Draft Technical Report
for
Tentative Cleanup and Abatement
Order No. R9-2011-0001

APPENDIX FOR SECTION 23

TIER I SCREENING LEVEL RISK ASSESSMENT FOR AQUATIC-DEPENDENT WILDLIFE

September 15, 2010

SUMMARY OF TIER I AQUATIC-DEPENDENT WILDLIFE RISK ASSESSMENT RESULTS

	Arsenic		Chromium		Copper		Lead		Mercury		Nickel		Selenium	
	(mg/kg wet)	(mg/kg dry)	(mg/kg wet)	(mg/kg dry)	(mg/kg wet)	(mg/kg dry)	(mg/kg wet)	(mg/kg dry)	(mg/kg wet)	(mg/kg dry)	(mg/kg wet)	(mg/kg dry)	(mg/kg wet)	(mg/kg dry)
NA06														
t-test significantly different	No	--	No	--	**Yes**	--	**Yes**	--	No	--	No	--	No	--
> 95% UPL Reference Pool	--	No	--	No	--	No	--	**Yes**	--	No	--	No	--	No
HQ > 1														
Brown Pelican	--	No	--	No	--	No	--	**Yes**	--	No	--	No	--	No
Least Tern	--	No	--	No	--	**Yes**	--	**Yes**	--	No	--	No	--	**Yes**
Sea Lion	--	**Yes**	--	No	--	No	--	No	--	No	--	No	--	**Yes**
Surf Scoter	--	No	--	No	--	No	--	**Yes**	--	No	--	No	--	No
Western Grebe	**--**	No	**--**	No	**--**	**Yes**	**--**	**Yes**	**--**	No	**--**	No	**--**	No
Green Turtle	**--**	No	**--**	No	**--**	No	**--**	**Yes**	**--**	No	**--**	No	**--**	No
NA11														
t-test significantly different	No	--	No	--	**Yes**	--	**Yes**	--	No	--	No	--	No	--
> 95% UPL Reference Pool	--	No	--	No	--	No	--	No	--	No	--	No	--	No
HQ > 1														
Brown Pelican	--	No	--	No	--	No	--	**Yes**	--	No	--	No	--	No
Least Tern	--	No	--	No	--	**Yes**	--	**Yes**	--	No	--	No	--	**Yes**
Sea Lion	--	**Yes**	--	No	--	No	--	No	--	No	--	No	--	**Yes**
Surf Scoter	--	No	--	No	--	No	--	**Yes**	--	No	--	No	--	No
Western Grebe	**--**	No	**--**	No	**--**	No	**--**	**Yes**	**--**	No	**--**	No	**--**	No
Green Turtle	**--**	No	**--**	No	**--**	No	**--**	**Yes**	**--**	No	**--**	No	**--**	No
NA12														
t-test significantly different	No	--	No	--	**Yes**	--	**Yes**	--	No	--	No	--	No	--
> 95% UPL Reference Pool	--	No	--	No	--	No	--	No	--	No	--	No	--	No
HQ > 1														
Brown Pelican	--	No	--	No	--	No	--	**Yes**	--	No	--	No	--	**Yes**
Least Tern	--	No	--	No	--	**Yes**	--	**Yes**	--	No	--	No	--	**Yes**
Sea Lion	--	**Yes**	--	No	--	No	--	No	--	No	--	No	--	**Yes**
Surf Scoter	--	No	--	No	--	No	--	**Yes**	--	No	--	No	--	No
Western Grebe	**--**	No	**--**	No	**--**	No	**--**	**Yes**	**--**	No	**--**	No	**--**	No
Green Turtle	**--**	No	**--**	No	**--**	No	**--**	**Yes**	**--**	No	**--**	No	**--**	No
NA20														
t-test significantly different	No	--	No	--	**Yes**	--	**Yes**	--	**Yes**	--	No	--	No	--
> 95% UPL Reference Pool	--	No	--	No	--	No	--	No	--	No	--	No	--	No
HQ > 1														
Brown Pelican	--	No	--	No	--	No	--	**Yes**	--	No	--	No	--	No
Least Tern	--	No	--	No	--	No	--	**Yes**	--	No	--	No	--	**Yes**
Sea Lion	--	**Yes**	--	No	--	No	--	No	--	No	--	No	--	No
Surf Scoter	--	No	--	No	--	No	--	**Yes**	--	No	--	No	--	No
Western Grebe	**--**	No	**--**	No	**--**	No	**--**	**Yes**	**--**	No	**--**	No	**--**	No
Green Turtle	**--**	No	**--**	No	**--**	No	**--**	**Yes**	**--**	No	**--**	No	**--**	No
SW04														
t-test significantly different	**Yes**	--	No	--	**Yes**	--	**Yes**	--	**Yes**	--	No	--	No	--
> 95% UPL Reference Pool	--	**Yes**	--	No	--	**Yes**	--	**Yes**	--	No	--	No	--	No
HQ > 1														
Brown Pelican	--	No	--	No	--	**Yes**	--	**Yes**	--	No	--	No	--	No
Least Tern	--	No	--	No	--	**Yes**	--	**Yes**	--	No	--	No	--	**Yes**
Sea Lion	--	**Yes**	--	No	--	No	--	**No**	--	No	--	No	--	No

SUMMARY OF TIER I AQUATIC-DEPENDENT WILDLIFE RISK ASSESSMENT RESULTS

	Arsenic		Chromium		Copper		Lead		Mercury		Nickel		Selenium	
	(mg/kg wet)	(mg/kg dry)	(mg/kg wet)	(mg/kg dry)	(mg/kg wet)	(mg/kg dry)	(mg/kg wet)	(mg/kg dry)	(mg/kg wet)	(mg/kg dry)	(mg/kg wet)	(mg/kg dry)	(mg/kg wet)	(mg/kg dry)
Surf Scoter	--	No	--	No	--	**Yes**	--	**Yes**	--	No	--	No	--	No
Western Grebe	**--**	No	**--**	No	**--**	**Yes**	**--**	**Yes**	**--**	No	**--**	No	**--**	No
Green Turtle	**--**	No	**--**	No	**--**	No	**--**	**Yes**	**--**	No	**--**	No	**--**	No
SW08														
t-test significantly different	No	--	No	--	**Yes**	--	**Yes**	--	No	--	No	--	No	--
> 95% UPL Reference Pool	--	No	--	No	--	**Yes**	--	**Yes**	--	No	--	No	--	No
HQ > 1														
Brown Pelican	--	No	--	No	--	**Yes**	--	**Yes**	--	No	--	No	--	No
Least Tern	--	No	--	No	--	**Yes**	--	**Yes**	--	No	--	No	--	**Yes**
Sea Lion	--	**Yes**	--	No	--	No	--	No	--	No	--	No	--	No
Surf Scoter	--	No	--	No	--	**Yes**	--	**Yes**	--	No	--	No	--	No
Western Grebe	**--**	No	**--**	No	**--**	**Yes**	**--**	**Yes**	**--**	No	**--**	No	**--**	No
Green Turtle	**--**	No	**--**	No	**--**	No	**--**	**Yes**	**--**	No	**--**	No	**--**	No
SW13														
t-test significantly different	No	--	No	--	**Yes**	--	**Yes**	--	No	--	No	--	No	--
> 95% UPL Reference Pool	--	No	--	No	--	**Yes**	--	No	--	No	--	No	--	No
HQ > 1														
Brown Pelican	--	No	--	No	--	**Yes**	--	**Yes**	--	No	--	No	--	**Yes**
Least Tern	--	No	--	No	--	**Yes**	--	**Yes**	--	No	--	No	--	**Yes**
Sea Lion	--	**Yes**	--	No	--	No	--	No	--	No	--	No	--	**Yes**
Surf Scoter	--	No	--	No	--	**Yes**	--	**Yes**	--	No	--	No	--	No
Western Grebe	**--**	No	**--**	No	**--**	**Yes**	**--**	**Yes**	**--**	No	**--**	No	**--**	No
Green Turtle	**--**	No	**--**	No	**--**	No	**--**	**Yes**	**--**	No	**--**	No	**--**	No
SW21														
t-test significantly different	No	--	No	--	**Yes**	--	**Yes**	--	No	--	No	--	No	--
> 95% UPL Reference Pool	--	No	--	No	--	No	--	**Yes**	--	No	--	No	--	No
HQ > 1														
Brown Pelican	--	No	--	No	--	**Yes**	--	**Yes**	--	No	--	No	--	**Yes**
Least Tern	--	No	--	No	--	**Yes**	--	**Yes**	--	No	--	No	--	**Yes**
Sea Lion	--	**Yes**	--	No	--	No	--	No	--	No	--	No	--	**Yes**
Surf Scoter	--	No	--	No	--	No	--	**Yes**	--	No	--	No	--	No
Western Grebe	**--**	No	**--**	No	**--**	**Yes**	**--**	**Yes**	**--**	No	**--**	No	**--**	No
Green Turtle	**--**	No	**--**	No	**--**	No	**--**	**Yes**	**--**	No	**--**	No	**--**	No
SW28														
t-test significantly different	No	--	No	--	**Yes**	--	**Yes**	--	No	--	No	--	No	--
> 95% UPL Reference Pool	--	No	--	No	--	No	--	No	--	No	--	No	--	No
HQ > 1														
Brown Pelican	--	No	--	No	--	No	--	**Yes**	--	No	--	No	--	No
Least Tern	--	No	--	No	--	**Yes**	--	**Yes**	--	No	--	No	--	**Yes**
Sea Lion	--	**Yes**	--	No	--	No	--	No	--	No	--	No	--	No
Surf Scoter	--	No	--	No	--	No	--	**Yes**	--	No	--	No	--	No
Western Grebe	**--**	No	**--**	No	**--**	No	**--**	**Yes**	**--**	No	**--**	No	**--**	No
Green Turtle	**--**	No	**--**	No	**--**	No	**--**	**Yes**	**--**	No	**--**	No	**--**	No

SUMMARY OF TIER I AQUATIC-DEPENDENT WILDLIFE RISK ASSESSMENT RESULTS

	Zinc		TBT		Benzo[a]pyrene		Total PCB Congeners	
	(mg/kg wet)	(mg/kg dry)	(ug/kg wet)	(ug/kg dry)	(ug/kg wet)	(ug/kg dry)	(ng/g wet)	(ng/g dry)
NA06								
t-test significantly different	No/Yes	--	**Yes**	--	**Yes**	--	**Yes**	--
> 95% UPL Reference Pool	--	**Yes**	--	**Yes**	--	**Yes**	--	**Yes**
HQ > 1								
Brown Pelican	--	No	--	No		No	--	No
Least Tern	--	No	--	No		No	--	No
Sea Lion	--	No	--	No		No	--	No
Surf Scoter	--	No	--	No		No	--	No
Western Grebe	**--**	No	**--**	No		No	--	No
Green Turtle	**--**	No	**--**	No		No	--	No
NA11								
t-test significantly different	No	--	**Yes**	--	**Yes**	--	No	--
> 95% UPL Reference Pool	--	**Yes**	--	**Yes**	--	**Yes**	--	No
HQ > 1								
Brown Pelican	--	No	--	No		No	--	No
Least Tern	--	No	--	No		No	--	No
Sea Lion	--	No	--	No		No	--	No
Surf Scoter	--	No	--	No		No	--	No
Western Grebe	**--**	No	**--**	No		No	**--**	No
Green Turtle	**--**	No	**--**	No		No	**--**	No
NA12								
t-test significantly different	No	--	**Yes**	--	**Yes**	--	No	--
> 95% UPL Reference Pool	--	**Yes**	--	**Yes**	--	No	--	No
HQ > 1								
Brown Pelican	--	No	--	No		No	--	No
Least Tern	--	No	--	No		No	--	No
Sea Lion	--	No	--	No		No	--	No
Surf Scoter	--	No	--	No		No	--	No
Western Grebe	**--**	No	**--**	No		No	**--**	No
Green Turtle	**--**	No	**--**	No		No	**--**	No
NA20								
t-test significantly different	No	--	**Yes**	--	**Yes**	--	No	--
> 95% UPL Reference Pool	--	**Yes**	--	**Yes**	--	**Yes**	--	No
HQ > 1								
Brown Pelican	--	No	--	No		No	--	No
Least Tern	--	No	--	No		No	--	No
Sea Lion	--	No	--	No		No	--	No
Surf Scoter	--	No	--	No		No	--	No
Western Grebe	**--**	No	**--**	No		No	**--**	No
Green Turtle	**--**	No	**--**	No		No	**--**	No
SW04								
t-test significantly different	No	--	**Yes**	--	**Yes**	--	**Yes**	--
> 95% UPL Reference Pool	--	**Yes**	--	**Yes**	--	**Yes**	--	**Yes**
HQ > 1								
Brown Pelican	--	**Yes**	--	No		No	--	No
Least Tern	--	**Yes**	--	No		**Yes**	--	No
Sea Lion	--	**Yes**	--	No		No	--	No

SUMMARY OF TIER I AQUATIC-DEPENDENT WILDLIFE RISK ASSESSMENT RESULTS

	Zinc		TBT		Benzo[a]pyrene		Total PCB Congeners	
	(mg/kg wet)	(mg/kg dry)	(ug/kg wet)	(ug/kg dry)	(ug/kg wet)	(ug/kg dry)	(ng/g wet)	(ng/g dry)
Surf Scoter	--	**Yes**	--	No		No	--	No
Western Grebe	**--**	**Yes**	**--**	No		No	**--**	No
Green Turtle	**--**	No	**--**	No		No	**--**	No
SW08								
t-test significantly different	No	--	**Yes**	--	**Yes**	--	**Yes**	--
> 95% UPL Reference Pool	--	**Yes**	--	**Yes**	--	**Yes**	--	**Yes**
HQ > 1								
Brown Pelican	--	No	--	No		No	--	No
Least Tern	--	**Yes**	--	No		**Yes**	--	**Yes**
Sea Lion	--	No	--	No		No	--	No
Surf Scoter	--	No	--	No		No	--	No
Western Grebe	**--**	No	**--**	No		No	**--**	No
Green Turtle	**--**	No	**--**	No		No	**--**	No
SW13								
t-test significantly different	No	--	**Yes**	--	**Yes**	--	No	--
> 95% UPL Reference Pool	--	**Yes**	--	**Yes**	--	**Yes**	--	**Yes**
HQ > 1								
Brown Pelican	--	No	--	No		No	--	**Yes**
Least Tern	--	**Yes**	--	No		No	--	**Yes**
Sea Lion	--	No	--	No		No	--	No
Surf Scoter	--	No	--	No		No	--	No
Western Grebe	**--**	No	**--**	No		No	**--**	No
Green Turtle	**--**	No	**--**	No		No	**--**	No
SW21								
t-test significantly different	**Yes**	--	**Yes**	--	**Yes**	--	**Yes**	--
> 95% UPL Reference Pool	--	**Yes**	--	**Yes**	--	**Yes**	--	**Yes**
HQ > 1								
Brown Pelican	--	No	--	No		No	--	**Yes**
Least Tern	--	**Yes**	--	No		**Yes**	--	**Yes**
Sea Lion	--	No	--	No		No	--	No
Surf Scoter	--	No	--	No		No	--	No
Western Grebe	**--**	No	**--**	No		No	**--**	No
Green Turtle	**--**	No	**--**	No		No	**--**	No
SW28								
t-test significantly different	No	--	**Yes**	--	**Yes**	--	**Yes**	--
> 95% UPL Reference Pool	--	**Yes**	--	**Yes**	--	**Yes**	--	**Yes**
HQ > 1								
Brown Pelican	--	No	--	No		No	--	No
Least Tern	--	**Yes**	--	No		No	--	**Yes**
Sea Lion	--	No	--	No		No	--	No
Surf Scoter	--	No	--	No		No	--	No
Western Grebe	**--**	No	**--**	No		No	**--**	No
Green Turtle	**--**	No	**--**	No		No	**--**	No

[BLANK SHEET]

