Site-Specific Determination of BTA	18	6	12	0	18	\$680	\$0		324	\$12,236
Review Technology Installation and Operation Plan & Verification										
Monitoring Plan	35	1	3	0	4	\$145	\$0		140	\$5,082
Review the Monitoring Frequency	56	1	2	0	3	\$113	\$0		168	
Review Establish Requirements for Site-Specific Technology		1	3	0	4	\$145	\$0		72	
Permit Record Keeping	56	1	1	2	4	\$130	·		224	* /-
Other Direct Costs	56	0	0	0	-	\$0	\$50		0	\$2,800
Totals	56	23	49	2	39	\$1,422	\$50	\$1,472	2,162	\$82,443

Exhibit A.50MGD.5 Respondents for the ICR Approval Period Year by Year by Activity

Facilities

	Year 1	Year 2	Year 3	
				Annual
	2010	2011	2012	Average ¹
Start-up Activities	31	17	8	19
Permit Application Activities	31	17	8	19
Proposal for Collection of Information for Comprehensive Demonstration Study	27	10	6	14
FW River/Stream Source Water Body Flow Information	4	6	5	5
FW Lake/Reservoir Source Water Body Flow Information	1	0	1	1
Design and Construction Technology Plan (Impingement)	9	14	8	10
Design and Construction Technology Plan (Entrainment)	7	9	4	7
Design and Construction Technology Plan (All)	11	14	8	11
Freshwater Baseline Monitoring for Impingement Mortality and/or Entrainment Study	11	17	12	13
Freshwater Monitoring for Impingement Mortality Study	11	17	12	13
Freshwater Monitoring for Entrainment Study	2	4	2	3
Marine Baseline Monitoring for Impingement Mortality and/or Entrainment Study	16	20	20	19
Marine Monitoring for Impingement Mortality Study	14	16	16	15
Marine Monitoring for Entrainment Study	16	20	20	19
Impingement Mortality & Entrainment Characterization Study Initial Analysis	27	10	6	14
Impingement Mortality & Entrainment Characterization Study Final Report	11	14	8	11
Pilot Study Impingement Monitoring (Freshwater)	0	1	0	0
Pilot Study Entrainment Monitoring (Freshwater)	0	1	0	0
Pilot Study Impingement Monitoring (Marine)	3	5	2	3
Pilot Study Entrainment Monitoring (Marine)	3	5	2	3
Pilot Study Entrainment Monitoring (All)	3	6	2 2 2 8	4
Technology Installation and Operation Plan	12	15	8	12
Verification Monitoring Plan	12	15	8	12
Annual Monitoring for Impingement (Freshwater)	0	5	11	5
Annual Monitoring for Impingement (Marine)	0	4	12	5
Annual Monitoring for Entrainment (Freshwater)	0	2	4	2
Annual Monitoring for Entrainment (Marine)	0	2 6	14	7
Biannual Status Report Activities	0	12	15	9
Verification Study	0	12	15	9
ents	31	44	40	38

Directors

	Year 1	Year 2	Year 3	
				Annual
	2010	2011	2012	Average ²
Director Start-up Activities	46	0	0	15
Director Permit Issuance Activities				
Review Permit Application Information	31	17	8	19
Review Proposal for Collection of Information for Comprehensive Demonstration Study	27	10	6	14
Review Source Water Body Flow Information	5	6	6	6
Review Design and Construction Technology Plan	11	14	8	11
Review Impingement Mortality Monitoring Results	9	14	8	10
Review Entrainment Characterization Monitoring Results	7	9	4	7
Review Baseline Characterization Monitoring Results and Study Findings	11	14	8	11
Review Pilot Study for New Impingement & Entrainment Technology	3	6	2	4
Review Restoration Measures	3	2	1	2
Review Information to Support Site-Specific Determination of BTA	5	9	4	6
Review Technology Installation and Operation Plan & Verification Monitoring Plan	12	15	8	12
Determine Monitoring Frequency	31	17	8	19
Determine Permit Requirements and Issue Permit	31	17	8	19
Verification Study Review	0	0	0	0
Alternative Regulatory Requirements	0	0	0	0
Annual Director Activities				
Review of Biannual Status Report	0	12	15	9
Compliance Tracking	0	12	15	9
Determination on Monitoring Frequency Reduction	0	12	15	9
Record Keeping	0	12	15	9
Respondents	46	44	40	43

Sum for Facilities and Directors

	Year 1	Year 2	Year 3	
				Annual
	2010	2011	2012	Average
Facilities	31	44	40	38
Directors	46	44	40	43
Yearly Total	77	88	80	82

^[1] Each facility is one respondent. One respondent may be involved in more than one activity; however, in order to avoid double-counting, the maximum number of respondents expected to be involved in the rule activities annually is assumed to be the number of respondents for that year.

^[2] Each Director is one respondent.