COMPARISON OF SITE/REFERENCE *MACOMA* TISSUE CONCENTRATIONS

	Total Solids (decimal wet)	Arsenic (mg/kg wet)	Control	Arsenic (mg/kg dry)	Cadmium (mg/kg wet)	Control	Cadmium (mg/kg dry)	Chromium (mg/kg wet)	Control	Chromium (mg/kg dry)	Copper (mg/kg wet)	Control	Copper (mg/kg dry)	Lead (mg/kg wet)	Control
NA06	0.147	3	3	20.41	0.032	0.031	0.22	0.33	0.78	2.24	2.3	1.5	15.65	0.64	0.1
NA06	0.151	2.6	3.1	17.22	0.033	0.045	0.22	0.34	0.25	2.25	2.1	1.2	13.91	0.82	0.12
NA06	0.128	2.7	2.7	21.09	0.056	0.04	0.44	0.29	0.77	2.27	2.3	0.99	17.97	0.5	0.11
NA06	0.159	3	2.8	18.87	0.037	0.034	0.23	0.38	0.35	2.39	2.4	1.2	15.09	0.53	0.09
NA06	0.167	3.3	3.2	19.76	0.051	0.037	0.31	0.25	0.19	1.50	2.3	0.97	13.77	0.58	0.11
mean	0.1504	2.92	2.96	19.47	0.0418	0.0374	0.28	0.318	0.468	2.13	2.28	1.172	15.28	0.614	0.106
max	0.167	3.3	3.2	21.09	0.056	0.045	0.4375	0.38	0.78	2.39	2.4	1.5	17.97	0.82	0.12
t-test significantly different	--	No	--	--	No	--	--	No	--	--		--	--		--
> 95% UPL Reference Pool	--	--	--	No	--	--	No	--	--	No	--	--	No	--	--
NA11	0.155	3.2	3	20.65	0.036	0.031	0.23	0.26	0.78	1.68	1.6	1.5	10.32	0.37	0.1
NA11	0.148	2.6	3.1	17.57	0.028	0.045	0.19	0.23	0.25	1.55	1.8	1.2	12.16	0.28	0.12
NA11	0.131	2.8	2.7	21.37	0.025	0.04	0.19	0.18	0.77	1.37	1.6	0.99	12.21	0.3	0.11
NA11	0.155	3.7	2.8	23.87	0.052	0.034	0.34	0.34	0.35	2.19	2.6	1.2	16.77	0.53	0.09
NA11	0.147	2.6	3.2	17.69	0.054	0.037	0.37	0.36	0.19	2.45	1.9	0.97	12.93	0.48	0.11
mean	0.1472	2.98	2.96	20.23	0.039	0.0374	0.26	0.274	0.468	1.85	1.9	1.172	12.88	0.392	0.106
max	0.155	3.7	3.2	23.87	0.054	0.045	0.3673469	0.36	0.78	2.45	2.6	1.5	16.77	0.53	0.12
t-test significantly different			--	--		--	--		--	--		--	--		--
> 95% UPL Reference Pool		--	--	No	--	--	No	--	--	No	--	--	No	--	--
NA12	0.14	2.8	3	20.00	0.02	0.031	0.14	0.2	0.78	1.43	1.7	1.5	12.14	0.3	0.1
NA12	0.132	2.6	3.1	19.70	0.036	0.045	0.27	0.26	0.25	1.97	2	1.2	15.15	0.31	0.12
NA12	0.152	2.6	2.7	17.11	0.031	0.04	0.20	0.26	0.77	1.71	1.5	0.99	9.87	0.3	0.11
NA12	0.147	2.9	2.8	19.73	0.035	0.034	0.24	0.32	0.35	2.18	1.7	1.2	11.56	0.37	0.09
NA12	0.142	2.6	3.2	18.31	0.028	0.037	0.20	0.19	0.19	1.34	2.4	0.97	16.90	0.38	0.11
mean	0.1426	2.7	2.96	18.97	0.03	0.0374	0.21	0.246	0.468	1.72	1.86	1.172	13.13	0.332	0.106
max	0.152	2.9	3.2	20.00	0.036	0.045	0.2727273	0.32	0.78	2.18	2.4	1.5	16.90	0.38	0.12
t-test significantly different			--	--		--	--		--	--		--	--		--
> 95% UPL Reference Pool		--	--	No	--	--	No	--	--	No	--	--	No	--	--
NA20	0.162	3	3	18.52	0.029	0.031	0.18	0.25	0.78	1.54	1.7	1.5	10.49	0.41	0.1
NA20	0.136	2.2	3.1	16.18	0.023	0.045	0.17	0.27	0.25	1.99	1.6	1.2	11.76	0.38	0.12
NA20	0.158	3.2	2.7	20.25	0.035	0.04	0.22	0.37	0.77	2.34	2	0.99	12.66	0.55	0.11
NA20	0.158	3.2	2.8	20.25	0.035	0.034	0.22	0.37	0.35	2.34	2	1.2	12.66	0.55	0.09
NA20	0.147	2.5	3.2	17.01	0.029	0.037	0.20	0.3	0.19	2.04	1.4	0.97	9.52	0.37	0.11
mean	0.1522	2.82	2.96	18.44	0.0302	0.0374	0.20	0.312	0.468	2.05	1.74	1.172	11.42	0.452	0.106
max	0.162	3.2	3.2	20.25	0.035	0.045	0.221519	0.37	0.78	2.34	2	1.5	12.66	0.55	0.12
t-test significantly different			--	--		--	--		--	--		--	--		--
> 95% UPL Reference Pool		--	--	No	--	--	No	--	--	No	--	--	No	--	--
SW04	0.146	3.8	3	26.03	0.043	0.031	0.29	0.76	0.78	5.21	8.1	1.5	55.48	1.9	0.1
SW04	0.142	3.8	3.1	26.76	0.055	0.045	0.39	0.49	0.25	3.45	5	1.2	35.21	1.7	0.12
SW04	0.152	3.1	2.7	20.39	0.037	0.04	0.24	0.53	0.77	3.49	4	0.99	26.32	1.3	0.11
SW04	0.153	3.6	2.8	23.53	0.031	0.034	0.20	0.18	0.35	1.18	2.5	1.2	16.34	0.7	0.09
SW04	0.149	3.6	3.2	24.16	0.027	0.037	0.18	0.42	0.19	2.82	4.6	0.97	30.87	1.1	0.11
mean	0.1484	3.58	2.96	24.17	0.0386	0.0374	0.26	0.476	0.468	3.23	4.84	1.172	32.84	1.34	0.106
max	0.153	3.8	3.2	26.76	0.055	0.045	0.3873239	0.76	0.78	5.21	8.1	1.5	55.48	1.9	0.12
t-test significantly different		**Yes**	--	--	No	--	--	No	--	--	**Yes**	--	--	**Yes**	--

NOTE: Shaded values indicate undetected at detection limit. Therefore, 1/2 detection limit used in this table.

COMPARISON OF SITE/REFERENCE *MACOMA* TISSUE CONCENTRATIONS

	Total Solids (decimal wet)	Arsenic (mg/kg wet)	Control	Arsenic (mg/kg dry)	Cadmium (mg/kg wet)	Control	Cadmium (mg/kg dry)	Chromium (mg/kg wet)	Control	Chromium (mg/kg dry)	Copper (mg/kg wet)	Control	Copper (mg/kg dry)	Lead (mg/kg wet)	Control
> 95% UPL Reference Pool		--	--	**Yes**	--	--	No	--	--	No	--	--	**Yes**	--	--
SW08	0.148	2.6	3	17.57	0.022	0.031	0.15	0.33	0.78	2.23	3.2	1.5	21.62	0.8	0.1
SW08	0.12	2.8	3.1	23.33	0.029	0.045	0.24	0.35	0.25	2.92	3.2	1.2	26.67	1.4	0.12
SW08	0.148	2.8	2.7	18.92	0.035	0.04	0.24	0.53	0.77	3.58	2.6	0.99	17.57	0.6	0.11
SW08	0.157	3	2.8	19.11	0.037	0.034	0.24	0.3	0.35	1.91	3.2	1.2	20.38	0.66	0.09
SW08	0.138	2.6	3.2	18.84	0.03	0.037	0.22	0.31	0.19	2.25	4.3	0.97	31.16	0.75	0.11
mean	0.1422	2.76	2.96	19.55	0.0306	0.0374	0.22	0.364	0.468	2.58	3.3	1.172	23.48	0.842	0.106
max	0.157	3	3.2	23.33	0.037	0.045	0.2416667	0.53	0.78	3.58	4.3	1.5	31.16	1.4	0.12
t-test significantly different		No	--	--	No	--	--	No	--	--	**Yes**	--	--	**Yes**	--
> 95% UPL Reference Pool		--	--	No	--	--	No	--	--	No	--	--	**Yes**	--	--
SW13	0.12	2.5	3	20.83	0.032	0.031	0.27	0.26	0.78	2.17	2.5	1.5	20.83	0.35	0.1
SW13	0.158	3.6	3.1	22.78	0.045	0.045	0.28	0.31	0.25	1.96	5.6	1.2	35.44	0.4	0.12
SW13	0.163	3.1	2.7	19.02	0.031	0.04	0.19	0.3	0.77	1.84	3.1	0.99	19.02	0.43	0.11
SW13	0.14	2.1	2.8	15.00	0.025	0.034	0.18	0.41	0.35	2.93	4.2	1.2	30.00	0.35	0.09
SW13	0.151	2.9	3.2	19.21	0.027	0.037	0.18	0.29	0.19	1.92	2.9	0.97	19.21	0.33	0.11
mean	0.1464	2.84	2.96	19.37	0.032	0.0374	0.22	0.314	0.468	2.16	3.66	1.172	24.90	0.372	0.106
max	0.163	3.6	3.2	22.78	0.045	0.045	0.2848101	0.41	0.78	2.93	5.6	1.5	35.44	0.43	0.12
t-test significantly different		No	--	--	No	--	--	No	--	--	**Yes**	--	--	**Yes**	--
> 95% UPL Reference Pool		--	--	No	--	--	No	--	--	No	--	--	**Yes**	--	--
SW21	0.157	3.1	3	19.75	0.033	0.031	0.21	0.32	0.78	2.04	2.4	1.5	15.29	0.46	0.1
SW21	0.146	3.1	3.1	21.23	0.037	0.045	0.25	0.32	0.25	2.19	2	1.2	13.70	0.53	0.12
SW21	0.164	3.7	2.7	22.56	0.053	0.04	0.32	0.35	0.77	2.13	2.4	0.99	14.63	0.69	0.11
SW21	0.148	2.9	2.8	19.59	0.042	0.034	0.28	0.34	0.35	2.30	2.2	1.2	14.86	0.58	0.09
SW21	0.128	2.6	3.2	20.31	0.038	0.037	0.30	0.6	0.19	4.69	3.1	0.97	24.22	0.9	0.11
mean	0.1486	3.08	2.96	20.69	0.0406	0.0374	0.27	0.386	0.468	2.67	2.42	1.172	16.54	0.632	0.106
max	0.164	3.7	3.2	22.56	0.053	0.045	0.3231707	0.6	0.78	4.69	3.1	1.5	24.22	0.9	0.12
t-test significantly different		No	--	--	No	--	--	No	--	--	**Yes**	--	--	**Yes**	--
> 95% UPL Reference Pool		--	--	No	--	--	No	--	--	No	--	--	No	--	--
SW28	0.157	2.8	3	17.83	0.036	0.031	0.23	0.2	0.78	1.27	1.8	1.5	11.46	0.35	0.1
SW28	0.143	2.7	3.1	18.88	0.028	0.045	0.20	0.18	0.25	1.26	1.6	1.2	11.19	0.39	0.12
SW28	0.155	3.3	2.7	21.29	0.036	0.04	0.23	0.25	0.77	1.61	2.2	0.99	14.19	0.45	0.11
SW28	0.163	3.5	2.8	21.47	0.053	0.034	0.33	0.3	0.35	1.84	2.7	1.2	16.56	0.51	0.09
SW28	0.155	3.1	3.2	20.00	0.034	0.037	0.22	0.27	0.19	1.74	2.2	0.97	14.19	0.45	0.11
mean	0.1546	3.08	2.96	19.90	0.0374	0.0374	0.24	0.24	0.468	1.55	2.1	1.172	13.52	0.43	0.106
max	0.163	3.5	3.2	21.47	0.053	0.045	0.3251534	0.3	0.78	1.84	2.7	1.5	16.56	0.51	0.12
t-test significantly different		No	--	--	No	--	--	No	--	--	**Yes**	--	--	**Yes**	--
> 95% UPL Reference Pool		--	--	No	--	--	No	--	--	No	--	--	No	--	--

NOTE: Shaded values indicate undetected at detection limit. Therefore, 1/2 detection limit used in this table.

COMPARISON OF SITE/REFERENCE *MACOMA* TISSUE CONCENTRATIONS

	Lead (mg/kg dry)	Mercury (mg/kg wet)	Control	Mercury (mg/kg dry)	Nickel (mg/kg wet)	Control	Nickel (mg/kg dry)	Selenium (mg/kg wet)	Control	Selenium (mg/kg dry)	Silver (mg/kg wet)	Control	Silver (mg/kg dry)	Zinc (mg/kg wet)	Control
NA06	4.35	0.016	0.018	0.109	0.38	0.4	2.59	0.4	0.2	2.72	0.038	0.027	0.259	17	16
NA06	5.43	0.014	0.015	0.093	0.37	0.43	2.45	0.2	0.4	1.32	0.052	0.033	0.344	18	18
NA06	3.91	0.016	0.016	0.125	0.34	0.75	2.66	0.3	0.3	2.34	0.053	0.036	0.414	21	15
NA06	3.33	0.026	0.012	0.164	0.47	0.38	2.96	0.3	0.3	1.89	0.03	0.027	0.189	18	14
NA06	3.47	0.018	0.013	0.108	0.37	0.35	2.22	0.3	0.2	1.80	0.026	0.041	0.156	24	17
mean	4.10	0.018	0.0148	0.120	0.386	0.462	2.57	0.3	0.28	2.01	0.0398	0.0328	0.272	19.6	16
max	5.43	0.026	0.018	0.164	0.47	0.75	2.96	0.4	0.4	2.72	0.053	0.041	0.414	24	18
t-test significantly different	--		--	--		--	--		--	--		--	--		--
> 95% UPL Reference Pool	**Yes**	--	--	No	--	--	No	--	--	No	--	--	No	--	--
NA11	2.39	0.012	0.018	0.077	0.39	0.4	2.52	0.3	0.2	1.94	0.051	0.027	0.329	15	16
NA11	1.89	0.014	0.015	0.095	0.27	0.43	1.82	0.2	0.4	1.35	0.041	0.033	0.277	16	18
NA11	2.29	0.017	0.016	0.130	0.28	0.75	2.14	0.3	0.3	2.29	0.042	0.036	0.321	14	15
NA11	3.42	0.018	0.012	0.116	0.39	0.38	2.52	0.4	0.3	2.58	0.072	0.027	0.465	20	14
NA11	3.27	0.016	0.013	0.109	0.36	0.35	2.45	0.2	0.2	1.36	0.037	0.041	0.252	18	17
mean	2.65	0.0154	0.0148	0.105	0.338	0.462	2.29	0.28	0.28	1.90	0.0486	0.0328	0.329	16.6	16
max	3.42	0.018	0.018	0.130	0.39	0.75	2.52	0.4	0.4	2.58	0.072	0.041	0.465	20	18
t-test significantly different	--		--	--		--	--		--	--		--	--		--
> 95% UPL Reference Pool	No	--	--	No	--	--	No	--	--	No	--	--	No	--	--
NA12	2.14	0.02	0.018	0.143	0.32	0.4	2.29	0.4	0.2	2.86	0.02	0.027	0.143	12	16
NA12	2.35	0.015	0.015	0.114	0.36	0.43	2.73	0.3	0.4	2.27	0.031	0.033	0.235	17	18
NA12	1.97	0.013	0.016	0.086	0.3	0.75	1.97	0.2	0.3	1.32	0.027	0.036	0.178	17	15
NA12	2.52	0.014	0.012	0.095	0.37	0.38	2.52	0.4	0.3	2.72	0.031	0.027	0.211	17	14
NA12	2.68	0.014	0.013	0.099	0.29	0.35	2.04	0.2	0.2	1.41	0.05	0.041	0.352	18	17
mean	2.33	0.0152	0.0148	0.107	0.328	0.462	2.31	0.3	0.28	2.12	0.0318	0.0328	0.224	16.2	16
max	2.68	0.02	0.018	0.143	0.37	0.75	2.73	0.4	0.4	2.86	0.05	0.041	0.352	18	18
t-test significantly different	--		--	--		--	--		--	--		--	--		--
> 95% UPL Reference Pool	No	--	--	No	--	--	No	--	--	No	--	--	No	--	--
NA20	2.53	0.017	0.018	0.105	0.42	0.4	2.59	0.3	0.2	1.85	0.022	0.027	0.136	19	16
NA20	2.79	0.017	0.015	0.125	0.34	0.43	2.50	0.2	0.4	1.47	0.019	0.033	0.140	15	18
NA20	3.48	0.023	0.016	0.146	0.5	0.75	3.16	0.2	0.3	1.27	0.022	0.036	0.139	18	15
NA20	3.48	0.023	0.012	0.146	0.5	0.38	3.16	0.2	0.3	1.27	0.022	0.027	0.139	18	14
NA20	2.52	0.017	0.013	0.116	0.38	0.35	2.59	0.2	0.2	1.36	0.022	0.041	0.150	16	17
mean	2.96	0.0194	0.0148	0.127	0.428	0.462	2.80	0.22	0.28	1.44	0.0214	0.0328	0.141	17.2	16
max	3.48	0.023	0.018	0.146	0.5	0.75	3.16	0.3	0.4	1.85	0.022	0.041	0.150	19	18
t-test significantly different	--		--	--		--	--		--	--		--	--		--
> 95% UPL Reference Pool	No	--	--	No	--	--	No	--	--	No	--	--	No	--	--
SW04	13.01	0.023	0.018	0.158	0.48	0.4	3.29	0.3	0.2	2.05	0.058	0.027	0.397	46	16
SW04	11.97	0.021	0.015	0.148	0.63	0.43	4.44	0.2	0.4	1.41	0.029	0.033	0.204	31	18
SW04	8.55	0.022	0.016	0.145	0.35	0.75	2.30	0.2	0.3	1.32	0.034	0.036	0.224	27	15
SW04	4.58	0.016	0.012	0.105	0.37	0.38	2.42	0.2	0.3	1.31	0.028	0.027	0.183	19	14
SW04	7.38	0.019	0.013	0.128	0.38	0.35	2.55	0.3	0.2	2.01	0.024	0.041	0.161	21	17
mean	9.10	0.0202	0.0148	0.136	0.442	0.462	3.00	0.24	0.28	1.62	0.0346	0.0328	0.234	28.8	16
max	13.01	0.023	0.018	0.158	0.63	0.75	4.44	0.3	0.4	2.05	0.058	0.041	0.397	46	18
t-test significantly different	--	**Yes**	--	--	No	--	--	No	--	--	No	--	--	No	--

NOTE: Shaded values indicate undetected at detection limit. Therefore, 1/2 detection limit used in this table.