Exhibit A.50MGD.6 Responses for the ICR Approval Period Year by Year by Activity

Facilities

	Year 1	Year 2	Year 3	
				Annual
	2010	2011	2012	Average
Start-up Activities	31	17	8	19
Permit Application Activities	31	17	8	19
Proposal for Collection of Information for Comprehensive Demonstration Study	27	10	6	14
FW River/Stream Source Water Body Flow Information	4	6	5	5
FW Lake/Reservoir Source Water Body Flow Information	1	0	1	1
Design and Construction Technology Plan (Impingement)	9	14	8	10
Design and Construction Technology Plan (Entrainment)	7	9	4	7
Design and Construction Technology Plan (All)	11	14	8	11
Freshwater Baseline Monitoring for Impingement Mortality and/or Entrainment				
Study	11	17	12	13
Freshwater Monitoring for Impingement Mortality Study	11	17	12	13
Freshwater Monitoring for Entrainment Study	2	4	2	3
Marine Baseline Monitoring for Impingement Mortality and/or Entrainment				
Study	16	20	20	19
Marine Monitoring for Impingement Mortality Study	14	16	16	15
Marine Monitoring for Entrainment Study	16	20	20	19
Impingement Mortality & Entrainment Characterization Study Initial Analysis	27	10	6	14
Impingement Mortality & Entrainment Characterization Study Final Report	11	14	8	11
Pilot Study Impingement Monitoring (Freshwater)	0	1	0	0
Pilot Study Entrainment Monitoring (Freshwater)	0	1	0	0
Pilot Study Impingement Monitoring (Marine)	3	5	2	3
Pilot Study Entrainment Monitoring (Marine)	3	5	2	3
Pilot Study Entrainment Monitoring (All)	3	6	2	4
Technology Installation and Operation Plan	12	15	8	12
Verification Monitoring Plan	12	15	8	12
Annual Monitoring for Impingement (Freshwater)	0	5	11	5
Annual Monitoring for Impingement (Marine)	0	4	12	5
Annual Monitoring for Entrainment (Freshwater)	0	2	4	2
Annual Monitoring for Entrainment (Marine)	0	6	14	7
Biannual Status Report Activities	0	12	15	9
Verification Study	0	12	15	9
Responses	272	312	245	276

Directors

	Year 1	Year 2	Year 3	
				Annual
	2010	2011	2012	Average
Director Start-up Activities	46	0	0	15
Director Permit Issuance Activities				
Review Permit Application Information	31	17	8	19
Review Proposal for Collection of Information for Comprehensive				
Demonstration Study	27	10	6	14
Review Source Water Body Flow Information	5	6	6	6
Review Design and Construction Technology Plan	11	14	8	11
Review Impingement Mortality Monitoring Results	9	14	8	10
Review Entrainment Characterization Monitoring Results	7	9	4	7
Review Baseline Characterization Monitoring Results and Study				
Findings	11	14	8	11
Review Pilot Study for New Impingement & Entrainment Technology	3	6	2	4
Review Restoration Measures	3	2	1	2
Review Information to Support Site-Specific Determination of BTA	5	9	4	6
Review Technology Installation and Operation Plan & Verification				
Monitoring Plan	12	15	8	12
Determine Monitoring Frequency	31	17	8	19
Determine Permit Requirements and Issue Permit	31	17	8	19
Verification Study Review	0	0	0	0
Alternative Regulatory Requirements	0	0	0	0
Annual Director Activities	-	-		-
Review of Biannual Status Report	0	12	15	9
Compliance Tracking	0	12	15	9
Determination on Monitoring Frequency Reduction	0	12	15	9
Record Keeping	0	12	15	9
Responses	232	198	139	190

Sum for Facilities and Directors

	Year 1	Year 2	Year 3	
	2010	2011	2012	Annual Average
Facilities	272	_	_	
Directors	232	198	139	190
Yearly Tota	I 504	510	384	466

Exhibit A.50MGD.7 Hourly Burden for the ICR Approval Period Year by Year for Facilities

Facility Activities

		Year 1	Year 2	Year 3	
					Annual
	Source (Exhibit)	2010	2011	2012	Average
NPDES Permit Application Activities					
Start-up Activities	A.50MGD.1a	1,333	731	344	803
Permit Application Activities	A.50MGD.1b	7,657	4,199	1,976	4,61
Proposal for Collection of Information for Comprehensive Demonstration Study	A.50MGD.1c	7,344	2,720	1,632	3,899
FW River/Stream Source Water Body Flow Information	A.50MGD.1d	400	600	500	500
FW Lake/Reservoir Source Water Body Flow Information	A.50MGD.1d	112	0	112	75
Design and Construction Technology Plan (Impingement)	A.50MGD.1e	279	434	248	320
Design and Construction Technology Plan (Entrainment)	A.50MGD.1e	217	279	124	207
Design and Construction Technology Plan (All)	A.50MGD.1e	330	420	240	330
Freshwater Baseline Monitoring for Impingement Mortality and/or Entrainment Study	A.50MGD.1f	24,305	37,562	26,514	29,460
Freshwater Monitoring for Impingement Mortality Study	A.50MGD.1f	12,150	18,777	13,254	14,727
Freshwater Monitoring for Entrainment Study	A.50MGD.1f	1,689	3,378	1,689	2,252
Marine Baseline Monitoring for Impingement Mortality and/or Entrainment Study	A.50MGD.1f	45,464	56,830	56,830	53,041
Marine Monitoring for Impingement Mortality Study	A.50MGD.1f	19,795	22,623	22,623	21,680
Marine Monitoring for Entrainment Study	A.50MGD.1f	17,220	21,525	21,525	20,090
Impingement Mortality & Entrainment Characterization Study Initial Analysis	A.50MGD.1f	10,071	3,730	2,238	5,346
Impingement Mortality & Entrainment Characterization Study Final Report	A.50MGD.1f	4,389	5,586	3,192	4,389
Pilot Study Impingement Monitoring (Freshwater) for Pilot Study	A.50MGD.1g	0	661	0	220
Pilot Study Entrainment Monitoring (Freshwater) for Pilot Study	A.50MGD.1g	0	541	0	180
Pilot Study Impingement Monitoring (Marine) for Pilot Study	A.50MGD.1g	2,492	4,153	1,661	2,768
Pilot Study Entrainment Monitoring (Marine) for Pilot Study	A.50MGD.1g	2,024	3,373	1,349	2,248
Pilot Study Entrainment Monitoring (All) for Pilot Study	A.50MGD.1g	1,062	2,124	708	1,298
Technology Installation and Operation Plan	A.50MGD.1h	624	780	416	607
Verification Monitoring Plan	A.50MGD.1i	1,536	1,920	1,024	1,493
NPDES Permit Application Activity Total		160,491	192,944	158,199	170,544
Annual Activities					
Annual Monitoring for Impingement (Freshwater)	A.50MGD.2a	0	1,895	4,169	2,02
Annual Monitoring for Impingement (Marine)	A.50MGD.2b	0	1,926	5,779	2,569
Annual Monitoring for Entrainment (Freshwater)	A.50MGD.2c	0	1,228	2,456	1,22
Annual Monitoring for Entrainment (Marine)	A.50MGD.2d	0	4,656	10,864	5,17
Biannual Status Report Activities	A.50MGD.2e	0	3,888	4,860	2,910
Verification Study	A.50MGD.2f	0	1,416	1,770	1,06
Annual Activity Yearly Labor Total		0	15,009	29,898	14,969
Vanilit de la Tatal		400 (01	207.052	400.007	405.54
Yearly Labor Total		160,491	207,953	188,097	185,51

Exhibit A.50MGD.8 Hourly Burden for the ICR Approval Period Year by Year for Directors and Federal Government

Director Activities

		Year 1	Year 2	Year 3	
	Source				Annual
	(Exhibit)	2010	2011	2012	Average
Director Start-up Activities	A.50MGD.3a	4,600	0	0	1,533
Director Permit Issuance Activities	A.50MGD.3b	16,301	19,258	9,408	14,989
Verification Study Review	A.50MGD.3c	0	0	0	0
Alternative Regulatory Requirements	A.50MGD.3d	0	0	0	0
Annual Director Activities	A.50MGD.3e	0	600	750	450
Yearly Total		20,901	19,858	10,158	16,972

Federal Activities

		Year 1	Year 2	Year 3	
	Source				Annual
	(Exhibit)	2010	2011	2012	Average
Federal Permit Program Oversight Activities	A.50MGD.4a	943	810	409	721
Yearly Total		943	810	409	721