COMPARISON OF SITE/REFERENCE *MACOMA* TISSUE CONCENTRATIONS

	Lead (mg/kg dry)	Mercury (mg/kg wet)	Control	Mercury (mg/kg dry)	Nickel (mg/kg wet)	Control	Nickel (mg/kg dry)	Selenium (mg/kg wet)	Control	Selenium (mg/kg dry)	Silver (mg/kg wet)	Control	Silver (mg/kg dry)	Zinc (mg/kg wet)	Control
> 95% UPL Reference Pool	**Yes**	--	--	No	--	--	No	--	--	No	--	--	No	--	--
SW08	5.41	0.026	0.018	0.176	0.29	0.4	1.96	0.2	0.2	1.35	0.016	0.027	0.108	15	16
SW08	11.67	0.015	0.015	0.125	0.29	0.43	2.42	0.1	0.4	0.83	0.034	0.033	0.283	14	18
SW08	4.05	0.018	0.016	0.122	0.43	0.75	2.91	0.3	0.3	2.03	0.019	0.036	0.128	17	15
SW08	4.20	0.017	0.012	0.108	0.37	0.38	2.36	0.2	0.3	1.27	0.041	0.027	0.261	19	14
SW08	5.43	0.017	0.013	0.123	0.3	0.35	2.17	0.2	0.2	1.45	0.067	0.041	0.486	14	17
mean	6.15	0.0186	0.0148	0.131	0.336	0.462	2.36	0.2	0.28	1.39	0.0354	0.0328	0.253	15.8	16
max	11.67	0.026	0.018	0.176	0.43	0.75	2.91	0.3	0.4	2.03	0.067	0.041	0.486	19	18
t-test significantly different	--	No	--	--	No	--	--	No	--	--	No	--	--	No	--
> 95% UPL Reference Pool	**Yes**	--	--	No	--	--	No	--	--	No	--	--	No	--	--
SW13	2.92	0.013	0.018	0.108	0.35	0.4	2.92	0.2	0.2	1.67	0.043	0.027	0.358	17	16
SW13	2.53	0.014	0.015	0.089	0.44	0.43	2.78	0.5	0.4	3.16	0.077	0.033	0.487	24	18
SW13	2.64	0.018	0.016	0.110	0.41	0.75	2.52	0.3	0.3	1.84	0.028	0.036	0.172	25	15
SW13	2.50	0.013	0.012	0.093	0.34	0.38	2.43	0.2	0.3	1.43	0.027	0.027	0.193	16	14
SW13	2.19	0.016	0.013	0.106	0.34	0.35	2.25	0.2	0.2	1.32	0.038	0.041	0.252	14	17
mean	2.55	0.0148	0.0148	0.101	0.376	0.462	2.58	0.28	0.28	1.88	0.0426	0.0328	0.292	19.2	16
max	2.92	0.018	0.018	0.110	0.44	0.75	2.92	0.5	0.4	3.16	0.077	0.041	0.487	25	18
t-test significantly different	--	No	--	--	No	--	--	No	--	--	No	--	--	No	--
> 95% UPL Reference Pool	No	--	--	No	--	--	No	--	--	No	--	--	No	--	--
SW21	2.93	0.016	0.018	0.102	0.36	0.4	2.29	0.2	0.2	1.27	0.053	0.027	0.338	18	16
SW21	3.63	0.017	0.015	0.116	0.31	0.43	2.12	0.2	0.4	1.37	0.039	0.033	0.267	18	18
SW21	4.21	0.017	0.016	0.104	0.41	0.75	2.50	0.3	0.3	1.83	0.061	0.036	0.372	24	15
SW21	3.92	0.017	0.012	0.115	0.36	0.38	2.43	0.3	0.3	2.03	0.05	0.027	0.338	18	14
SW21	7.03	0.012	0.013	0.094	0.37	0.35	2.89	0.4	0.2	3.13	0.054	0.041	0.422	19	17
mean	4.34	0.0158	0.0148	0.106	0.362	0.462	2.45	0.28	0.28	1.93	0.0514	0.0328	0.347	19.4	16
max	7.03	0.017	0.018	0.116	0.41	0.75	2.89	0.4	0.4	3.13	0.061	0.041	0.422	24	18
t-test significantly different	--	No	--	--	No	--	--	No	--	--	**Yes**	--	--	**Yes**	--
> 95% UPL Reference Pool	**Yes**	--	--	No	--	--	No	--	--	No	--	--	No	--	--
SW28	2.23	0.019	0.018	0.121	0.4	0.4	2.55	0.2	0.2	1.27	0.028	0.027	0.178	18	16
SW28	2.73	0.017	0.015	0.119	0.32	0.43	2.24	0.15	0.4	1.05	0.02	0.033	0.140	15	18
SW28	2.90	0.02	0.016	0.129	0.38	0.75	2.45	0.4	0.3	2.58	0.038	0.036	0.245	22	15
SW28	3.13	0.015	0.012	0.092	0.48	0.38	2.94	0.3	0.3	1.84	0.052	0.027	0.319	25	14
SW28	2.90	0.016	0.013	0.103	0.35	0.35	2.26	0.2	0.2	1.29	0.039	0.041	0.252	17	17
mean	2.78	0.0174	0.0148	0.113	0.386	0.462	2.49	0.25	0.28	1.61	0.0354	0.0328	0.227	19.4	16
max	3.13	0.02	0.018	0.129	0.48	0.75	2.94	0.4	0.4	2.58	0.052	0.041	0.319	25	18
t-test significantly different	--	No	--	--	No	--	--	No	--	--	No	--	--	No	--
> 95% UPL Reference Pool	No	--	--	No	--	--	No	--	--	No	--	--	No	--	--

NOTE: Shaded values indicate undetected at detection limit. Therefore, 1/2 detection limit used in this table.

COMPARISON OF SITE/REFERENCE *MACOMA* TISSUE CONCENTRATIONS

	Zinc (mg/kg dry)	TBT (ug/kg wet)	Control	TBT (ug/kg dry)	Benzo[a]pyrene (ug/kg wet)	Control	Benzo[a]pyrene (ug/kg dry)	Total PCB Congeners (ng/g wet)	Control	Total PCB Congeners (ng/g dry)
NA06	115.65	16	0.495	108.84	27	5	183.67	55	0.47	374.15
NA06	119.21	32	0.5	211.92	26	2.5	172.19	40.1	0.44	265.56
NA06	164.06	31	0.5	242.19	20	2.5	156.25	20.1	0.54	157.03
NA06	113.21	38	1.4	238.99	30	5	188.68	69.2	46	435.22
NA06	143.71	41	0.495	245.51	32	5	191.62	57.9	0.33	346.71
mean	131.17	31.6	0.678	209.49	27	4	178.48	48.46	9.556	315.73
max	164.06	41	1.4	245.51	32	5	191.62	69.2	46	435.22
t-test significantly different	--		--	--		--	--		--	--
> 95% UPL Reference Pool	**Yes**	--	--	**Yes**	--	--	**Yes**	--	--	**Yes**
NA11	96.77	15	0.495	96.77	23	5	148.39	26.9	0.47	173.55
NA11	108.11	11	0.5	74.32	26	2.5	175.68	23.8	0.44	160.81
NA11	106.87	12	0.5	91.60	19	2.5	145.04	21.6	0.54	164.89
NA11	129.03	19	1.4	122.58	27	5	174.19	28.1	46	181.29
NA11	122.45	12	0.495	81.63	20	5	136.05	26.5	0.33	180.27
mean	112.65	13.8	0.678	93.38	23	4	155.87	25.38	9.556	172.16
max	129.03	19	1.4	122.58	27	5	175.68	28.1	46	181.29
t-test significantly different	--		--	--		--	--		--	--
> 95% UPL Reference Pool	**Yes**	--	--	**Yes**	--	--	**Yes**	--	--	No
NA12	85.71	18	0.495	128.57	19	5	135.71	16.1	0.47	115.00
NA12	128.79	15	0.5	113.64	19	2.5	143.94	15.2	0.44	115.15
NA12	111.84	13	0.5	85.53	21	2.5	138.16	17.3	0.54	113.82
NA12	115.65	19	1.4	129.25	23	5	156.46	23.4	46	159.18
NA12	126.76	8.8	0.495	61.97	18	5	126.76	17.1	0.33	120.42
mean	113.75	14.76	0.678	103.79	20	4	140.21	17.82	9.556	124.71
max	128.79	19	1.4	129.25	23	5	156.46	23.4	46	159.18
t-test significantly different	--		--	--		--	--		--	--
> 95% UPL Reference Pool	**Yes**	--	--	**Yes**	--	--	No	--	--	No
NA20	117.28	22	0.495	135.80	46	5	283.95	24.5	0.47	151.23
NA20	110.29	26	0.5	191.18	23	2.5	169.12	16.9	0.44	124.26
NA20	113.92	27	0.5	170.89	35	2.5	221.52	13.2	0.54	83.54
NA20	113.92	27	1.4	170.89	43	5	272.15	13.2	46	83.54
NA20	108.84	16	0.495	108.84	43	5	292.52	21.6	0.33	146.94
mean	112.85	23.6	0.678	155.52	38	4	247.85	17.88	9.556	117.91
max	117.28	27	1.4	191.18	46	5	292.52	24.5	46	151.23
t-test significantly different	--		--	--		--	--		--	--
> 95% UPL Reference Pool	**Yes**	--	--	**Yes**	--	--	**Yes**	--	--	No
SW04	315.07	330	0.495	2260.27	170	5	1164.38	195	0.47	1335.62
SW04	218.31	740	0.5	5211.27	170	2.5	1197.18	161	0.44	1133.80
SW04	177.63	420	0.5	2763.16	150	2.5	986.84	15	0.54	98.68
SW04	124.18	150	1.4	980.39	180	5	1176.47	136	46	888.89
SW04	140.94	15	0.495	100.67	200	5	1342.28	196	0.33	1315.44
mean	195.23	331	0.678	2263.15	174	4	1173.43	140.6	9.556	954.49
max	315.07	740	1.4	5211.27	200	5	1342.28	196	46	1335.62
t-test significantly different	--	**Yes**	--	--	Need Calc	--	--	**Yes**	--	--

NOTE: Shaded values indicate undetected at detection limit. Therefore, 1/2 detection limit used in this table.

COMPARISON OF SITE/REFERENCE *MACOMA* TISSUE CONCENTRATIONS

	Zinc (mg/kg dry)	TBT (ug/kg wet)	Control	TBT (ug/kg dry)	Benzo[a]pyrene (ug/kg wet)	Control	Benzo[a]pyrene (ug/kg dry)	Total PCB Congeners (ng/g wet)	Control	Total PCB Congeners (ng/g dry)
> 95% UPL Reference Pool	**Yes**	--	--	**Yes**	--	--	**Yes**	--	--	**Yes**
SW08	101.35	120	0.495	810.81	170	5	1148.65	103	0.47	695.95
SW08	116.67	210	0.5	1750.00	140	2.5	1166.67	98.2	0.44	818.33
SW08	114.86	110	0.5	743.24	180	2.5	1216.22	86.2	0.54	582.43
SW08	121.02	180	1.4	1146.50	190	5	1210.19	135	46	859.87
SW08	101.45	120	0.495	869.57	150	5	1086.96	90.1	0.33	652.90
mean	111.07	148	0.678	1064.02	166	4	1165.74	102.5	9.556	721.90
max	121.02	210	1.4	1750.00	190	5	1216.22	135	46	859.87
t-test significantly different	--	**Yes**	--	--	Need Calc	--	--	**Yes**	--	--
> 95% UPL Reference Pool	**Yes**	--	--	**Yes**	--	--	**Yes**	--	--	**Yes**
SW13	141.67	120	0.495	1000.00	79	5	658.33	22.9	0.47	190.83
SW13	151.90	140	0.5	886.08	120	2.5	759.49	27.9	0.44	176.58
SW13	153.37	150	0.5	920.25	100	2.5	613.50	43.2	0.54	265.03
SW13	114.29	93	1.4	664.29	100	5	714.29	181	46	1292.86
SW13	92.72	120	0.495	794.70	130	5	860.93	35.3	0.33	233.77
mean	130.79	124.6	0.678	853.06	105.8	4	721.31	62.06	9.556	431.82
max	153.37	150	1.4	1000.00	130	5	860.93	181	46	1292.86
t-test significantly different	--	**Yes**	--	--	Need Calc	--	--	?No?	--	--
> 95% UPL Reference Pool	**Yes**	--	--	**Yes**	--	--	**Yes**	--	--	**Yes**
SW21	114.65	13	0.495	82.80	180	5	1146.50	143	0.47	910.83
SW21	123.29	14	0.5	95.89	150	2.5	1027.40	175	0.44	1198.63
SW21	146.34	16	0.5	97.56	120	2.5	731.71	170	0.54	1036.59
SW21	121.62	15	1.4	101.35	130	5	878.38	167	46	1128.38
SW21	148.44	24	0.495	187.50	110	5	859.38	106	0.33	828.13
mean	130.87	16.4	0.678	113.02	138	4	928.67	152.2	9.556	1020.51
max	148.44	24	1.4	187.50	180	5	1146.50	175	46	1198.63
t-test significantly different	--	**Yes**	--	--	Need Calc	--	--	**Yes**	--	--
> 95% UPL Reference Pool	**Yes**	--	--	**Yes**	--	--	**Yes**	--	--	**Yes**
SW28	114.65	15	0.495	95.54	140	5	891.72	127	0.47	808.92
SW28	104.90	10	0.5	69.93	130	2.5	909.09	120	0.44	839.16
SW28	141.94	16	0.5	103.23	130	2.5	838.71	136	0.54	877.42
SW28	153.37	11	1.4	67.48	140	5	858.90	104	46	638.04
SW28	109.68	13	0.495	83.87	140	5	903.23	121	0.33	780.65
mean	124.91	13	0.678	84.01	136	4	880.33	121.6	9.556	788.84
max	153.37	16	1.4	103.23	140	5	909.09	136	46	877.42
t-test significantly different	--	**Yes**	--	--	Need Calc	--	--	**Yes**	--	--
> 95% UPL Reference Pool	**Yes**	--	--	**Yes**	--	--	**Yes**	--	--	**Yes**

NOTE: Shaded values indicate undetected at detection limit. Therefore, 1/2 detection limit used in this table.

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Tier I - Summary of Hazard Quotients

Receptor: **Surf Scoter**
Location: **NA06**

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	8.6E-02	--	--	--	3.9E-01	--	--	--	--	--	--
LOAEL HQ:	8.6E-03	--	--	--	7.8E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	2.2E-01	1.7E-02	2.0E-01	#VALUE!	9.5E-01	**4.7E+01**	4.4E-01	1.4E-01	5.0E-01	4.9E-01
BTAG High HQ:	#VALUE!	1.6E-02	2.7E-04	5.1E-02	#VALUE!	4.2E-02	7.4E-02	9.5E-02	3.5E-03	1.2E-01	4.9E-02
MAXIMUM											
NOAEL HQ:	9.1E-02	--	--	--	4.1E-01	--	--	--	--	--	--
LOAEL HQ:	9.1E-03	--	--	--	8.2E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	2.9E-01	2.0E-02	2.1E-01	#VALUE!	9.5E-01	**5.2E+01**	5.0E-01	1.6E-01	6.8E-01	5.3E-01
BTAG High HQ:	#VALUE!	2.1E-02	3.1E-04	5.2E-02	#VALUE!	4.2E-02	8.3E-02	1.1E-01	3.9E-03	1.7E-01	5.3E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Benzo[a]pyrene
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.179521
Maximum detected value (mg/kg, dry weight):	0.191617

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.61
Maximum detected value (mg/kg, dry weight):	0.61

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E-02	mean
Daily exposure (mg/kg-day)	1.3E-02	max

Hazard Quotients

NOAEL HQ:	8.6E-02	mean
LOAEL HQ:	8.6E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	9.1E-02	max
LOAEL HQ:	9.1E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Total PCB Congeners
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.322207
Maximum detected value (mg/kg, dry weight):	0.43522

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.64
Maximum detected value (mg/kg, dry weight):	0.64

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.0E-02	mean
Daily exposure (mg/kg-day)	2.6E-02	max

Hazard Quotients

BTAG Low HQ:	2.2E-01	mean
BTAG High HQ:	1.6E-02	mean
BTAG Low HQ:	2.9E-01	max
BTAG High HQ:	2.1E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Tributyltin
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.210106
Maximum detected value (mg/kg, dry weight):	0.245509

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.18
Maximum detected value (mg/kg, dry weight):	0.18

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E-02	mean
Daily exposure (mg/kg-day)	1.4E-02	max

Hazard Quotients

BTAG Low HQ:	1.7E-02	mean
BTAG High HQ:	2.7E-04	mean
BTAG Low HQ:	2.0E-02	max
BTAG High HQ:	3.1E-04	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Arsenic
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	19.41489
Maximum detected value (mg/kg, dry weight):	19.76048

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	11
Maximum detected value (mg/kg, dry weight):	11

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E+00	mean
Daily exposure (mg/kg-day)	1.1E+00	max

Hazard Quotients

BTAG Low HQ:	2.0E-01	mean
BTAG High HQ:	5.1E-02	mean
BTAG Low HQ:	2.1E-01	max
BTAG High HQ:	5.2E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Cadmium
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.277926
Maximum detected value (mg/kg, dry weight):	0.4375

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.28
Maximum detected value (mg/kg, dry weight):	0.28

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.6E-02	mean
Daily exposure (mg/kg-day)	2.5E-02	max

Hazard Quotients

BTAG Low HQ:	2.1E-01	mean
BTAG High HQ:	1.6E-03	mean
BTAG Low HQ:	3.2E-01	max
BTAG High HQ:	2.4E-03	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Chromium
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.114362
Maximum detected value (mg/kg, dry weight):	2.389937

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	67
Maximum detected value (mg/kg, dry weight):	67

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.4E-01	mean
Daily exposure (mg/kg-day)	3.5E-01	max

Hazard Quotients

NOAEL HQ:	3.9E-01	mean
LOAEL HQ:	7.8E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	4.1E-01	max
LOAEL HQ:	8.2E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Copper
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	15.15957
Maximum detected value (mg/kg, dry weight):	15.09434

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	410
Maximum detected value (mg/kg, dry weight):	410

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.2E+00	mean
Daily exposure (mg/kg-day)	2.2E+00	max

Hazard Quotients

BTAG Low HQ:	9.5E-01	mean
BTAG High HQ:	4.2E-02	mean
BTAG Low HQ:	9.5E-01	max
BTAG High HQ:	4.2E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Lead
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	4.082447
Maximum detected value (mg/kg, dry weight):	5.430464

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	130
Maximum detected value (mg/kg, dry weight):	130

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.5E-01	mean
Daily exposure (mg/kg-day)	7.3E-01	max

Hazard Quotients

BTAG Low HQ:	4.7E+01	mean
BTAG High HQ:	7.4E-02	mean
BTAG Low HQ:	5.2E+01	max
BTAG High HQ:	8.3E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Total Mercury
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.119681
Maximum detected value (mg/kg, dry weight):	0.163522

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	3.2
Maximum detected value (mg/kg, dry weight):	3.2

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.7E-02	mean
Daily exposure (mg/kg-day)	2.0E-02	max

Hazard Quotients

BTAG HQ:	4.4E-01	mean
BTAG HQ:	9.5E-02	mean
BTAG Low HQ:	5.0E-01	max
BTAG High HQ:	1.1E-01	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Nickel
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.566489
Maximum detected value (mg/kg, dry weight):	2.955975

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	17
Maximum detected value (mg/kg, dry weight):	17

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.0E-01	mean
Daily exposure (mg/kg-day)	2.2E-01	max

Hazard Quotients

BTAG Low HQ:	1.4E-01	mean
BTAG High HQ:	3.5E-03	mean
BTAG Low HQ:	1.6E-01	max
BTAG High HQ:	3.9E-03	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Selenium
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.994681
Maximum detected value (mg/kg, dry weight):	2.721088

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E-01	mean
Daily exposure (mg/kg-day)	1.6E-01	max

Hazard Quotients

BTAG Low HQ:	5.0E-01	mean
BTAG High HQ:	1.2E-01	mean
BTAG Low HQ:	6.8E-01	max
BTAG High HQ:	1.7E-01	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Zinc
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	130.3191
Maximum detected value (mg/kg, dry weight):	143.7126

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	330
Maximum detected value (mg/kg, dry weight):	330

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	8.4E+00	mean
Daily exposure (mg/kg-day)	9.1E+00	max

Hazard Quotients

BTAG Low HQ:	4.9E-01	mean
BTAG High HQ:	4.9E-02	mean
BTAG Low HQ:	5.3E-01	max
BTAG High HQ:	5.3E-02	max

Tier I - Summary of Hazard Quotients

Receptor: Sea Lion
Location: NA06

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	--	--	--	--	2.8E-02	--	--	--	--	--	--
LOAEL HQ:	--	--	--	--	1.3E-03	--	--	--	--	--	--
BTAG Low HQ:	3.3E-03	2.1E-02	1.9E-02	**1.4E+00**	#VALUE!	2.3E-01	1.8E-01	1.8E-01	5.1E-01	8.9E-01	3.2E-01
BTAG High HQ:	1.3E-04	5.9E-03	3.2E-04	9.2E-02	#VALUE!	9.7E-04	7.4E-04	1.8E-02	2.2E-03	3.7E-02	7.5E-03
MAXIMUM											
NOAEL HQ:	--	--	--	--	3.0E-02	--	--	--	--	--	--
LOAEL HQ:	--	--	--	--	1.4E-03	--	--	--	--	--	--
BTAG Low HQ:	3.5E-03	2.8E-02	2.2E-02	**1.4E+00**	#VALUE!	2.3E-01	2.1E-01	2.1E-01	5.8E-01	**1.2E+00**	3.5E-01
BTAG High HQ:	1.4E-04	7.8E-03	3.7E-04	9.4E-02	#VALUE!	9.7E-04	8.6E-04	2.1E-02	2.4E-03	5.0E-02	8.2E-03

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Benzo[a]pyrene
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.179521
Maximum detected value (mg/kg, dry weight):	0.191617

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.61
Maximum detected value (mg/kg, dry weight):	0.61

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.31
BTAG High (mg/kg-day):	32.8

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.4E-03	mean
Daily exposure (mg/kg-day)	4.6E-03	max

Hazard Quotients

BTAG Low HQ:	3.3E-03	mean
BTAG High HQ:	1.3E-04	mean
BTAG Low HQ:	3.5E-03	max
BTAG High HQ:	1.4E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Total PCB Congeners
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.322207
Maximum detected value (mg/kg, dry weight):	0.43522

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.64
Maximum detected value (mg/kg, dry weight):	0.64

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.36
BTAG High (mg/kg-day):	1.28

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.5E-03	mean
Daily exposure (mg/kg-day)	1.0E-02	max

Hazard Quotients

BTAG Low HQ:	2.1E-02	mean
BTAG High HQ:	5.9E-03	mean
BTAG Low HQ:	2.8E-02	max
BTAG High HQ:	7.8E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Tributyltin
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.210106
Maximum detected value (mg/kg, dry weight):	0.245509

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.18
Maximum detected value (mg/kg, dry weight):	0.18

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.25
BTAG High (mg/kg-day):	15

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.7E-03	mean
Daily exposure (mg/kg-day)	5.5E-03	max

Hazard Quotients

BTAG Low HQ:	1.9E-02	mean
BTAG High HQ:	3.2E-04	mean
BTAG Low HQ:	2.2E-02	max
BTAG High HQ:	3.7E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Arsenic
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	19.41489
Maximum detected value (mg/kg, dry weight):	19.76048

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	11
Maximum detected value (mg/kg, dry weight):	11

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.32
BTAG High (mg/kg-day):	4.7

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.3E-01	mean
Daily exposure (mg/kg-day)	4.4E-01	max

Hazard Quotients

BTAG Low HQ:	1.4E+00	mean
BTAG High HQ:	9.2E-02	mean
BTAG Low HQ:	1.4E+00	max
BTAG High HQ:	9.4E-02	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Cadmium
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.277926
Maximum detected value (mg/kg, dry weight):	0.4375

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.28
Maximum detected value (mg/kg, dry weight):	0.28

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.06
BTAG High (mg/kg-day):	2.64

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.3E-03	mean
Daily exposure (mg/kg-day)	9.8E-03	max

Hazard Quotients

BTAG Low HQ:	1.1E-01	mean
BTAG High HQ:	2.4E-03	mean
BTAG Low HQ:	1.6E-01	max
BTAG High HQ:	3.7E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Chromium
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.114362
Maximum detected value (mg/kg, dry weight):	2.389937

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	67
Maximum detected value (mg/kg, dry weight):	67

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	3.3
LOAEL (mg/kg-day):	69
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.2E-02	mean
Daily exposure (mg/kg-day)	9.8E-02	max

Hazard Quotients

NOAEL HQ:	2.8E-02	mean
LOAEL HQ:	1.3E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	3.0E-02	max
LOAEL HQ:	1.4E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Copper
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	15.15957
Maximum detected value (mg/kg, dry weight):	15.09434

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	410
Maximum detected value (mg/kg, dry weight):	410

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.67
BTAG High (mg/kg-day):	632

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.1E-01	mean
Daily exposure (mg/kg-day)	6.1E-01	max

Hazard Quotients

BTAG Low HQ:	2.3E-01	mean
BTAG High HQ:	9.7E-04	mean
BTAG Low HQ:	2.3E-01	max
BTAG High HQ:	9.7E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Lead
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	4.082447
Maximum detected value (mg/kg, dry weight):	5.430464

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	130
Maximum detected value (mg/kg, dry weight):	130

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1
BTAG High (mg/kg-day):	241

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.8E-01	mean
Daily exposure (mg/kg-day)	2.1E-01	max

Hazard Quotients

BTAG Low HQ:	1.8E-01	mean
BTAG High HQ:	7.4E-04	mean
BTAG Low HQ:	2.1E-01	max
BTAG High HQ:	8.6E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Total Mercury
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.119681
Maximum detected value (mg/kg, dry weight):	0.163522

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	3.2
Maximum detected value (mg/kg, dry weight):	3.2

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.027
BTAG High (mg/kg-day):	0.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.8E-03	mean
Daily exposure (mg/kg-day)	5.8E-03	max

Hazard Quotients

BTAG HQ:	1.8E-01	mean
BTAG HQ:	1.8E-02	mean
BTAG Low HQ:	2.1E-01	max
BTAG High HQ:	2.1E-02	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Nickel
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.566489
Maximum detected value (mg/kg, dry weight):	2.955975

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	17
Maximum detected value (mg/kg, dry weight):	17

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.133
BTAG High (mg/kg-day):	31.6

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.8E-02	mean
Daily exposure (mg/kg-day)	7.7E-02	max

Hazard Quotients

BTAG Low HQ:	5.1E-01	mean
BTAG High HQ:	2.2E-03	mean
BTAG Low HQ:	5.8E-01	max
BTAG High HQ:	2.4E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Selenium
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.994681
Maximum detected value (mg/kg, dry weight):	2.721088

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.05
BTAG High (mg/kg-day):	1.21

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.5E-02	mean
Daily exposure (mg/kg-day)	6.1E-02	max

Hazard Quotients

BTAG Low HQ:	8.9E-01	mean
BTAG High HQ:	3.7E-02	mean
BTAG Low HQ:	1.2E+00	max
BTAG High HQ:	5.0E-02	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Zinc
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	130.3191
Maximum detected value (mg/kg, dry weight):	143.7126

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	330
Maximum detected value (mg/kg, dry weight):	330

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	9.6
BTAG High (mg/kg-day):	411

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.1E+00	mean
Daily exposure (mg/kg-day)	3.4E+00	max

Hazard Quotients

BTAG Low HQ:	3.2E-01	mean
BTAG High HQ:	7.5E-03	mean
BTAG Low HQ:	3.5E-01	max
BTAG High HQ:	8.2E-03	max

Tier I - Summary of Hazard Quotients

Receptor: CA Least Tern
Location: NA06

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	1.7E-01	--	--	--	5.4E-01	--	--	--	--	--	--
LOAEL HQ:	1.7E-02	--	--	--	1.1E-01	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	4.6E-01	3.6E-02	4.4E-01	#VALUE!	**1.4E+00**	**6.4E+01**	6.3E-01	2.6E-01	**1.1E+00**	9.8E-01
BTAG High HQ:	#VALUE!	3.3E-02	5.7E-04	1.1E-01	#VALUE!	5.9E-02	1.0E-01	1.4E-01	6.5E-03	2.7E-01	9.8E-02
MAXIMUM											
NOAEL HQ:	1.8E-01	--	--	--	5.8E-01	--	--	--	--	--	--
LOAEL HQ:	1.8E-02	--	--	--	1.2E-01	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	6.1E-01	4.2E-02	4.5E-01	#VALUE!	**1.3E+00**	**7.6E+01**	7.6E-01	3.0E-01	**1.5E+00**	1.1E+00
BTAG High HQ:	#VALUE!	4.3E-02	6.7E-04	1.1E-01	#VALUE!	5.9E-02	1.2E-01	1.7E-01	7.3E-03	3.6E-01	1.1E-01

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Benzo[a]pyrene
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.179521
Maximum detected value (mg/kg, dry weight):	0.191617

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.61
Maximum detected value (mg/kg, dry weight):	0.61

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.4E-02	mean
Daily exposure (mg/kg-day)	2.5E-02	max

Hazard Quotients

NOAEL HQ:	1.7E-01	mean
LOAEL HQ:	1.7E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	1.8E-01	max
LOAEL HQ:	1.8E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Total PCB Congeners
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.322207
Maximum detected value (mg/kg, dry weight):	0.43522

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.64
Maximum detected value (mg/kg, dry weight):	0.64

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.1E-02	mean
Daily exposure (mg/kg-day)	5.5E-02	max

Hazard Quotients

BTAG Low HQ:	4.6E-01	mean
BTAG High HQ:	3.3E-02	mean
BTAG Low HQ:	6.1E-01	max
BTAG High HQ:	4.3E-02	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Tributyltin
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.210106
Maximum detected value (mg/kg, dry weight):	0.245509

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.18
Maximum detected value (mg/kg, dry weight):	0.18

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.6E-02	mean
Daily exposure (mg/kg-day)	3.1E-02	max

Hazard Quotients

BTAG Low HQ:	3.6E-02	mean
BTAG High HQ:	5.7E-04	mean
BTAG Low HQ:	4.2E-02	max
BTAG High HQ:	6.7E-04	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Arsenic
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	19.41489
Maximum detected value (mg/kg, dry weight):	19.76048

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	11
Maximum detected value (mg/kg, dry weight):	11

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.4E+00	mean
Daily exposure (mg/kg-day)	2.4E+00	max

Hazard Quotients

BTAG Low HQ:	4.4E-01	mean
BTAG High HQ:	1.1E-01	mean
BTAG Low HQ:	4.5E-01	max
BTAG High HQ:	1.1E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Cadmium
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.277926
Maximum detected value (mg/kg, dry weight):	0.4375

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.28
Maximum detected value (mg/kg, dry weight):	0.28

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.5E-02	mean
Daily exposure (mg/kg-day)	5.4E-02	max

Hazard Quotients

BTAG Low HQ:	4.4E-01	mean
BTAG High HQ:	3.3E-03	mean
BTAG Low HQ:	6.8E-01	max
BTAG High HQ:	5.2E-03	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Chromium
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.114362
Maximum detected value (mg/kg, dry weight):	2.389937

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	67
Maximum detected value (mg/kg, dry weight):	67

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.6E-01	mean
Daily exposure (mg/kg-day)	5.0E-01	max

Hazard Quotients

NOAEL HQ:	5.4E-01	mean
LOAEL HQ:	1.1E-01	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	5.8E-01	max
LOAEL HQ:	1.2E-01	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Copper
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	15.15957
Maximum detected value (mg/kg, dry weight):	15.09434

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	410
Maximum detected value (mg/kg, dry weight):	410

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.1E+00	mean
Daily exposure (mg/kg-day)	3.1E+00	max

Hazard Quotients

BTAG Low HQ:	1.4E+00	mean
BTAG High HQ:	5.9E-02	mean
BTAG Low HQ:	1.3E+00	max
BTAG High HQ:	5.9E-02	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Lead
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	4.082447
Maximum detected value (mg/kg, dry weight):	5.430464

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	130
Maximum detected value (mg/kg, dry weight):	130

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.0E-01	mean
Daily exposure (mg/kg-day)	1.1E+00	max

Hazard Quotients

BTAG Low HQ:	6.4E+01	mean
BTAG High HQ:	1.0E-01	mean
BTAG Low HQ:	7.6E+01	max
BTAG High HQ:	1.2E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Total Mercury
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.119681
Maximum detected value (mg/kg, dry weight):	0.163522

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	3.2
Maximum detected value (mg/kg, dry weight):	3.2

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.4E-02	mean
Daily exposure (mg/kg-day)	3.0E-02	max

Hazard Quotients

BTAG HQ:	6.3E-01	mean
BTAG HQ:	1.4E-01	mean
BTAG Low HQ:	7.6E-01	max
BTAG High HQ:	1.7E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Nickel
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.566489
Maximum detected value (mg/kg, dry weight):	2.955975

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	17
Maximum detected value (mg/kg, dry weight):	17

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.7E-01	mean
Daily exposure (mg/kg-day)	4.1E-01	max

Hazard Quotients

BTAG Low HQ:	2.6E-01	mean
BTAG High HQ:	6.5E-03	mean
BTAG Low HQ:	3.0E-01	max
BTAG High HQ:	7.3E-03	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Selenium
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.994681
Maximum detected value (mg/kg, dry weight):	2.721088

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.5E-01	mean
Daily exposure (mg/kg-day)	3.4E-01	max

Hazard Quotients

BTAG Low HQ:	1.1E+00	mean
BTAG High HQ:	2.7E-01	mean
BTAG Low HQ:	1.5E+00	max
BTAG High HQ:	3.6E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Zinc
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	130.3191
Maximum detected value (mg/kg, dry weight):	143.7126

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	330
Maximum detected value (mg/kg, dry weight):	330

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.7E+01	mean
Daily exposure (mg/kg-day)	1.9E+01	max

Hazard Quotients

BTAG Low HQ:	9.8E-01	mean
BTAG High HQ:	9.8E-02	mean
BTAG Low HQ:	1.1E+00	max
BTAG High HQ:	1.1E-01	max

Tier I - Summary of Hazard Quotients

Receptor: Green Turtle
Location: NA06

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	5.0E-03	--	--	--	2.3E-02	--	--	--	--	--	--
LOAEL HQ:	5.0E-04	--	--	--	4.7E-03	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	1.3E-02	9.9E-04	1.2E-02	#VALUE!	5.6E-02	**2.8E+00**	2.6E-02	8.5E-03	2.9E-02	2.8E-02
BTAG High HQ:	#VALUE!	9.3E-04	1.6E-05	3.0E-03	#VALUE!	2.5E-03	4.4E-03	5.7E-03	2.1E-04	7.2E-03	2.8E-03
MAXIMUM											
NOAEL HQ:	5.3E-03	--	--	--	2.4E-02	--	--	--	--	--	--
LOAEL HQ:	5.3E-04	--	--	--	4.9E-03	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	1.7E-02	1.1E-03	1.2E-02	#VALUE!	5.6E-02	**3.1E+00**	3.0E-02	9.4E-03	3.9E-02	3.1E-02
BTAG High HQ:	#VALUE!	1.2E-03	1.8E-05	3.0E-03	#VALUE!	2.5E-03	4.9E-03	6.4E-03	2.3E-04	9.8E-03	3.1E-03

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Benzo[a]pyrene
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.179521
Maximum detected value (mg/kg, dry weight):	0.191617

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.61
Maximum detected value (mg/kg, dry weight):	0.61

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.1E-04	mean
Daily exposure (mg/kg-day)	7.4E-04	max

Hazard Quotients

NOAEL HQ:	5.0E-03	mean
LOAEL HQ:	5.0E-04	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	5.3E-03	max
LOAEL HQ:	5.3E-04	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Total PCB Congeners
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.322207
Maximum detected value (mg/kg, dry weight):	0.43522

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.64
Maximum detected value (mg/kg, dry weight):	0.64

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E-03	mean
Daily exposure (mg/kg-day)	1.5E-03	max

Hazard Quotients

BTAG Low HQ:	1.3E-02	mean
BTAG High HQ:	9.3E-04	mean
BTAG Low HQ:	1.7E-02	max
BTAG High HQ:	1.2E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Tributyltin
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.210106
Maximum detected value (mg/kg, dry weight):	0.245509

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.18
Maximum detected value (mg/kg, dry weight):	0.18

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.2E-04	mean
Daily exposure (mg/kg-day)	8.4E-04	max

Hazard Quotients

BTAG Low HQ:	9.9E-04	mean
BTAG High HQ:	1.6E-05	mean
BTAG Low HQ:	1.1E-03	max
BTAG High HQ:	1.8E-05	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Arsenic
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	19.41489
Maximum detected value (mg/kg, dry weight):	19.76048

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	11
Maximum detected value (mg/kg, dry weight):	11

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.6E-02	mean
Daily exposure (mg/kg-day)	6.7E-02	max

Hazard Quotients

BTAG Low HQ:	1.2E-02	mean
BTAG High HQ:	3.0E-03	mean
BTAG Low HQ:	1.2E-02	max
BTAG High HQ:	3.0E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Cadmium
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.277926
Maximum detected value (mg/kg, dry weight):	0.4375

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.28
Maximum detected value (mg/kg, dry weight):	0.28

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.6E-04	mean
Daily exposure (mg/kg-day)	1.5E-03	max

Hazard Quotients

BTAG Low HQ:	1.2E-02	mean
BTAG High HQ:	9.2E-05	mean
BTAG Low HQ:	1.9E-02	max
BTAG High HQ:	1.4E-04	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Chromium
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.114362
Maximum detected value (mg/kg, dry weight):	2.389937

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	67
Maximum detected value (mg/kg, dry weight):	67

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.0E-02	mean
Daily exposure (mg/kg-day)	2.1E-02	max

Hazard Quotients

NOAEL HQ:	2.3E-02	mean
LOAEL HQ:	4.7E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	2.4E-02	max
LOAEL HQ:	4.9E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Copper
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	15.15957
Maximum detected value (mg/kg, dry weight):	15.09434