Exhibit A.50MGD.9 Costs for the ICR Approval Period Year by Year for Facilities

Facility Activities

Facility Activities		Year 1	Year 2	Year 3	
	Source				Annual
	(Exhibit)	2010	2011	2012	Average
NPDES Permit Application Activities					
Start-up Activities	A.50MGD.1a	\$65,754	\$36,059	\$16,969	\$39,594
Permit Application Activities	A.50MGD.1b	\$308,493	\$169,174	\$79,611	\$185,759
Proposal for Collection of Information for Comprehensive Demonstration Study	A.50MGD.1c	\$333,283	\$123,438	\$74,063	\$176,928
FW River/Stream Source Water Body Flow Information	A.50MGD.1d	\$13,523	\$20,285	\$16,904	\$16,904
FW Lake/Reservoir Source Water Body Flow Information	A.50MGD.1d	\$3,946	\$0 40.446	\$3,946	\$2,630
Design and Construction Technology Plan (Impingement) Design and Construction Technology Plan (Entrainment)	A.50MGD.1e A.50MGD.1e	12,308 9,573	19,146	10,941	14,132 9,117
Design and Construction Technology Plan (Entrainment) Design and Construction Technology Plan (All)	A.50MGD.1e	9,573 10,142	12,308 12,908	5,470 7,376	10,142
Design and Construction Technology Plan (Ail)	A.SUNGD. TE	10,142	12,906	7,376	10,142
Freshwater Baseline Monitoring for Impingement Mortality and/or Entrainment Study	A.50MGD.1f	1,128,042	1,743,338	1,230,592	1,367,324
Freshwater Monitoring for Impingement Mortality Study	A.50MGD.1f	566,982	876,245	618,526	687,251
Freshwater Monitoring for Entrainment Study	A.50MGD.1f	79,454	158,907	79,454	105,938
Marine Deceline Maritarine for Invainnement Martalit, and/or Entrainment Charles	A FOMOD 44	0.404.005	0.007.000	0.007.000	0.454.070
Marine Baseline Monitoring for Impingement Mortality and/or Entrainment Study	A.50MGD.1f	2,101,605	2,627,006	2,627,006	2,451,873
Marine Monitoring for Impingement Mortality Study	A.50MGD.1f	916,020	1,046,880	1,046,880	1,003,260
Marine Monitoring for Entrainment Study	A.50MGD.1f	801,332	1,001,665	1,001,665	934,888
Impingement Mortality & Entrainment Characterization Study Initial Analysis	A.50MGD.1f	595,126	220,417	132,250	315,931
Impingement Mortality & Entrainment Characterization Study Final Report	A.50MGD.1f	207,629	264,256	151,003	207,629
Pilot Study Impingement Monitoring (Freshwater) for Pilot Study	A.50MGD.1g	0	33,927	0	11,309
Pilot Study Entrainment Monitoring (Freshwater) for Pilot Study	A.50MGD.1g	0	28,473	0	9,491
Pilot Study Impingement Monitoring (Marine) for Pilot Study	A.50MGD.1g	124,717	207,862	83,145	138,575
Pilot Study Entrainment Monitoring (Marine) for Pilot Study	A.50MGD.1g	103,447	172,411	68,964	114,941
Pilot Study Entrainment Monitoring (All) for Pilot Study	A.50MGD.1g	52,460	104,921	34,974	64,118
Technology Installation and Operation Plan	A.50MGD.1h	\$28,469	\$35,586	\$18,979	27,678
Verification Monitoring Plan	A.50MGD.1i	\$71,016	\$88,770	\$47,344	\$69,043
NPDES Permit Application Activity Total		\$7,533,323	\$9,003,984	\$7,356,062	\$7,964,456
Annual Activities					
Marine Monitoring for Impingement Mortality Study	A.50MGD.2a	\$0	\$92,519	\$203,541	\$98,686
Impingement Mortality & Entrainment Characterization Study Initial Analysis	A.50MGD.2b	\$0	\$94,255	\$282,764	\$125,673
Impingement Mortality & Entrainment Characterization Study Final Report	A.50MGD.2c	\$0	\$60,751	\$121,502	\$60,751
Pilot Study Impingement Monitoring (Freshwater)	A.50MGD.2d	\$0	\$228,411	\$532,959	\$253,790
Biannual Status Report Activities	A.50MGD.2e	\$0	\$199,416	\$249,270	\$149,562
Verification Study	A.50MGD.2f	\$0 \$0	\$81,266	\$101,583	\$60,950 \$740,413
Annual Activity Yearly Labor Total		\$0	\$756,618	\$1,491,619	\$749,412
Yearly Labor Total		\$7,533,323	\$9,760,601	\$8,847,681	\$8,713,868

Facility O&M

		Year 1	Year 2	Year 3	
	Source				Annual
	(Exhibit)	2010	2011	2012	Average
NPDES Application					
Purchase, Installation & Operation of Pilot Study Technology-Freshwater	A.50MGD.1i	\$0	\$804,252	\$0	\$268,084
Purchase, Installation & Operation of Pilot Study Technology-Freshwater-Impingement Only	A.50MGD.1i	\$0	\$0	\$0	\$0
Purchase, Installation & Operation of Pilot Study Technology-Marine	A.50MGD.1i	\$567,186	\$945,310	\$378,124	\$630,207
Purchase, Installation & Operation of Pilot Study Technology-Marine- Impingement Only	A.50MGD.1i	\$0	\$0	\$0	\$0
Biological Study Laboratory Analysis (Freshwater)	A.50MGD.1i	\$78,000	\$156,000	\$78,000	\$104,000
Biological Study Laboratory Analysis (Marine)	A.50MGD.1i	\$811,200	\$1,014,000	\$1,014,000	\$946,400
Pilot Study Entrainment Laboratory Analysis (Freshwater)	A.50MGD.1i	\$0	\$6,000	\$0	\$2,000
Pilot Study Entrainment Laboratory Analysis (Marine)	A.50MGD.1i	\$23,400	\$39,000	\$15,600	\$26,000
Other Direct Costs	A.50MGD.1a-I	\$142,923	\$157,613	\$123,272	\$141,269
Annual					
Identify & Enumerate Entrained Freshwater Biota	A.50MGD.2g	\$0	\$15,600	\$31,200	\$15,600
Identify & Enumerate Entrained Marine Biota	A.50MGD.2g	\$0	\$60,840	\$141,960	\$67,600
Other Direct Costs	A.50MGD.2a-g	\$0	\$25,530	\$44,010	\$23,180
Equipment Cost Subtotal		\$567,186	\$1,749,562	\$378,124	\$898,291
Laboratory Analysis Subtotal		\$912,600	\$1,291,440	\$1,280,760	\$1,161,600
Other Direct Costs Subtotal		\$142,923	\$183,143	\$167,282	\$164,449
Yearly O&M Total		\$1,622,709	\$3,224,145	\$1,826,166	\$2,224,340