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	410
Maximum detected value (mg/kg, dry weight):	410

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.3E-01	mean
Daily exposure (mg/kg-day)	1.3E-01	max

Hazard Quotients

BTAG Low HQ:	5.6E-02	mean
BTAG High HQ:	2.5E-03	mean
BTAG Low HQ:	5.6E-02	max
BTAG High HQ:	2.5E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Lead
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	4.082447
Maximum detected value (mg/kg, dry weight):	5.430464

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	130
Maximum detected value (mg/kg, dry weight):	130

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.9E-02	mean
Daily exposure (mg/kg-day)	4.3E-02	max

Hazard Quotients

BTAG Low HQ:	2.8E+00	mean
BTAG High HQ:	4.4E-03	mean
BTAG Low HQ:	3.1E+00	max
BTAG High HQ:	4.9E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Total Mercury
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.119681
Maximum detected value (mg/kg, dry weight):	0.163522

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	3.2
Maximum detected value (mg/kg, dry weight):	3.2

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.0E-03	mean
Daily exposure (mg/kg-day)	1.2E-03	max

Hazard Quotients

BTAG HQ:	2.6E-02	mean
BTAG HQ:	5.7E-03	mean
BTAG Low HQ:	3.0E-02	max
BTAG High HQ:	6.4E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Nickel
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.566489
Maximum detected value (mg/kg, dry weight):	2.955975

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	17
Maximum detected value (mg/kg, dry weight):	17

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E-02	mean
Daily exposure (mg/kg-day)	1.3E-02	max

Hazard Quotients

BTAG Low HQ:	8.5E-03	mean
BTAG High HQ:	2.1E-04	mean
BTAG Low HQ:	9.4E-03	max
BTAG High HQ:	2.3E-04	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Selenium
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.994681
Maximum detected value (mg/kg, dry weight):	2.721088

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.7E-03	mean
Daily exposure (mg/kg-day)	9.1E-03	max

Hazard Quotients

BTAG Low HQ:	2.9E-02	mean
BTAG High HQ:	7.2E-03	mean
BTAG Low HQ:	3.9E-02	max
BTAG High HQ:	9.8E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Zinc
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	130.3191
Maximum detected value (mg/kg, dry weight):	143.7126

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	330
Maximum detected value (mg/kg, dry weight):	330

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.9E-01	mean
Daily exposure (mg/kg-day)	5.3E-01	max

Hazard Quotients

BTAG Low HQ:	2.8E-02	mean
BTAG High HQ:	2.8E-03	mean
BTAG Low HQ:	3.1E-02	max
BTAG High HQ:	3.1E-03	max

Tier I - Summary of Hazard Quotients

Receptor: **Brown Pelican**
Location: **NA06**

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	1.1E-01	--	--	--	3.4E-01	--	--	--	--	--	--
LOAEL HQ:	1.1E-02	--	--	--	6.7E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	3.0E-01	2.4E-02	2.9E-01	#VALUE!	8.5E-01	**4.0E+01**	3.9E-01	1.7E-01	7.1E-01	6.5E-01
BTAG High HQ:	#VALUE!	2.1E-02	3.8E-04	7.2E-02	#VALUE!	3.7E-02	6.4E-02	8.5E-02	4.2E-03	1.8E-01	6.5E-02
MAXIMUM											
NOAEL HQ:	1.2E-01	--	--	--	3.6E-01	--	--	--	--	--	--
LOAEL HQ:	1.2E-02	--	--	--	7.2E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	4.0E-01	2.8E-02	2.9E-01	#VALUE!	8.4E-01	**4.8E+01**	4.8E-01	1.9E-01	9.6E-01	7.1E-01
BTAG High HQ:	#VALUE!	2.9E-02	4.4E-04	7.3E-02	#VALUE!	3.7E-02	7.6E-02	1.0E-01	4.8E-03	2.4E-01	7.1E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Benzo[a]pyrene
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.179521
Maximum detected value (mg/kg, dry weight):	0.191617

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.61
Maximum detected value (mg/kg, dry weight):	0.61

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

	Total PAHs	Total Solids			
	250	14.7	100	0.147	
	270	15.1	100	0.151	
	190	12.8	100	0.128	
	320	15.9	100	0.159	
	320	16.7	100	0.167	
	270			**0.1504**	1795.213
BAP					
	27	14.7	100	0.147	
	26	15.1	100	0.151	
	20	12.8	100	0.128	
	30	15.9	100	0.159	
	32	16.7	100	0.167	
	27			**0.1504**	179.5213
	191.6167665				

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.6E-02	mean
Daily exposure (mg/kg-day)	1.7E-02	max

Hazard Quotients

NOAEL HQ:	1.1E-01	mean
LOAEL HQ:	1.1E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	1.2E-01	max
LOAEL HQ:	1.2E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Total PCB Congeners
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.322207
Maximum detected value (mg/kg, dry weight):	0.43522

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.64
Maximum detected value (mg/kg, dry weight):	0.64

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.7E-02	mean
Daily exposure (mg/kg-day)	3.6E-02	max

Hazard Quotients

BTAG Low HQ:	3.0E-01	mean
BTAG High HQ:	2.1E-02	mean
BTAG Low HQ:	4.0E-01	max
BTAG High HQ:	2.9E-02	max

	PCB Cong	Total Solids			
	55	14.7	100	0.147	
	40.1	15.1	100	0.151	
	20.1	12.8	100	0.128	
	69.2	15.9	100	0.159	
	57.9	16.7	100	0.167	
	48.46			**0.1504**	**322.2074**
	435.22013				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Tributyltin
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.210106
Maximum detected value (mg/kg, dry weight):	0.245509

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.18
Maximum detected value (mg/kg, dry weight):	0.18

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.7E-02	mean
Daily exposure (mg/kg-day)	2.0E-02	max

Hazard Quotients

BTAG Low HQ:	2.4E-02	mean
BTAG High HQ:	3.8E-04	mean
BTAG Low HQ:	2.8E-02	max
BTAG High HQ:	4.4E-04	max

TBT	Total Solids				
16	14.7	100	0.147		
32	15.1	100	0.151		
31	12.8	100	0.128		
38	15.9	100	0.159		
41	16.7	100	0.167		
31.6			**0.1504**	**210.1064**	

245.509

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Arsenic
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	19.41489
Maximum detected value (mg/kg, dry weight):	19.76048

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	11
Maximum detected value (mg/kg, dry weight):	11

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.6E+00	mean
Daily exposure (mg/kg-day)	1.6E+00	max

Hazard Quotients

BTAG Low HQ:	2.9E-01	mean
BTAG High HQ:	7.2E-02	mean
BTAG Low HQ:	2.9E-01	max
BTAG High HQ:	7.3E-02	max

	Arsenic	Total Solids			
	3	14.7	100	0.147	
	2.6	15.1	100	0.151	
	2.7	12.8	100	0.128	
	3	15.9	100	0.159	
	3.3	16.7	100	0.167	
	2.92			**0.1504**	**19.41489**
	19.76048				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Cadmium
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.277926
Maximum detected value (mg/kg, dry weight):	0.4375

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.28
Maximum detected value (mg/kg, dry weight):	0.28

Cadmium	Total Solids			
0.032	14.7	100	0.147	
0.033	15.1	100	0.151	
0.056	12.8	100	0.128	
0.037	15.9	100	0.159	
0.051	16.7	100	0.167	
0.0418			**0.1504**	**0.277926**
0.4375				

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.3E-02	mean
Daily exposure (mg/kg-day)	3.6E-02	max

Hazard Quotients

BTAG Low HQ:	2.9E-01	mean
BTAG High HQ:	2.2E-03	mean
BTAG Low HQ:	4.5E-01	max
BTAG High HQ:	3.4E-03	max

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Chromium
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.114362
Maximum detected value (mg/kg, dry weight):	2.389937

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	67
Maximum detected value (mg/kg, dry weight):	67

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.9E-01	mean
Daily exposure (mg/kg-day)	3.1E-01	max

Hazard Quotients

NOAEL HQ:	3.4E-01	mean
LOAEL HQ:	6.7E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	3.6E-01	max
LOAEL HQ:	7.2E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

	Chromium	Total Solids			
	0.33	14.7	100	0.147	
	0.34	15.1	100	0.151	
	0.29	12.8	100	0.128	
	0.38	15.9	100	0.159	
	0.25	16.7	100	0.167	
	0.318			**0.1504**	**2.114362**
	2.389937				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Copper
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	15.15957
Maximum detected value (mg/kg, dry weight):	15.09434

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	410
Maximum detected value (mg/kg, dry weight):	410

Copper	Total Solids			
2.3	14.7	100	0.147	
2.1	15.1	100	0.151	
2.3	12.8	100	0.128	
2.4	15.9	100	0.159	
2.3	16.7	100	0.167	
2.28			**0.1504**	**15.15957**

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

15.09434

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.9E+00	mean
Daily exposure (mg/kg-day)	1.9E+00	max

Hazard Quotients

BTAG Low HQ:	8.5E-01	mean
BTAG High HQ:	3.7E-02	mean
BTAG Low HQ:	8.4E-01	max
BTAG High HQ:	3.7E-02	max

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Lead
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	4.082447
Maximum detected value (mg/kg, dry weight):	5.430464

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	130
Maximum detected value (mg/kg, dry weight):	130

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.6E-01	mean
Daily exposure (mg/kg-day)	6.7E-01	max

Hazard Quotients

BTAG Low HQ:	4.0E+01	mean
BTAG High HQ:	6.4E-02	mean
BTAG Low HQ:	4.8E+01	max
BTAG High HQ:	7.6E-02	max

Lead	Total Solids			
0.64	14.7	100	0.147	
0.82	15.1	100	0.151	
0.5	12.8	100	0.128	
0.53	15.9	100	0.159	
0.58	16.7	100	0.167	
0.614			**0.1504**	**4.082447**
5.430464				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Total Mercury
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.119681
Maximum detected value (mg/kg, dry weight):	0.163522

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	3.2
Maximum detected value (mg/kg, dry weight):	3.2

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.5E-02	mean
Daily exposure (mg/kg-day)	1.9E-02	max

Hazard Quotients

BTAG HQ:	3.9E-01	mean
BTAG HQ:	8.5E-02	mean
BTAG Low HQ:	4.8E-01	max
BTAG High HQ:	1.0E-01	max

Mercury	Total Solids			
0.016	14.7	100	0.147	
0.014	15.1	100	0.151	
0.016	12.8	100	0.128	
0.026	15.9	100	0.159	
0.018	16.7	100	0.167	
0.018			**0.1504**	**0.119681**

0.163522

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Nickel
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.566489
Maximum detected value (mg/kg, dry weight):	2.955975

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	17
Maximum detected value (mg/kg, dry weight):	17

Nickel	Total Solids			
0.38	14.7	100	0.147	
0.37	15.1	100	0.151	
0.34	12.8	100	0.128	
0.47	15.9	100	0.159	
0.37	16.7	100	0.167	
0.386			**0.1504**	**2.566489**

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

2.955975

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.4E-01	mean
Daily exposure (mg/kg-day)	2.7E-01	max

Hazard Quotients

BTAG Low HQ:	1.7E-01	mean
BTAG High HQ:	4.2E-03	mean
BTAG Low HQ:	1.9E-01	max
BTAG High HQ:	4.8E-03	max

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Selenium
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.994681
Maximum detected value (mg/kg, dry weight):	2.721088

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.6E-01	mean
Daily exposure (mg/kg-day)	2.2E-01	max

Hazard Quotients

BTAG Low HQ:	7.1E-01	mean
BTAG High HQ:	1.8E-01	mean
BTAG Low HQ:	9.6E-01	max
BTAG High HQ:	2.4E-01	max

Selenium	Total Solids			
0.4	14.7	100	0.147	
0.2	15.1	100	0.151	
0.3	12.8	100	0.128	
0.3	15.9	100	0.159	
0.3	16.7	100	0.167	
0.3			**0.1504**	**1.994681**
2.721088				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Zinc
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	130.3191
Maximum detected value (mg/kg, dry weight):	143.7126

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	330
Maximum detected value (mg/kg, dry weight):	330

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E+01	mean
Daily exposure (mg/kg-day)	1.2E+01	max

Hazard Quotients

BTAG Low HQ:	6.5E-01	mean
BTAG High HQ:	6.5E-02	mean
BTAG Low HQ:	7.1E-01	max
BTAG High HQ:	7.1E-02	max

Zinc	Total Solids				
17	14.7	100	0.147		
18	15.1	100	0.151		
21	12.8	100	0.128		
18	15.9	100	0.159		
24	16.7	100	0.167		
19.6			**0.1504**	**130.3191**	
143.7126					

Tier I - Summary of Hazard Quotients

Receptor: **Western Grebe**
Location: **NA06**

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	9.0E-02	--	--	--	4.4E-01	--	--	--	--	--	--
LOAEL HQ:	9.0E-03	--	--	--	8.8E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	2.3E-01	1.7E-02	2.1E-01	#VALUE!	**1.1E+00**	**5.2E+01**	4.9E-01	1.5E-01	5.1E-01	5.0E-01
BTAG High HQ:	#VALUE!	1.6E-02	2.8E-04	5.2E-02	#VALUE!	4.7E-02	8.4E-02	1.1E-01	3.8E-03	1.3E-01	5.0E-02
MAXIMUM											
NOAEL HQ:	9.5E-02	--	--	--	4.6E-01	--	--	--	--	--	--
LOAEL HQ:	9.5E-03	--	--	--	9.1E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	3.0E-01	2.0E-02	2.1E-01	#VALUE!	**1.1E+00**	**5.8E+01**	5.5E-01	1.7E-01	6.9E-01	5.5E-01
BTAG High HQ:	#VALUE!	2.1E-02	3.2E-04	5.3E-02	#VALUE!	4.7E-02	9.2E-02	1.2E-01	4.1E-03	1.7E-01	5.5E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Benzo[a]pyrene
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.179521
Maximum detected value (mg/kg, dry weight):	0.191617

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.61
Maximum detected value (mg/kg, dry weight):	0.61

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.3E-02	mean
Daily exposure (mg/kg-day)	1.3E-02	max

Hazard Quotients

NOAEL HQ:	9.0E-02	mean
LOAEL HQ:	9.0E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	9.5E-02	max
LOAEL HQ:	9.5E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Total PCB Congeners
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.322207
Maximum detected value (mg/kg, dry weight):	0.43522

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.64
Maximum detected value (mg/kg, dry weight):	0.64

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.1E-02	mean
Daily exposure (mg/kg-day)	2.7E-02	max

Hazard Quotients

BTAG Low HQ:	2.3E-01	mean
BTAG High HQ:	1.6E-02	mean
BTAG Low HQ:	3.0E-01	max
BTAG High HQ:	2.1E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Tributyltin
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.210106
Maximum detected value (mg/kg, dry weight):	0.245509

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.18
Maximum detected value (mg/kg, dry weight):	0.18

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.3E-02	mean
Daily exposure (mg/kg-day)	1.5E-02	max

Hazard Quotients

BTAG Low HQ:	1.7E-02	mean
BTAG High HQ:	2.8E-04	mean
BTAG Low HQ:	2.0E-02	max
BTAG High HQ:	3.2E-04	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Arsenic
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	19.41489
Maximum detected value (mg/kg, dry weight):	19.76048

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	11
Maximum detected value (mg/kg, dry weight):	11

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E+00	mean
Daily exposure (mg/kg-day)	1.2E+00	max

Hazard Quotients

BTAG Low HQ:	2.1E-01	mean
BTAG High HQ:	5.2E-02	mean
BTAG Low HQ:	2.1E-01	max
BTAG High HQ:	5.3E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Cadmium
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.277926
Maximum detected value (mg/kg, dry weight):	0.4375

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.28
Maximum detected value (mg/kg, dry weight):	0.28

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.7E-02	mean
Daily exposure (mg/kg-day)	2.6E-02	max

Hazard Quotients

BTAG Low HQ:	2.1E-01	mean
BTAG High HQ:	1.6E-03	mean
BTAG Low HQ:	3.2E-01	max
BTAG High HQ:	2.5E-03	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Chromium
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.114362
Maximum detected value (mg/kg, dry weight):	2.389937

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	67
Maximum detected value (mg/kg, dry weight):	67

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.8E-01	mean
Daily exposure (mg/kg-day)	3.9E-01	max

Hazard Quotients

NOAEL HQ:	4.4E-01	mean
LOAEL HQ:	8.8E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	4.6E-01	max
LOAEL HQ:	9.1E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Copper
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	15.15957
Maximum detected value (mg/kg, dry weight):	15.09434

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	410
Maximum detected value (mg/kg, dry weight):	410

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.4E+00	mean
Daily exposure (mg/kg-day)	2.4E+00	max

Hazard Quotients

BTAG Low HQ:	1.1E+00	mean
BTAG High HQ:	4.7E-02	mean
BTAG Low HQ:	1.1E+00	max
BTAG High HQ:	4.7E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Lead
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	4.082447
Maximum detected value (mg/kg, dry weight):	5.430464

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	130
Maximum detected value (mg/kg, dry weight):	130

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.3E-01	mean
Daily exposure (mg/kg-day)	8.1E-01	max

Hazard Quotients

BTAG Low HQ:	5.2E+01	mean
BTAG High HQ:	8.4E-02	mean
BTAG Low HQ:	5.8E+01	max
BTAG High HQ:	9.2E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Total Mercury
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.119681
Maximum detected value (mg/kg, dry weight):	0.163522

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	3.2
Maximum detected value (mg/kg, dry weight):	3.2

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.9E-02	mean
Daily exposure (mg/kg-day)	2.2E-02	max

Hazard Quotients

BTAG HQ:	4.9E-01	mean
BTAG HQ:	1.1E-01	mean
BTAG Low HQ:	5.5E-01	max
BTAG High HQ:	1.2E-01	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Nickel
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.566489
Maximum detected value (mg/kg, dry weight):	2.955975

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	17
Maximum detected value (mg/kg, dry weight):	17

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.1E-01	mean
Daily exposure (mg/kg-day)	2.3E-01	max

Hazard Quotients

BTAG Low HQ:	1.5E-01	mean
BTAG High HQ:	3.8E-03	mean
BTAG Low HQ:	1.7E-01	max
BTAG High HQ:	4.1E-03	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Selenium
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.994681
Maximum detected value (mg/kg, dry weight):	2.721088

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E-01	mean
Daily exposure (mg/kg-day)	1.6E-01	max

Hazard Quotients

BTAG Low HQ:	5.1E-01	mean
BTAG High HQ:	1.3E-01	mean
BTAG Low HQ:	6.9E-01	max
BTAG High HQ:	1.7E-01	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Zinc
Location: NA06

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	130.3191
Maximum detected value (mg/kg, dry weight):	143.7126

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	330
Maximum detected value (mg/kg, dry weight):	330

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	8.7E+00	mean
Daily exposure (mg/kg-day)	9.4E+00	max

Hazard Quotients

BTAG Low HQ:	5.0E-01	mean
BTAG High HQ:	5.0E-02	mean
BTAG Low HQ:	5.5E-01	max
BTAG High HQ:	5.5E-02	max

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Tier I - Summary of Hazard Quotients

Receptor: Surf Scoter
Location: NA11

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	7.2E-02	--	--	--	3.4E-01	--	--	--	--	--	--
LOAEL HQ:	7.2E-03	--	--	--	6.9E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	1.1E-01	7.3E-03	2.1E-01	#VALUE!	5.7E-01	**2.8E+01**	2.2E-01	1.3E-01	4.8E-01	4.1E-01
BTAG High HQ:	#VALUE!	8.1E-03	1.2E-04	5.3E-02	#VALUE!	2.5E-02	4.4E-02	4.8E-02	3.1E-03	1.2E-01	4.1E-02
MAXIMUM											
NOAEL HQ:	7.9E-02	--	--	--	3.8E-01	--	--	--	--	--	--
LOAEL HQ:	7.9E-03	--	--	--	7.7E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	1.2E-01	9.6E-03	2.5E-01	#VALUE!	6.6E-01	**3.1E+01**	2.4E-01	1.4E-01	6.4E-01	4.6E-01
BTAG High HQ:	#VALUE!	8.5E-03	1.5E-04	6.2E-02	#VALUE!	2.9E-02	4.9E-02	5.1E-02	3.4E-03	1.6E-01	4.6E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Benzo[a]pyrene
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.15625
Maximum detected value (mg/kg, dry weight):	0.174194

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.4
Maximum detected value (mg/kg, dry weight):	0.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.0E-02	mean
Daily exposure (mg/kg-day)	1.1E-02	max

Hazard Quotients

NOAEL HQ:	7.2E-02	mean
LOAEL HQ:	7.2E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	7.9E-02	max
LOAEL HQ:	7.9E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Total PCB Congeners
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.172418
Maximum detected value (mg/kg, dry weight):	0.18129

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.19
Maximum detected value (mg/kg, dry weight):	0.19

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.0E-02	mean
Daily exposure (mg/kg-day)	1.1E-02	max

Hazard Quotients

BTAG Low HQ:	1.1E-01	mean
BTAG High HQ:	8.1E-03	mean
BTAG Low HQ:	1.2E-01	max
BTAG High HQ:	8.5E-03	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Tributyltin
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.09375
Maximum detected value (mg/kg, dry weight):	0.122581

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.038
Maximum detected value (mg/kg, dry weight):	0.038

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.4E-03	mean
Daily exposure (mg/kg-day)	7.0E-03	max

Hazard Quotients

BTAG Low HQ:	7.3E-03	mean
BTAG High HQ:	1.2E-04	mean
BTAG Low HQ:	9.6E-03	max
BTAG High HQ:	1.5E-04	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Arsenic
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	20.24457
Maximum detected value (mg/kg, dry weight):	23.87097

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	9.3
Maximum detected value (mg/kg, dry weight):	9.3

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E+00	mean
Daily exposure (mg/kg-day)	1.4E+00	max

Hazard Quotients

BTAG Low HQ:	2.1E-01	mean
BTAG High HQ:	5.3E-02	mean
BTAG Low HQ:	2.5E-01	max
BTAG High HQ:	6.2E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Cadmium
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.264946
Maximum detected value (mg/kg, dry weight):	0.367347

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.28
Maximum detected value (mg/kg, dry weight):	0.28

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.6E-02	mean
Daily exposure (mg/kg-day)	2.1E-02	max

Hazard Quotients

BTAG Low HQ:	2.0E-01	mean
BTAG High HQ:	1.5E-03	mean
BTAG Low HQ:	2.7E-01	max
BTAG High HQ:	2.1E-03	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Chromium
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.861413
Maximum detected value (mg/kg, dry weight):	2.44898

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	59
Maximum detected value (mg/kg, dry weight):	59

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.0E-01	mean
Daily exposure (mg/kg-day)	3.3E-01	max

Hazard Quotients

NOAEL HQ:	3.4E-01	mean
LOAEL HQ:	6.9E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	3.8E-01	max
LOAEL HQ:	7.7E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Copper
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	12.90761
Maximum detected value (mg/kg, dry weight):	16.77419

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	180
Maximum detected value (mg/kg, dry weight):	180

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.3E+00	mean
Daily exposure (mg/kg-day)	1.5E+00	max

Hazard Quotients

BTAG Low HQ:	5.7E-01	mean
BTAG High HQ:	2.5E-02	mean
BTAG Low HQ:	6.6E-01	max
BTAG High HQ:	2.9E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Lead
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.663043
Maximum detected value (mg/kg, dry weight):	3.419355

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	73
Maximum detected value (mg/kg, dry weight):	73

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.9E-01	mean
Daily exposure (mg/kg-day)	4.3E-01	max

Hazard Quotients

BTAG Low HQ:	2.8E+01	mean
BTAG High HQ:	4.4E-02	mean
BTAG Low HQ:	3.1E+01	max
BTAG High HQ:	4.9E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Total Mercury
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.10462
Maximum detected value (mg/kg, dry weight):	0.116129

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.85
Maximum detected value (mg/kg, dry weight):	0.85

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	8.6E-03	mean
Daily exposure (mg/kg-day)	9.3E-03	max

Hazard Quotients

BTAG Low HQ:	2.2E-01	mean
BTAG High HQ:	4.8E-02	mean
BTAG Low HQ:	2.4E-01	max
BTAG High HQ:	5.1E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Nickel
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.296196
Maximum detected value (mg/kg, dry weight):	2.516129

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	15
Maximum detected value (mg/kg, dry weight):	15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.8E-01	mean
Daily exposure (mg/kg-day)	1.9E-01	max

Hazard Quotients

BTAG Low HQ:	1.3E-01	mean
BTAG High HQ:	3.1E-03	mean
BTAG Low HQ:	1.4E-01	max
BTAG High HQ:	3.4E-03	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Selenium
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.902174
Maximum detected value (mg/kg, dry weight):	2.580645

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E-01	mean
Daily exposure (mg/kg-day)	1.5E-01	max

Hazard Quotients

BTAG Low HQ:	4.8E-01	mean
BTAG High HQ:	1.2E-01	mean
BTAG Low HQ:	6.4E-01	max
BTAG High HQ:	1.6E-01	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Zinc
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	112.7717
Maximum detected value (mg/kg, dry weight):	129.0323

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	230
Maximum detected value (mg/kg, dry weight):	230

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.1E+00	mean
Daily exposure (mg/kg-day)	8.0E+00	max

Hazard Quotients

BTAG Low HQ:	4.1E-01	mean
BTAG High HQ:	4.1E-02	mean
BTAG Low HQ:	4.6E-01	max
BTAG High HQ:	4.6E-02	max

Tier I - Summary of Hazard Quotients

Receptor: Sea Lion
Location: NA11

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	--	--	--	--	2.5E-02	--	--	--	--	--	--
LOAEL HQ:	--	--	--	--	1.2E-03	--	--	--	--	--	--
BTAG Low HQ:	2.8E-03	1.1E-02	8.4E-03	**1.4E+00**	#VALUE!	1.5E-01	1.1E-01	1.1E-01	4.6E-01	8.5E-01	2.7E-01
BTAG High HQ:	1.1E-04	3.1E-03	1.4E-04	9.6E-02	#VALUE!	6.4E-04	4.5E-04	1.1E-02	1.9E-03	3.5E-02	6.4E-03
MAXIMUM											
NOAEL HQ:	--	--	--	--	2.9E-02	--	--	--	--	--	--
LOAEL HQ:	--	--	--	--	1.4E-03	--	--	--	--	--	--
BTAG Low HQ:	3.1E-03	1.1E-02	1.1E-02	**1.7E+00**	#VALUE!	1.8E-01	1.3E-01	1.2E-01	4.9E-01	**1.1E+00**	3.1E-01
BTAG High HQ:	1.3E-04	3.2E-03	1.8E-04	1.1E-01	#VALUE!	7.8E-04	5.2E-04	1.2E-02	2.1E-03	4.7E-02	7.3E-03

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Benzo[a]pyrene
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.15625
Maximum detected value (mg/kg, dry weight):	0.174194

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.4
Maximum detected value (mg/kg, dry weight):	0.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.31
BTAG High (mg/kg-day):	32.8

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.7E-03	mean
Daily exposure (mg/kg-day)	4.1E-03	max

Hazard Quotients

BTAG Low HQ:	2.8E-03	mean
BTAG High HQ:	1.1E-04	mean
BTAG Low HQ:	3.1E-03	max
BTAG High HQ:	1.3E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Total PCB Congeners
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.172418
Maximum detected value (mg/kg, dry weight):	0.18129

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.19
Maximum detected value (mg/kg, dry weight):	0.19

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.36
BTAG High (mg/kg-day):	1.28

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.9E-03	mean
Daily exposure (mg/kg-day)	4.1E-03	max

Hazard Quotients

BTAG Low HQ:	1.1E-02	mean
BTAG High HQ:	3.1E-03	mean
BTAG Low HQ:	1.1E-02	max
BTAG High HQ:	3.2E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Tributyltin
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.09375
Maximum detected value (mg/kg, dry weight):	0.122581

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.038
Maximum detected value (mg/kg, dry weight):	0.038

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.25
BTAG High (mg/kg-day):	15

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.1E-03	mean
Daily exposure (mg/kg-day)	2.7E-03	max

Hazard Quotients

BTAG Low HQ:	8.4E-03	mean
BTAG High HQ:	1.4E-04	mean
BTAG Low HQ:	1.1E-02	max
BTAG High HQ:	1.8E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Arsenic
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	20.24457
Maximum detected value (mg/kg, dry weight):	23.87097

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	9.3
Maximum detected value (mg/kg, dry weight):	9.3

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.32
BTAG High (mg/kg-day):	4.7

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.5E-01	mean
Daily exposure (mg/kg-day)	5.3E-01	max

Hazard Quotients

BTAG Low HQ:	1.4E+00	mean
BTAG High HQ:	9.6E-02	mean
BTAG Low HQ:	1.7E+00	max
BTAG High HQ:	1.1E-01	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Cadmium
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.264946
Maximum detected value (mg/kg, dry weight):	0.367347

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.28
Maximum detected value (mg/kg, dry weight):	0.28

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.06
BTAG High (mg/kg-day):	2.64

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.0E-03	mean
Daily exposure (mg/kg-day)	8.3E-03	max

Hazard Quotients

BTAG Low HQ:	1.0E-01	mean
BTAG High HQ:	2.3E-03	mean
BTAG Low HQ:	1.4E-01	max
BTAG High HQ:	3.1E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Chromium
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.861413
Maximum detected value (mg/kg, dry weight):	2.44898

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	59
Maximum detected value (mg/kg, dry weight):	59

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	3.3
LOAEL (mg/kg-day):	69
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	8.1E-02	mean
Daily exposure (mg/kg-day)	9.4E-02	max

Hazard Quotients

NOAEL HQ:	2.5E-02	mean
LOAEL HQ:	1.2E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	2.9E-02	max
LOAEL HQ:	1.4E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Copper
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	12.90761
Maximum detected value (mg/kg, dry weight):	16.77419

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	180
Maximum detected value (mg/kg, dry weight):	180

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.67
BTAG High (mg/kg-day):	632

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.1E-01	mean
Daily exposure (mg/kg-day)	4.9E-01	max

Hazard Quotients

BTAG Low HQ:	1.5E-01	mean
BTAG High HQ:	6.4E-04	mean
BTAG Low HQ:	1.8E-01	max
BTAG High HQ:	7.8E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Lead
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.663043
Maximum detected value (mg/kg, dry weight):	3.419355

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	73
Maximum detected value (mg/kg, dry weight):	73

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1
BTAG High (mg/kg-day):	241

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E-01	mean
Daily exposure (mg/kg-day)	1.3E-01	max

Hazard Quotients

BTAG Low HQ:	1.1E-01	mean
BTAG High HQ:	4.5E-04	mean
BTAG Low HQ:	1.3E-01	max
BTAG High HQ:	5.2E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Total Mercury
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.10462
Maximum detected value (mg/kg, dry weight):	0.116129

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.85
Maximum detected value (mg/kg, dry weight):	0.85

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.027
BTAG High (mg/kg-day):	0.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.9E-03	mean
Daily exposure (mg/kg-day)	3.1E-03	max

Hazard Quotients

BTAG HQ:	1.1E-01	mean
BTAG HQ:	1.1E-02	mean
BTAG Low HQ:	1.2E-01	max
BTAG High HQ:	1.2E-02	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Nickel
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.296196
Maximum detected value (mg/kg, dry weight):	2.516129

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	15
Maximum detected value (mg/kg, dry weight):	15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.133
BTAG High (mg/kg-day):	31.6

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.1E-02	mean
Daily exposure (mg/kg-day)	6.6E-02	max

Hazard Quotients

BTAG Low HQ:	4.6E-01	mean
BTAG High HQ:	1.9E-03	mean
BTAG Low HQ:	4.9E-01	max
BTAG High HQ:	2.1E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Selenium
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.902174
Maximum detected value (mg/kg, dry weight):	2.580645

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.05
BTAG High (mg/kg-day):	1.21

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.3E-02	mean
Daily exposure (mg/kg-day)	5.7E-02	max

Hazard Quotients

BTAG Low HQ:	8.5E-01	mean
BTAG High HQ:	3.5E-02	mean
BTAG Low HQ:	1.1E+00	max
BTAG High HQ:	4.7E-02	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Zinc
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	112.7717
Maximum detected value (mg/kg, dry weight):	129.0323

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	230
Maximum detected value (mg/kg, dry weight):	230

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	9.6
BTAG High (mg/kg-day):	411

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.6E+00	mean
Daily exposure (mg/kg-day)	3.0E+00	max

Hazard Quotients

BTAG Low HQ:	2.7E-01	mean
BTAG High HQ:	6.4E-03	mean
BTAG Low HQ:	3.1E-01	max
BTAG High HQ:	7.3E-03	max

Tier I - Summary of Hazard Quotients

Receptor: **CA Least Tern**
Location: **NA11**

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	1.5E-01	--	--	--	4.7E-01	--	--	--	--	--	--
LOAEL HQ:	1.5E-02	--	--	--	9.5E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	2.4E-01	1.6E-02	4.6E-01	#VALUE!	9.3E-01	**3.9E+01**	3.9E-01	2.4E-01	**1.0E+00**	8.4E-01
BTAG High HQ:	#VALUE!	1.7E-02	2.5E-04	1.1E-01	#VALUE!	4.1E-02	6.3E-02	8.5E-02	5.8E-03	2.5E-01	8.4E-02
MAXIMUM											
NOAEL HQ:	1.6E-01	--	--	--	5.6E-01	--	--	--	--	--	--
LOAEL HQ:	1.6E-02	--	--	--	1.1E-01	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	2.5E-01	2.1E-02	5.4E-01	#VALUE!	**1.1E+00**	**4.6E+01**	4.3E-01	2.6E-01	**1.4E+00**	9.6E-01
BTAG High HQ:	#VALUE!	1.8E-02	3.3E-04	1.3E-01	#VALUE!	5.0E-02	7.3E-02	9.3E-02	6.3E-03	3.4E-01	9.6E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Benzo[a]pyrene
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.15625
Maximum detected value (mg/kg, dry weight):	0.174194

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.4
Maximum detected value (mg/kg, dry weight):	0.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.0E-02	mean
Daily exposure (mg/kg-day)	2.3E-02	max

Hazard Quotients

NOAEL HQ:	1.5E-01	mean
LOAEL HQ:	1.5E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	1.6E-01	max
LOAEL HQ:	1.6E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Total PCB Congeners
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.172418
Maximum detected value (mg/kg, dry weight):	0.18129

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.19
Maximum detected value (mg/kg, dry weight):	0.19

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.2E-02	mean
Daily exposure (mg/kg-day)	2.3E-02	max

Hazard Quotients

BTAG Low HQ:	2.4E-01	mean
BTAG High HQ:	1.7E-02	mean
BTAG Low HQ:	2.5E-01	max
BTAG High HQ:	1.8E-02	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Tributyltin
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.09375
Maximum detected value (mg/kg, dry weight):	0.122581

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.038
Maximum detected value (mg/kg, dry weight):	0.038

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E-02	mean
Daily exposure (mg/kg-day)	1.5E-02	max

Hazard Quotients

BTAG Low HQ:	1.6E-02	mean
BTAG High HQ:	2.5E-04	mean
BTAG Low HQ:	2.1E-02	max
BTAG High HQ:	3.3E-04	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Arsenic
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	20.24457
Maximum detected value (mg/kg, dry weight):	23.87097

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	9.3
Maximum detected value (mg/kg, dry weight):	9.3

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.5E+00	mean
Daily exposure (mg/kg-day)	2.9E+00	max

Hazard Quotients

BTAG Low HQ:	4.6E-01	mean
BTAG High HQ:	1.1E-01	mean
BTAG Low HQ:	5.4E-01	max
BTAG High HQ:	1.3E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Cadmium
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036	
Food ingestion rate (kg/day dry wt):	0.0044	
Sediment ingestion rate (kg/day dry wt):	0.00011	
Area Use Factor (unitless):	1	0.003
Time Use Factor (unitless):	1	

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.264946
Maximum detected value (mg/kg, dry weight):	0.367347

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.28
Maximum detected value (mg/kg, dry weight):	0.28

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.3E-02	mean
Daily exposure (mg/kg-day)	4.6E-02	max

Hazard Quotients

BTAG Low HQ:	4.2E-01	mean
BTAG High HQ:	3.2E-03	mean
BTAG Low HQ:	5.7E-01	max
BTAG High HQ:	4.4E-03	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Chromium
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.861413
Maximum detected value (mg/kg, dry weight):	2.44898