Exhibit A.50MGD.10 Costs for the ICR Approval Period Year by Year for Directors and Federal Government

Director Activities

		Year 1	Year 2	Year 3	
	Source				Annual
	(Exhibit)	2010	2011	2012	Average
Director Start-up Activities	A.50MGD.3a	\$179,124	\$0	\$0	\$59,708
Director Permit Issuance Activities	A.50MGD.3b	\$717,497	\$871,038	\$426,298	\$671,611
Verification Study Review	A.50MGD.3c	\$0	\$0	\$0	\$0
Alternative Regulatory Requirements	A.50MGD.3d	\$0	\$0	\$0	\$0
Annual Director Activities	A.50MGD.3e	\$0	\$22,216	\$27,770	\$16,662
Yearly Total		\$896,621	\$893,254	\$454,068	\$747,981

Director O&M

		Year 1	Year 2	Year 3	
	Source				Annual
	(Exhibit)	2010	2011	2012	Average
Start-Up & NPDES Application					
Other Direct Costs	A.50MGD.3a-b	\$11,910	\$5,270	\$2,480	\$6,553
Annual					
Other Direct Costs	A.50MGD.3c-d	\$0	\$360	\$450	\$270
Yearly O&M Cost Total		\$11,910	\$5,630	\$2,930	\$6,823

Federal Labor Activities

		Year 1	Year 2	Year 3	
	Source				Annual
	(Exhibit)	2010	2011	2012	Average
Federal Permit Program Oversight Activities	A.50MGD.4a	34,605	29,918	15,120	\$26,548
Yearly Total		\$34,605	\$29,918	\$15,120	\$26,548

Federal O&M

		Year 1	Year 2	Year 3	
	Source				Annual
	(Exhibit)	2010	2011	2012	Average
Federal Permit Program Oversight ODCs	A.50MGD.4a	\$1,550	\$850	\$400	\$933
Yearly Total		\$1,550	\$850	\$400	\$933

Exhibit A.50MGD.11 Summary of the Burden, Respondents, Responses, and Costs for the ICR Approval Period by Year and Annual Averages

Facilities

		Year 1	Year 2	Year 3		Three Year
	Source (Exhibit)	2010	2011	2012	Annual Average	Total 1
Burden (hours)	A.50MGD.7	160,491	207,953	188,097	185,514	556,541
Respondents (number)	A.50MGD.5	31	44	40	38	56
Responses (number)	A.50MGD.6	272	312	245	276	829
Costs (labor)	A.50MGD.9	\$7,533,323	\$9,760,601	\$8,847,681	\$8,713,868	\$26,141,604
Costs (Equipment)	A.50MGD.9	\$567,186	\$1,749,562	\$378,124	\$898,291	\$2,694,872
Costs (Lab Analysis)	A.50MGD.9	\$912,600	\$1,291,440	\$1,280,760	\$1,161,600	\$3,484,800
Costs (Other Direct Costs)	A.50MGD.9	\$142,923	\$183,143	\$167,282	\$164,449	\$493,348
Total Costs		\$9,156,032	\$12,984,746	\$10,673,847	\$10,938,208	\$32,814,624

^[1] Each facility is one respondent. One respondent may perform activities in more than one year. So to avoid double-counting, the respondent 3 year total, is the total number of facilities that must perform one or more activities during the ICR approval period.

Directors

		Year 1	Year 2	Year 3		Three Year
	Source (Exhibit)	2010	2011	2012	Annual Average	Total ¹
Burden (hours)	, ,	20,901	19,858	10,158	16,972	50,917
Respondents (number)	A.50MGD.5	46	44	40	43	46
Responses (number)	A.50MGD.6	232	198	139	190	569
Costs(labor)	A.50MGD.10	\$896,621	\$893,254	\$454,068	\$747,981	\$2,243,943
Costs (Other Direct Costs)	A.50MGD.10		\$5,630	. ,		\$20,470
Total Costs		\$908,531	\$898,884	\$456,998	\$754,804	\$2,264,413

^[1] Each director is one respondent. One respondent may perform activities in more than one year. So to avoid double-counting, the respondent 3 year total, is the total number of directors that must perform one or more activities during the ICR approval period.