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	59
Maximum detected value (mg/kg, dry weight):	59

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.1E-01	mean
Daily exposure (mg/kg-day)	4.8E-01	max

Hazard Quotients

NOAEL HQ:	4.7E-01	mean
LOAEL HQ:	9.5E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	5.6E-01	max
LOAEL HQ:	1.1E-01	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Copper
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	12.90761
Maximum detected value (mg/kg, dry weight):	16.77419

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	180
Maximum detected value (mg/kg, dry weight):	180

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.1E+00	mean
Daily exposure (mg/kg-day)	2.6E+00	max

Hazard Quotients

BTAG Low HQ:	9.3E-01	mean
BTAG High HQ:	4.1E-02	mean
BTAG Low HQ:	1.1E+00	max
BTAG High HQ:	5.0E-02	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Lead
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.663043
Maximum detected value (mg/kg, dry weight):	3.419355

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	73
Maximum detected value (mg/kg, dry weight):	73

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.5E-01	mean
Daily exposure (mg/kg-day)	6.4E-01	max

Hazard Quotients

BTAG Low HQ:	3.9E+01	mean
BTAG High HQ:	6.3E-02	mean
BTAG Low HQ:	4.6E+01	max
BTAG High HQ:	7.3E-02	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Total Mercury
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.10462
Maximum detected value (mg/kg, dry weight):	0.116129

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.85
Maximum detected value (mg/kg, dry weight):	0.85

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.5E-02	mean
Daily exposure (mg/kg-day)	1.7E-02	max

Hazard Quotients

BTAG HQ:	3.9E-01	mean
BTAG HQ:	8.5E-02	mean
BTAG Low HQ:	4.3E-01	max
BTAG High HQ:	9.3E-02	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Nickel
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.296196
Maximum detected value (mg/kg, dry weight):	2.516129

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	15
Maximum detected value (mg/kg, dry weight):	15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.3E-01	mean
Daily exposure (mg/kg-day)	3.5E-01	max

Hazard Quotients

BTAG Low HQ:	2.4E-01	mean
BTAG High HQ:	5.8E-03	mean
BTAG Low HQ:	2.6E-01	max
BTAG High HQ:	6.3E-03	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Selenium
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.902174
Maximum detected value (mg/kg, dry weight):	2.580645

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.4E-01	mean
Daily exposure (mg/kg-day)	3.2E-01	max

Hazard Quotients

BTAG Low HQ:	1.0E+00	mean
BTAG High HQ:	2.5E-01	mean
BTAG Low HQ:	1.4E+00	max
BTAG High HQ:	3.4E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Zinc
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	112.7717
Maximum detected value (mg/kg, dry weight):	129.0323

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	230
Maximum detected value (mg/kg, dry weight):	230

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.4E+01	mean
Daily exposure (mg/kg-day)	1.6E+01	max

Hazard Quotients

BTAG Low HQ:	8.4E-01	mean
BTAG High HQ:	8.4E-02	mean
BTAG Low HQ:	9.6E-01	max
BTAG High HQ:	9.6E-02	max

Tier I - Summary of Hazard Quotients

Receptor: Green Turtle
Location: NA11

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	4.2E-03	--	--	--	2.0E-02	--	--	--	--	--	--
LOAEL HQ:	4.2E-04	--	--	--	4.1E-03	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	6.7E-03	4.3E-04	1.2E-02	#VALUE!	3.4E-02	**1.6E+00**	1.3E-02	7.6E-03	2.8E-02	2.4E-02
BTAG High HQ:	#VALUE!	4.7E-04	6.8E-06	3.1E-03	#VALUE!	1.5E-03	2.6E-03	2.8E-03	1.9E-04	6.9E-03	2.4E-03
MAXIMUM											
NOAEL HQ:	4.6E-03	--	--	--	2.3E-02	--	--	--	--	--	--
LOAEL HQ:	4.6E-04	--	--	--	4.5E-03	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	7.0E-03	5.6E-04	1.4E-02	#VALUE!	3.9E-02	**1.8E+00**	1.4E-02	8.1E-03	3.7E-02	2.7E-02
BTAG High HQ:	#VALUE!	5.0E-04	8.9E-06	3.6E-03	#VALUE!	1.7E-03	2.9E-03	3.0E-03	2.0E-04	9.3E-03	2.7E-03

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Benzo[a]pyrene
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.15625
Maximum detected value (mg/kg, dry weight):	0.174194

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.4
Maximum detected value (mg/kg, dry weight):	0.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.9E-04	mean
Daily exposure (mg/kg-day)	6.5E-04	max

Hazard Quotients

NOAEL HQ:	4.2E-03	mean
LOAEL HQ:	4.2E-04	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	4.6E-03	max
LOAEL HQ:	4.6E-04	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Total PCB Congeners
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.172418
Maximum detected value (mg/kg, dry weight):	0.18129

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.19
Maximum detected value (mg/kg, dry weight):	0.19

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.0E-04	mean
Daily exposure (mg/kg-day)	6.3E-04	max

Hazard Quotients

BTAG Low HQ:	6.7E-03	mean
BTAG High HQ:	4.7E-04	mean
BTAG Low HQ:	7.0E-03	max
BTAG High HQ:	5.0E-04	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Tributyltin
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.09375
Maximum detected value (mg/kg, dry weight):	0.122581

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.038
Maximum detected value (mg/kg, dry weight):	0.038

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.1E-04	mean
Daily exposure (mg/kg-day)	4.1E-04	max

Hazard Quotients

BTAG Low HQ:	4.3E-04	mean
BTAG High HQ:	6.8E-06	mean
BTAG Low HQ:	5.6E-04	max
BTAG High HQ:	8.9E-06	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Arsenic
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	20.24457
Maximum detected value (mg/kg, dry weight):	23.87097

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	9.3
Maximum detected value (mg/kg, dry weight):	9.3

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.8E-02	mean
Daily exposure (mg/kg-day)	8.0E-02	max

Hazard Quotients

BTAG Low HQ:	1.2E-02	mean
BTAG High HQ:	3.1E-03	mean
BTAG Low HQ:	1.4E-02	max
BTAG High HQ:	3.6E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Cadmium
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.264946
Maximum detected value (mg/kg, dry weight):	0.367347

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.28
Maximum detected value (mg/kg, dry weight):	0.28

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.2E-04	mean
Daily exposure (mg/kg-day)	1.3E-03	max

Hazard Quotients

BTAG Low HQ:	1.1E-02	mean
BTAG High HQ:	8.8E-05	mean
BTAG Low HQ:	1.6E-02	max
BTAG High HQ:	1.2E-04	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Chromium
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.861413
Maximum detected value (mg/kg, dry weight):	2.44898

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	59
Maximum detected value (mg/kg, dry weight):	59

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.8E-02	mean
Daily exposure (mg/kg-day)	2.0E-02	max

Hazard Quotients

NOAEL HQ:	2.0E-02	mean
LOAEL HQ:	4.1E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	2.3E-02	max
LOAEL HQ:	4.5E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Copper
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	12.90761
Maximum detected value (mg/kg, dry weight):	16.77419

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	180
Maximum detected value (mg/kg, dry weight):	180

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.7E-02	mean
Daily exposure (mg/kg-day)	9.0E-02	max

Hazard Quotients

BTAG Low HQ:	3.4E-02	mean
BTAG High HQ:	1.5E-03	mean
BTAG Low HQ:	3.9E-02	max
BTAG High HQ:	1.7E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Lead
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.663043
Maximum detected value (mg/kg, dry weight):	3.419355

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	73
Maximum detected value (mg/kg, dry weight):	73

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.3E-02	mean
Daily exposure (mg/kg-day)	2.5E-02	max

Hazard Quotients

BTAG Low HQ:	1.6E+00	mean
BTAG High HQ:	2.6E-03	mean
BTAG Low HQ:	1.8E+00	max
BTAG High HQ:	2.9E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Total Mercury
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.10462
Maximum detected value (mg/kg, dry weight):	0.116129

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.85
Maximum detected value (mg/kg, dry weight):	0.85

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.1E-04	mean
Daily exposure (mg/kg-day)	5.5E-04	max

Hazard Quotients

BTAG HQ:	1.3E-02	mean
BTAG HQ:	2.8E-03	mean
BTAG Low HQ:	1.4E-02	max
BTAG High HQ:	3.0E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Nickel
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.296196
Maximum detected value (mg/kg, dry weight):	2.516129

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	15
Maximum detected value (mg/kg, dry weight):	15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.0E-02	mean
Daily exposure (mg/kg-day)	1.1E-02	max

Hazard Quotients

BTAG Low HQ:	7.6E-03	mean
BTAG High HQ:	1.9E-04	mean
BTAG Low HQ:	8.1E-03	max
BTAG High HQ:	2.0E-04	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Selenium
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.902174
Maximum detected value (mg/kg, dry weight):	2.580645

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.4E-03	mean
Daily exposure (mg/kg-day)	8.6E-03	max

Hazard Quotients

BTAG Low HQ:	2.8E-02	mean
BTAG High HQ:	6.9E-03	mean
BTAG Low HQ:	3.7E-02	max
BTAG High HQ:	9.3E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Zinc
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	112.7717
Maximum detected value (mg/kg, dry weight):	129.0323

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	230
Maximum detected value (mg/kg, dry weight):	230

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.1E-01	mean
Daily exposure (mg/kg-day)	4.7E-01	max

Hazard Quotients

BTAG Low HQ:	2.4E-02	mean
BTAG High HQ:	2.4E-03	mean
BTAG Low HQ:	2.7E-02	max
BTAG High HQ:	2.7E-03	max

Tier I - Summary of Hazard Quotients

Receptor: Brown Pelican
Location: NA11

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	9.5E-02	--	--	--	3.0E-01	--	--	--	--	--	--
LOAEL HQ:	9.5E-03	--	--	--	5.9E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	1.6E-01	1.0E-02	3.0E-01	#VALUE!	5.9E-01	**2.5E+01**	2.6E-01	1.5E-01	6.8E-01	5.5E-01
BTAG High HQ:	#VALUE!	1.1E-02	1.7E-04	7.5E-02	#VALUE!	2.6E-02	3.9E-02	5.5E-02	3.8E-03	1.7E-01	5.5E-02
MAXIMUM											
NOAEL HQ:	1.1E-01	--	--	--	3.5E-01	--	--	--	--	--	--
LOAEL HQ:	1.1E-02	--	--	--	7.0E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	1.7E-01	1.4E-02	3.5E-01	#VALUE!	7.3E-01	**2.9E+01**	2.8E-01	1.7E-01	9.1E-01	6.3E-01
BTAG High HQ:	#VALUE!	1.2E-02	2.2E-04	8.8E-02	#VALUE!	3.2E-02	4.6E-02	6.0E-02	4.1E-03	2.3E-01	6.3E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Benzo[a]pyrene
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.15625
Maximum detected value (mg/kg, dry weight):	0.174194

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.4
Maximum detected value (mg/kg, dry weight):	0.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.3E-02	mean
Daily exposure (mg/kg-day)	1.5E-02	max

Hazard Quotients

NOAEL HQ:	9.5E-02	mean
LOAEL HQ:	9.5E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	1.1E-01	max
LOAEL HQ:	1.1E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

	BAP					
	23	15.5	100	0.155		
	26	14.8	100	0.148		
	19	13.1	100	0.131		
	27	15.5	100	0.155		
	20	14.7	100	0.147		
	23			**0.1472**	156.25	
	174.1935484					

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Total PCB Congeners
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.172418
Maximum detected value (mg/kg, dry weight):	0.18129

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.19
Maximum detected value (mg/kg, dry weight):	0.19

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.4E-02	mean
Daily exposure (mg/kg-day)	1.5E-02	max

Hazard Quotients

BTAG Low HQ:	1.6E-01	mean
BTAG High HQ:	1.1E-02	mean
BTAG Low HQ:	1.7E-01	max
BTAG High HQ:	1.2E-02	max

PCB Cong	Total Solids				
26.9	15.5	100	0.155		
23.8	14.8	100	0.148		
21.6	13.1	100	0.131		
28.1	15.5	100	0.155		
26.5	14.7	100	0.147		
25.38			**0.1472**	**172.4185**	
181.2903					

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Tributyltin
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.09375
Maximum detected value (mg/kg, dry weight):	0.122581

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.038
Maximum detected value (mg/kg, dry weight):	0.038

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.6E-03	mean
Daily exposure (mg/kg-day)	1.0E-02	max

Hazard Quotients

BTAG Low HQ:	1.0E-02	mean
BTAG High HQ:	1.7E-04	mean
BTAG Low HQ:	1.4E-02	max
BTAG High HQ:	2.2E-04	max

TBT		Total Solids		
	15	15.5	100	0.155
	11	14.8	100	0.148
	12	13.1	100	0.131
	19	15.5	100	0.155
	12	14.7	100	0.147
	13.8			**0.1472**
122.5806				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Arsenic
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	20.24457
Maximum detected value (mg/kg, dry weight):	23.87097

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	9.3
Maximum detected value (mg/kg, dry weight):	9.3

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.7E+00	mean
Daily exposure (mg/kg-day)	1.9E+00	max

Hazard Quotients

BTAG Low HQ:	3.0E-01	mean
BTAG High HQ:	7.5E-02	mean
BTAG Low HQ:	3.5E-01	max
BTAG High HQ:	8.8E-02	max

Arsenic	Total Solids			
3.2	15.5	100	0.155	
2.6	14.8	100	0.148	
2.8	13.1	100	0.131	
3.7	15.5	100	0.155	
2.6	14.7	100	0.147	
2.98			**0.1472**	**20.24457**

23.87097

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Cadmium
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.264946
Maximum detected value (mg/kg, dry weight):	0.367347

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.28
Maximum detected value (mg/kg, dry weight):	0.28

Cadmium	Total Solids			
0.036	15.5	100	0.155	
0.028	14.8	100	0.148	
0.025	13.1	100	0.131	
0.052	15.5	100	0.155	
0.054	14.7	100	0.147	
0.039			**0.1472**	**0.264946**

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1) 0.367347

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.2E-02	mean
Daily exposure (mg/kg-day)	3.0E-02	max

Hazard Quotients

BTAG Low HQ:	2.7E-01	mean
BTAG High HQ:	2.1E-03	mean
BTAG Low HQ:	3.8E-01	max
BTAG High HQ:	2.9E-03	max

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Chromium
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.861413
Maximum detected value (mg/kg, dry weight):	2.44898

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	59
Maximum detected value (mg/kg, dry weight):	59

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.5E-01	mean
Daily exposure (mg/kg-day)	3.0E-01	max

Hazard Quotients

NOAEL HQ:	3.0E-01	mean
LOAEL HQ:	5.9E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	3.5E-01	max
LOAEL HQ:	7.0E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Chromium	Total Solids					
0.26	15.5	100	0.155			
0.23	14.8	100	0.148			
0.18	13.1	100	0.131			
0.34	15.5	100	0.155			
0.36	14.7	100	0.147			
0.274			**0.1472**	**1.861413**		
2.44898						

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Copper
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	12.90761
Maximum detected value (mg/kg, dry weight):	16.77419

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	180
Maximum detected value (mg/kg, dry weight):	180

Copper	Total Solids			
1.6	15.5	100	0.155	
1.8	14.8	100	0.148	
1.6	13.1	100	0.131	
2.6	15.5	100	0.155	
1.9	14.7	100	0.147	
1.9			**0.1472**	**12.90761**

16.77419

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.4E+00	mean
Daily exposure (mg/kg-day)	1.7E+00	max

Hazard Quotients

BTAG Low HQ:	5.9E-01	mean
BTAG High HQ:	2.6E-02	mean
BTAG Low HQ:	7.3E-01	max
BTAG High HQ:	3.2E-02	max

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Lead
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.663043
Maximum detected value (mg/kg, dry weight):	3.419355

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	73
Maximum detected value (mg/kg, dry weight):	73

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.4E-01	mean
Daily exposure (mg/kg-day)	4.0E-01	max

Hazard Quotients

BTAG Low HQ:	2.5E+01	mean
BTAG High HQ:	3.9E-02	mean
BTAG Low HQ:	2.9E+01	max
BTAG High HQ:	4.6E-02	max

Lead	Total Solids				
0.37	15.5	100	0.155		
0.28	14.8	100	0.148		
0.3	13.1	100	0.131		
0.53	15.5	100	0.155		
0.48	14.7	100	0.147		
0.392			**0.1472**	**2.663043**	
3.419355					

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Total Mercury
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845	
Food ingestion rate (kg/day dry wt):	0.23	
Sediment ingestion rate (kg/day dry wt):	0.005	
Area Use Factor (unitless):	1	0.004
Time Use Factor (unitless):	1	

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.10462
Maximum detected value (mg/kg, dry weight):	0.116129

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.85
Maximum detected value (mg/kg, dry weight):	0.85

Mercury	Total Solids			
0.012	15.5	100	0.155	
0.014	14.8	100	0.148	
0.017	13.1	100	0.131	
0.018	15.5	100	0.155	
0.016	14.7	100	0.147	
0.0154			**0.1472**	**0.10462**

0.116129

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.0E-02	mean
Daily exposure (mg/kg-day)	1.1E-02	max

Hazard Quotients

BTAG HQ:	2.6E-01	mean
BTAG HQ:	5.5E-02	mean
BTAG Low HQ:	2.8E-01	max
BTAG High HQ:	6.0E-02	max

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Nickel
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.296196
Maximum detected value (mg/kg, dry weight):	2.516129

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	15
Maximum detected value (mg/kg, dry weight):	15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.1E-01	mean
Daily exposure (mg/kg-day)	2.3E-01	max

Hazard Quotients

BTAG Low HQ:	1.5E-01	mean
BTAG High HQ:	3.8E-03	mean
BTAG Low HQ:	1.7E-01	max
BTAG High HQ:	4.1E-03	max

Nickel	Total Solids			
0.39	15.5	100	0.155	
0.27	14.8	100	0.148	
0.28	13.1	100	0.131	
0.39	15.5	100	0.155	
0.36	14.7	100	0.147	
0.338			**0.1472**	**2.296196**
2.516129				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Selenium
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.902174
Maximum detected value (mg/kg, dry weight):	2.580645

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.6E-01	mean
Daily exposure (mg/kg-day)	2.1E-01	max

Hazard Quotients

BTAG Low HQ:	6.8E-01	mean
BTAG High HQ:	1.7E-01	mean
BTAG Low HQ:	9.1E-01	max
BTAG High HQ:	2.3E-01	max