Federal Government

		Year 1	Year 2	Year 3		Three Year
	Source (Exhibit)	2010	2011	2012	Annual Average	Total
Burden (hours)	A.50MGD.8	943	810	409	721	2,162
Costs(labor)	A.50MGD.10	\$34,605	\$29,918	\$15,120	\$26,548	\$79,643
Costs (O&M)	A.50MGD.10	\$1,550	\$850	\$400	\$933	\$2,800
Total Costs		\$36,155	\$30,768	\$15,520	\$27,481	\$82,443

Totals for Respondents (Facilities and Directors)*

	Annual	Three Year
	Average	Total
Total Respondent Burden (hours)	202,486	607,458
Total Respondents (number)	81	102
Total Respondent Labor Costs	\$9,461,849	\$28,385,547
Total Respondent Capital and O&M Costs	\$2,231,163	\$6,693,490
Total Respondent Cost for All Activities	\$11,693,012	\$35,079,037

^{*} Totals for annual averages may not match exactly due to rounding discrepancies

Exhibit A.50MGD.12 Facility Cost and Burden Estimates for NPDES Permit Renewal Activities

Exhibit A.50MGD.12a Start-up Activities

	Facility Manager	Junior Technical	CAD Operator	Contracted Manager	Biologist	Statistician	Biological Technician	Clerical	Burden Per Facility	Labor Cost per	O&M Costs*	Total Cost Per
				Assumed Load	ed Hourly Rate					Facility		Facility
	\$73	\$34	\$30	\$91	\$53	\$61	\$38	\$19	1			
Activity			•	Level of E	ffort (hrs)	•	•	•	В	С	D	C+D
Read and Understand Rule	4	4	0	0	0	0	0	0	8	\$429		
Mobilization/Planning	1	2	0	0	0	0	0	0	3	\$141		
Training	1	1	0	0	0	0	0	0	2	\$107		
Other Direct Costs	0	0	0	0	0	0	0	0	0	\$0	\$50	
Totals	6	7	0	0	0	0	0	-	13	\$677		\$727

Exhibit A.50MGD.12b Permit Application Activities

	Facility Manager	Junior Technical	CAD Operator	Contracted Manager	Biologist	Statistician	Biological Technician	Clerical	Burden Per Facility	Labor Cost per	O&M Costs*	Total Cost Per
				Assumed Load	ed Hourly Rate				Burden Per Facility	Facility		Facility
	\$73	\$34	\$30	\$91	\$53	\$61	\$38	\$19				
Activity				Level of E	ffort (hrs)				В	С	D	C+D
Source Water Physical Data	1	5	12	0	0	0	0	0	18	\$607		
Configuration and Location of CWIS	1	1	1	0	0	0	0	0	3	\$138		
Facility Water Balance Diagram	1	1	1	0	0	0	0	0	3	\$138		
CWIS Operation Narrative	12	30	0	0	0	0	0	0	42	\$1,898		
CWS Operation Narrative	12	30	0	0	0	0	0	0	42	\$1,898		
Engineering Calculations	6	24	0	0	0	0	0	0	30	\$1,255		
Submit Materials for Review by State	0	0	0	0	0	0	0	3	3	\$56		
Recordkeeping	1	3	1	0	0	0	0	1	6	\$224		
Other Direct Costs	0	0	0	0	0	0	0	0	0	\$0	\$255	
Totals	34	94	15	0	0	0	0	4	147	\$6,213		\$6,468

Exhibit A.50MGD.12c

Proposal for Collection of Information for Comprehensive Demonstration Study

	Facility Manager	Junior Technical	CAD Operator	Contracted Manager	Biologist	Statistician	Biological Technician	Clerical	Burden Per Facility	Labor Cost per	O&M Costs*	Total Cost Per
				Assumed Load	led Hourly Rate				burden Fer Facility	Facility	Oaw Costs	Facility
	\$73	\$34	\$30	\$91	\$53	\$61	\$38	\$19				
Activity				Level of E	ffort (hrs)				В	С	D	C+D
Description of Historical Studies that will be Used	6	12	0	0	0	0	0	1	19	\$866		
Description of Proposed and/or Implemented Technologies	2	6	0	0	0	0	0	0	8	\$350		
Develop Source Water Sampling Plan	12	18	2	0	0	0	0	1	33	\$1,582		
Submit Data and Plans for Review	0	0	0	0	0	0	0	4	4	\$74		
Revise Based on State Review	2	5	1	0	0	0	0	1	9	\$364		
Recordkeeping	1	2	0	0	0	0	0	2	5	\$178		
Other Direct Costs	0	0	0	0	0	0	0	0	0	\$0	\$200)
Totals	23	43	3.6	0	0	0	0	9	78	\$3,414		\$3,614

Exhibit A.50MGD.12d

Source Water Body Flow Information

Source water body Flow information												
	Facility Manager	Junior Technical	CAD Operator	Contracted Manager	Biologist	Statistician	Biological Technician	Clerical	Burden Per Facility	Labor Cost per	O&M Costs*	Total Cost Per
				Assumed Load	ed Hourly Rate				burden Fer Facility	Facility	Odivi Costs	Facility
	\$73	\$34	\$30	\$91	\$53	\$61	\$38	\$19				
Activity				Level of E	ffort (hrs)				В	С	D	C+D
Gather Information to Characterize Flow (FW River/Stream)	0	10	0	0	0	0	0	0	10	\$326		
Water Body Thermal Stratification Narrative (Lake/Reservoir)	1.2	12	0	0	0	0	0	0	13	\$496		
Perform Engineering Calculations	2.4	10	0	0	0	0	0	0	12	\$502		
Submit Data and Analysis for Review	0	0	0	0	0	0	0	5	5	\$89		
Recordkeeping	0.3	0.9	0	0	0	0	0	2.4	4	\$97		
Other Direct Costs	0	0	0	0	0	0	0	0	0	\$0	\$100	
Totals	4	32	0	0	0	0	0	7	43	\$1,510		\$1,610

Exhibit A.50MGD.12e

Design and Construction Technology Plan

	Facility Manager	Junior Technical	CAD Operator	Contracted Manager	Biologist	Statistician	Biological Technician	Clerical	Burden Per Facility	Labor Cost per	O&M Costs*	Total Cost Per
	Assumed Loaded Hourly Rate								Burden Per Facility	Facility	Oaivi Costs	Facility
	\$73	\$34	\$30	\$91	\$53	\$61	\$38	\$19				
Activity				Level of E	ffort (hrs)				В	С	D	C+D
Delineate Hydraulic Zone of Influence	1	3	4	0	0	0	0	0	8	\$296		
Develop Narrative Description of Technologies (Impingement)	3	6	0	0	0	0	0	0	9	\$424		
Perform Engineering Calculations (Impingement)	2	6	0	0	0	0	0	0	8	\$350		
Develop Narrative Description of Technologies (Entrainment)	3	6	0	0	0	0	0	0	9	\$424		
Perform Engineering Calculations (Entrainment)	2	6	0	0	0	0	0	0	8	\$350		
Submit Data and Analysis for Review	0	0	0	0	0	0	0	3	3	\$56		
Recordkeeping	1	1	0	0	0	0	0	3	5	\$163		
Other Direct Costs	0	0	0	0	0	0	0	0	0	\$0	\$150	
Totals	12	28	4	0	0	0	0	6	50	\$2,063		\$2,213

Exhibit A.50MGD.12f

Impingement Mortality Study and/or Entrainment Characterization Study

	Facility Manager	Junior Technical	CAD Operator	Contracted Manager	Biologist	Statistician	Biological Technician	Clerical		Labor Cost per		3 Year Total
	,			Assumed Loade	ů				Burden Per Facility	Facility	O&M Costs*	Cost Per
	\$73	\$34	\$30	\$91	\$53	\$61	\$38	\$19		-		Facility
Activity	•	<u> </u>		Level of Et	fort (hrs)				В	С	D	C+D
Implement Offshore Freshwater Sampling	2	16	0	60	1248	40	1248	10	2624	\$122,221	\$1,846	
Impingement Monitoring Freshwater	1	5	0	0	0	20	0	5	31	\$1,560	\$928	
Entrainment Monitoring Freshwater	1	5	0	0	0	20	0	5	31	\$1,560	\$715	
Implement Offshore Marine Sampling	3	30	0	96	2434	60	2434	15	5072	\$235,166	\$3,550	
Impingement Monitoring Marine	1	9	0	0	0	30	0	8	48	\$2,363	\$1,768	
Entrainment Monitoring Marine		9	0	0	0	30	0	8	48	\$2,363	\$1,354	
Biological Study Laboratory Analysis (Freshwater)	0	0	0	0	0	0	0	0	0	\$31,200		
Biological Study Laboratory Analysis (Marine)	0	0	0	0	0	0	0	0	0	\$60,840		
Profile of Source Water Biota	10	6	0	10	18	0	6	2	52	\$3,063		
Identification of Critical Species	10	6	0	6	12	0	0	1	35	\$2,136		
Description of Additional Stresses	5	3	0	5	9	0	3	1	26	\$1,532		
Write Study based on Results and Submit for Review by State	24	48	0	5	2	2	0	2	83	\$4,109		
Recordkeeping	2	4	0	2	4	1	0	7	20	\$867		
Finalize study based on State review	5	10	0	0	0	0	0	2	17	\$743		
Freshwater Totals	60	103	0	88	1293			35	2919			
Marine Totals	61	125	0	124	2479	123	2443	46	5401	\$344,382	\$6,672	\$351,054

Exhibit A.50MGD.12g

Information to Support Site-Specific Determination of BTA

	Facility Manager	Junior Technical	CAD Operator	Contracted Manager	Biologist	Statistician	Biological Technician	Clerical	Burden Per Facility	Labor Cost per	O&M Costs*	Total Cost Per Facility
				Assumed Load	led Hourly Rate				Durucii i ci i aciiity	Facility	Odivi Costs	
	\$73	\$34	\$30	\$91	\$53	\$61	\$38	\$19				
Activity				Level of E	ffort (hrs)				В	С	D	C+D
Perform Comprehensive Cost Evaluation Study	0	0	0	0	0	0	0	0	0	\$0		
Perform Valuation of Monetized Benefits	0	0	0	0	0	0	0	0	0	\$0		
Evaluate Detailed Mortality Data	0	0	0	0	0	0	0	0	0	\$0		
Perform Engineering Calculations	0	0	0	0	0	0	0	0	0	\$0		
Submit Data and Analysis for Review	0	0	0	0	0	0	0	0	0	\$0		
Recordkeeping	0	0	0	0	Ö	0	0	0	0	\$0		
Totals	-		0	0	0	0	0	•	0	\$0	\$0	\$0

Exhibit A.50MGD.12h

Site-Specific Technology Plan

	Facility Manager	Junior Technical	CAD Operator	Contracted Manager	Biologist	Statistician	Biological Technician	Clerical	Burden Per Facility	Labor Cost per Facility	O&M Costs*	Total Cost Per Facility
				Assumed Load	led Hourly Rate				Burden Per Facility		OWIN COSIS	
	\$73	\$34	\$30	\$91	\$53	\$61	\$38	\$19	1			
Activity				Level of E	ffort (hrs)				В	С	D	C+D
Develop Narrative Description of Technologies	0	0	0	0	0	0	0	0	0	\$0		
Document that Technologies Are Optimal	0	0	0	0	0	0	0	0	0	\$0		
Develop Design Calculations, Drawings, & Estimates	0	0	0	0	0	0	0	0	0	\$0		
Perform Engineering Calculations	0	0	0	0	0	0	0	0	0	\$0		
Submit Data and Analysis for Review	0	0	0	0	0	0	0	0	0	\$0		
Recordkeeping	0	0	0	0	0	0	0	0	0	\$0		
Totals	-		0	0	0	0	0	-	0	\$0	\$0	\$0

Exhibit A.50MGD.12g

Technology Installation and Operation Plan

	Facility Manager	Junior Technical	CAD Operator	Contracted Manager	Biologist	Statistician	Biological Technician	Clerical	- Burden Per Facility	Labor Cost per	O&M Costs*	Total Cost Per
	Assumed Loaded Hourly Rate							- Burden Per Facility	Facility	Oalvi Costs	Facility	
	\$73	\$34	\$30	\$91	\$53	\$61	\$38	\$19				
Activity				Level of E	ffort (hrs)				В	С	D	C+D
Installation & Maintenance Schedule	5	10	0	0	0	0	0	0	15	\$706		
Description of Proposed Monitoring Parameters	1	4	0	0	0	0	0	0	5	\$209		
List of Technology Assessment Activities	1	2	0	0	0	0	0	0	3	\$141		
Schedule & Methodology of Assessment Activities	2	2	0	0	0	0	0	0	4	\$214		
Submit Plan for Review	0	0	0	0	0	0	0	1	1	\$19		
Recordkeeping	1	1	0	0	0	0	0	1	3	\$126		
Other Direct Costs	0	0	0	0	0	0	0	0	0	\$0	\$48	
									31	\$1,415	\$48	\$1,463

Exhibit A.50MGD.13 Director Burden and Cost Estimates for Permit Renewal

Exhibit A.50MGD.13a
Director Permit Reissuance Activities

	Senior Technical	Junior Technical	Clerical	Burden Per	Labor Cost	ODCs lump	Total Cost	
	Assumed Loaded Hourly Rate			Permit	per Permit	sum*	Per Permit	
	\$50	\$32	\$24				l	
Activity		vel of Effort (h	rs)	В	С	D	C+D	
Review Source Water Physical Data	1	2	0	3	\$113			
Review CWIS Data	2	5	0	7	\$259			
Review CWS Operation Narrative	2	5	0	7	\$259			
Review Proposal for Collection of Information for Comprehensive Demonstration Study	5	5	0	10	\$407			
Review Source Water Body Flow Information	1	2	0	3	\$113			
Review Design and Construction Technology Plan	7	2	0	9	\$410			
Review Impingement Mortality Monitoring Results	24	3	0	27	\$1,284			
Review Entrainment Characterization Monitoring Results	24	3	0	27	\$1,284			
Review Baseline Characterization Monitoring Results and Study Findings	72	8	0	80	\$3,819			
Review Restoration Measures	120	30	0	150	\$6,897			
Review Information to Support Site-Specific Determination of BTA	240	60	0	300	\$13,794			
Review Technology Installation and Operation Plan	5	2	0	7	\$311			
Determine Monitoring Frequency	1	2	0	3	\$113			
Determine Record keeping and Reporting Frequency	1	2	0	3	\$113			
Establish Requirements for Site-Specific Technology	2	7	0	9	\$322			
Considering Public Comments	5	5	0	10	\$407			
Issuing Permit	0	2	0	2	\$64			
Permit Record Keeping	0	0	1	1	\$24			
Totals	512	145	1	658	\$29,994	\$310	\$30,304	