	Selenium	Total Solids			
	0.3	15.5	100	0.155	
	0.2	14.8	100	0.148	
	0.3	13.1	100	0.131	
	0.4	15.5	100	0.155	
	0.2	14.7	100	0.147	
	0.28			**0.1472**	**1.902174**
	2.580645				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Zinc
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	112.7717
Maximum detected value (mg/kg, dry weight):	129.0323

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	230
Maximum detected value (mg/kg, dry weight):	230

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.5E+00	mean
Daily exposure (mg/kg-day)	1.1E+01	max

Hazard Quotients

BTAG Low HQ:	5.5E-01	mean
BTAG High HQ:	5.5E-02	mean
BTAG Low HQ:	6.3E-01	max
BTAG High HQ:	6.3E-02	max

Zinc	Total Solids					
	15	15.5	100	0.155		
	16	14.8	100	0.148		
	14	13.1	100	0.131		
	20	15.5	100	0.155		
	18	14.7	100	0.147		
	16.6			**0.1472**	**112.7717**	
129.0323						

Tier I - Summary of Hazard Quotients

Receptor: **Western Grebe**
Location: **NA11**

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	7.5E-02	--	--	--	3.9E-01	--	--	--	--	--	--
LOAEL HQ:	7.5E-03	--	--	--	7.7E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	1.2E-01	7.5E-03	2.2E-01	#VALUE!	6.2E-01	**3.1E+01**	2.4E-01	1.4E-01	4.9E-01	4.2E-01
BTAG High HQ:	#VALUE!	8.3E-03	1.2E-04	5.4E-02	#VALUE!	2.7E-02	4.9E-02	5.1E-02	3.3E-03	1.2E-01	4.2E-02
MAXIMUM											
NOAEL HQ:	8.2E-02	--	--	--	4.3E-01	--	--	--	--	--	--
LOAEL HQ:	8.2E-03	--	--	--	8.5E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	1.2E-01	9.8E-03	2.5E-01	#VALUE!	7.2E-01	**3.4E+01**	2.5E-01	1.5E-01	6.6E-01	4.8E-01
BTAG High HQ:	#VALUE!	8.7E-03	1.6E-04	6.3E-02	#VALUE!	3.1E-02	5.4E-02	5.5E-02	3.6E-03	1.6E-01	4.8E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Benzo[a]pyrene
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.15625
Maximum detected value (mg/kg, dry weight):	0.174194

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.4
Maximum detected value (mg/kg, dry weight):	0.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.0E-02	mean
Daily exposure (mg/kg-day)	1.1E-02	max

Hazard Quotients

NOAEL HQ:	7.5E-02	mean
LOAEL HQ:	7.5E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	8.2E-02	max
LOAEL HQ:	8.2E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Total PCB Congeners
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.172418
Maximum detected value (mg/kg, dry weight):	0.18129

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.19
Maximum detected value (mg/kg, dry weight):	0.19

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E-02	mean
Daily exposure (mg/kg-day)	1.1E-02	max

Hazard Quotients

BTAG Low HQ:	1.2E-01	mean
BTAG High HQ:	8.3E-03	mean
BTAG Low HQ:	1.2E-01	max
BTAG High HQ:	8.7E-03	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Tributyltin
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.09375
Maximum detected value (mg/kg, dry weight):	0.122581

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.038
Maximum detected value (mg/kg, dry weight):	0.038

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.5E-03	mean
Daily exposure (mg/kg-day)	7.1E-03	max

Hazard Quotients

BTAG Low HQ:	7.5E-03	mean
BTAG High HQ:	1.2E-04	mean
BTAG Low HQ:	9.8E-03	max
BTAG High HQ:	1.6E-04	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Arsenic
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	20.24457
Maximum detected value (mg/kg, dry weight):	23.87097

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	9.3
Maximum detected value (mg/kg, dry weight):	9.3

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E+00	mean
Daily exposure (mg/kg-day)	1.4E+00	max

Hazard Quotients

BTAG Low HQ:	2.2E-01	mean
BTAG High HQ:	5.4E-02	mean
BTAG Low HQ:	2.5E-01	max
BTAG High HQ:	6.3E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Cadmium
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.264946
Maximum detected value (mg/kg, dry weight):	0.367347

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.28
Maximum detected value (mg/kg, dry weight):	0.28

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.6E-02	mean
Daily exposure (mg/kg-day)	2.2E-02	max

Hazard Quotients

BTAG Low HQ:	2.0E-01	mean
BTAG High HQ:	1.6E-03	mean
BTAG Low HQ:	2.7E-01	max
BTAG High HQ:	2.1E-03	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Chromium
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.861413
Maximum detected value (mg/kg, dry weight):	2.44898

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	59
Maximum detected value (mg/kg, dry weight):	59

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.3E-01	mean
Daily exposure (mg/kg-day)	3.7E-01	max

Hazard Quotients

NOAEL HQ:	3.9E-01	mean
LOAEL HQ:	7.7E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	4.3E-01	max
LOAEL HQ:	8.5E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Copper
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	12.90761
Maximum detected value (mg/kg, dry weight):	16.77419

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	180
Maximum detected value (mg/kg, dry weight):	180

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.4E+00	mean
Daily exposure (mg/kg-day)	1.6E+00	max

Hazard Quotients

BTAG Low HQ:	6.2E-01	mean
BTAG High HQ:	2.7E-02	mean
BTAG Low HQ:	7.2E-01	max
BTAG High HQ:	3.1E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Lead
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.663043
Maximum detected value (mg/kg, dry weight):	3.419355

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	73
Maximum detected value (mg/kg, dry weight):	73

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.3E-01	mean
Daily exposure (mg/kg-day)	4.7E-01	max

Hazard Quotients

BTAG Low HQ:	3.1E+01	mean
BTAG High HQ:	4.9E-02	mean
BTAG Low HQ:	3.4E+01	max
BTAG High HQ:	5.4E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Total Mercury
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.10462
Maximum detected value (mg/kg, dry weight):	0.116129

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.85
Maximum detected value (mg/kg, dry weight):	0.85

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.2E-03	mean
Daily exposure (mg/kg-day)	9.9E-03	max

Hazard Quotients

BTAG HQ:	2.4E-01	mean
BTAG HQ:	5.1E-02	mean
BTAG Low HQ:	2.5E-01	max
BTAG High HQ:	5.5E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Nickel
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.296196
Maximum detected value (mg/kg, dry weight):	2.516129

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	15
Maximum detected value (mg/kg, dry weight):	15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.9E-01	mean
Daily exposure (mg/kg-day)	2.0E-01	max

Hazard Quotients

BTAG Low HQ:	1.4E-01	mean
BTAG High HQ:	3.3E-03	mean
BTAG Low HQ:	1.5E-01	max
BTAG High HQ:	3.6E-03	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Selenium
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.902174
Maximum detected value (mg/kg, dry weight):	2.580645

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E-01	mean
Daily exposure (mg/kg-day)	1.5E-01	max

Hazard Quotients

BTAG Low HQ:	4.9E-01	mean
BTAG High HQ:	1.2E-01	mean
BTAG Low HQ:	6.6E-01	max
BTAG High HQ:	1.6E-01	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Zinc
Location: NA11

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	112.7717
Maximum detected value (mg/kg, dry weight):	129.0323

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	230
Maximum detected value (mg/kg, dry weight):	230

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.3E+00	mean
Daily exposure (mg/kg-day)	8.2E+00	max

Hazard Quotients

BTAG Low HQ:	4.2E-01	mean
BTAG High HQ:	4.2E-02	mean
BTAG Low HQ:	4.8E-01	max
BTAG High HQ:	4.8E-02	max

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Tier I - Summary of Hazard Quotients

Receptor: **Surf Scoter**
Location: **NA12**

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	8.6E-02	--	--	--	3.2E-01	--	--	--	--	--	--
LOAEL HQ:	8.6E-03	--	--	--	6.3E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	8.3E-02	8.3E-03	2.0E-01	#VALUE!	5.3E-01	**2.3E+01**	2.0E-01	1.3E-01	5.3E-01	4.1E-01
BTAG High HQ:	#VALUE!	5.9E-03	1.3E-04	4.9E-02	#VALUE!	2.3E-02	3.7E-02	4.4E-02	3.2E-03	1.3E-01	4.1E-02
MAXIMUM											
NOAEL HQ:	9.0E-02	--	--	--	3.5E-01	--	--	--	--	--	--
LOAEL HQ:	9.0E-03	--	--	--	6.9E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	1.0E-01	1.0E-02	2.1E-01	#VALUE!	6.2E-01	**2.4E+01**	2.6E-01	1.4E-01	7.1E-01	4.5E-01
BTAG High HQ:	#VALUE!	7.4E-03	1.6E-04	5.2E-02	#VALUE!	2.7E-02	3.9E-02	5.6E-02	3.4E-03	1.8E-01	4.5E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Benzo[a]pyrene
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.199158
Maximum detected value (mg/kg, dry weight):	0.210884

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.26
Maximum detected value (mg/kg, dry weight):	0.26

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E-02	mean
Daily exposure (mg/kg-day)	1.3E-02	max

Hazard Quotients

NOAEL HQ:	8.6E-02	mean
LOAEL HQ:	8.6E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	9.0E-02	max
LOAEL HQ:	9.0E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Total PCB Congeners
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.124965
Maximum detected value (mg/kg, dry weight):	0.159184

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.15
Maximum detected value (mg/kg, dry weight):	0.15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.5E-03	mean
Daily exposure (mg/kg-day)	9.4E-03	max

Hazard Quotients

BTAG Low HQ:	8.3E-02	mean
BTAG High HQ:	5.9E-03	mean
BTAG Low HQ:	1.0E-01	max
BTAG High HQ:	7.4E-03	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Tributyltin
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.103506
Maximum detected value (mg/kg, dry weight):	0.129252

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.08
Maximum detected value (mg/kg, dry weight):	0.08

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.0E-03	mean
Daily exposure (mg/kg-day)	7.5E-03	max

Hazard Quotients

BTAG Low HQ:	8.3E-03	mean
BTAG High HQ:	1.3E-04	mean
BTAG Low HQ:	1.0E-02	max
BTAG High HQ:	1.6E-04	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Arsenic
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	18.93408
Maximum detected value (mg/kg, dry weight):	19.72789

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	9.5
Maximum detected value (mg/kg, dry weight):	9.5

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E+00	mean
Daily exposure (mg/kg-day)	1.1E+00	max

Hazard Quotients

BTAG Low HQ:	2.0E-01	mean
BTAG High HQ:	4.9E-02	mean
BTAG Low HQ:	2.1E-01	max
BTAG High HQ:	5.2E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Cadmium
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.210379
Maximum detected value (mg/kg, dry weight):	0.272727

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.18
Maximum detected value (mg/kg, dry weight):	0.18

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E-02	mean
Daily exposure (mg/kg-day)	1.6E-02	max

Hazard Quotients

BTAG Low HQ:	1.5E-01	mean
BTAG High HQ:	1.2E-03	mean
BTAG Low HQ:	2.0E-01	max
BTAG High HQ:	1.5E-03	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Chromium
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.725105
Maximum detected value (mg/kg, dry weight):	2.176871

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	54
Maximum detected value (mg/kg, dry weight):	54

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.7E-01	mean
Daily exposure (mg/kg-day)	3.0E-01	max

Hazard Quotients

NOAEL HQ:	3.2E-01	mean
LOAEL HQ:	6.3E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	3.5E-01	max
LOAEL HQ:	6.9E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Copper
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	13.04348
Maximum detected value (mg/kg, dry weight):	16.90141

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	150
Maximum detected value (mg/kg, dry weight):	150

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E+00	mean
Daily exposure (mg/kg-day)	1.4E+00	max

Hazard Quotients

BTAG Low HQ:	5.3E-01	mean
BTAG High HQ:	2.3E-02	mean
BTAG Low HQ:	6.2E-01	max
BTAG High HQ:	2.7E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Lead
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.328191
Maximum detected value (mg/kg, dry weight):	2.676056

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	59
Maximum detected value (mg/kg, dry weight):	59

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.2E-01	mean
Daily exposure (mg/kg-day)	3.4E-01	max

Hazard Quotients

BTAG Low HQ:	2.3E+01	mean
BTAG High HQ:	3.7E-02	mean
BTAG Low HQ:	2.4E+01	max
BTAG High HQ:	3.9E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Total Mercury
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.106592
Maximum detected value (mg/kg, dry weight):	0.142857

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.62
Maximum detected value (mg/kg, dry weight):	0.62

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	8.0E-03	mean
Daily exposure (mg/kg-day)	1.0E-02	max

Hazard Quotients

BTAG Low HQ:	2.0E-01	mean
BTAG High HQ:	4.4E-02	mean
BTAG Low HQ:	2.6E-01	max
BTAG High HQ:	5.6E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Nickel
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.30014
Maximum detected value (mg/kg, dry weight):	2.517007

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	15
Maximum detected value (mg/kg, dry weight):	15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.8E-01	mean
Daily exposure (mg/kg-day)	1.9E-01	max

Hazard Quotients

BTAG Low HQ:	1.3E-01	mean
BTAG High HQ:	3.2E-03	mean
BTAG Low HQ:	1.4E-01	max
BTAG High HQ:	3.4E-03	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Selenium
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.103787
Maximum detected value (mg/kg, dry weight):	2.857143

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.1
Maximum detected value (mg/kg, dry weight):	1.1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E-01	mean
Daily exposure (mg/kg-day)	1.6E-01	max

Hazard Quotients

BTAG Low HQ:	5.3E-01	mean
BTAG High HQ:	1.3E-01	mean
BTAG Low HQ:	7.1E-01	max
BTAG High HQ:	1.8E-01	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Zinc
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	113.6045
Maximum detected value (mg/kg, dry weight):	126.7606

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	210
Maximum detected value (mg/kg, dry weight):	210

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.0E+00	mean
Daily exposure (mg/kg-day)	7.8E+00	max

Hazard Quotients

BTAG Low HQ:	4.1E-01	mean
BTAG High HQ:	4.1E-02	mean
BTAG Low HQ:	4.5E-01	max
BTAG High HQ:	4.5E-02	max

Tier I - Summary of Hazard Quotients

Receptor: Sea Lion
Location: NA12

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	--	--	--	--	2.3E-02	--	--	--	--	--	--
LOAEL HQ:	--	--	--	--	1.1E-03	--	--	--	--	--	--
BTAG Low HQ:	3.5E-03	7.9E-03	9.3E-03	**1.3E+00**	#VALUE!	1.5E-01	9.2E-02	1.0E-01	4.6E-01	9.4E-01	2.8E-01
BTAG High HQ:	1.4E-04	2.2E-03	1.6E-04	9.0E-02	#VALUE!	6.2E-04	3.8E-04	1.0E-02	1.9E-03	3.9E-02	6.4E-03
MAXIMUM											
NOAEL HQ:	--	--	--	--	2.6E-02	--	--	--	--	--	--
LOAEL HQ:	--	--	--	--	1.2E-03	--	--	--	--	--	--
BTAG Low HQ:	3.7E-03	1.0E-02	1.2E-02	**1.4E+00**	#VALUE!	1.8E-01	9.9E-02	1.3E-01	4.9E-01	**1.3E+00**	3.1E-01
BTAG High HQ:	1.5E-04	2.8E-03	1.9E-04	9.4E-02	#VALUE!	7.5E-04	4.1E-04	1.3E-02	2.1E-03	5.3E-02	7.1E-03

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Benzo[a]pyrene
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.199158
Maximum detected value (mg/kg, dry weight):	0.210884

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.26
Maximum detected value (mg/kg, dry weight):	0.26

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.31
BTAG High (mg/kg-day):	32.8

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.6E-03	mean
Daily exposure (mg/kg-day)	4.8E-03	max

Hazard Quotients

BTAG Low HQ:	3.5E-03	mean
BTAG High HQ:	1.4E-04	mean
BTAG Low HQ:	3.7E-03	max
BTAG High HQ:	1.5E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Total PCB Congeners
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.124965
Maximum detected value (mg/kg, dry weight):	0.159184

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.15
Maximum detected value (mg/kg, dry weight):	0.15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.36
BTAG High (mg/kg-day):	1.28

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.9E-03	mean
Daily exposure (mg/kg-day)	3.6E-03	max

Hazard Quotients

BTAG Low HQ:	7.9E-03	mean
BTAG High HQ:	2.2E-03	mean
BTAG Low HQ:	1.0E-02	max
BTAG High HQ:	2.8E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Tributyltin
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.103506
Maximum detected value (mg/kg, dry weight):	0.129252

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.08
Maximum detected value (mg/kg, dry weight):	0.08

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.25
BTAG High (mg/kg-day):	15

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.3E-03	mean
Daily exposure (mg/kg-day)	2.9E-03	max

Hazard Quotients

BTAG Low HQ:	9.3E-03	mean
BTAG High HQ:	1.6E-04	mean
BTAG Low HQ:	1.2E-02	max
BTAG High HQ:	1.9E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Arsenic
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	18.93408
Maximum detected value (mg/kg, dry weight):	19.72789

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	9.5
Maximum detected value (mg/kg, dry weight):	9.5

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.32
BTAG High (mg/kg-day):	4.7

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.2E-01	mean
Daily exposure (mg/kg-day)	4.4E-01	max

Hazard Quotients

BTAG Low HQ:	1.3E+00	mean
BTAG High HQ:	9.0E-02	mean
BTAG Low HQ:	1.4E+00	max
BTAG High HQ:	9.4E-02	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Cadmium
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.210379
Maximum detected value (mg/kg, dry weight):	0.272727

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.18
Maximum detected value (mg/kg, dry weight):	0.18

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.06
BTAG High (mg/kg-day):	2.64

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.8E-03	mean
Daily exposure (mg/kg-day)	6.1E-03	max

Hazard Quotients

BTAG Low HQ:	7.9E-02	mean
BTAG High HQ:	1.8E-03	mean
BTAG Low HQ:	1.0E-01	max
BTAG High HQ:	2.3E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Chromium
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.725105
Maximum detected value (mg/kg, dry weight):	2.176871

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	54
Maximum detected value (mg/kg, dry weight):	54

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	3.3
LOAEL (mg/kg-day):	69
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.5E-02	mean
Daily exposure (mg/kg-day)	8.5E-02	max

Hazard Quotients

NOAEL HQ:	2.3E-02	mean
LOAEL HQ:	1.1E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	2.6E-02	max
LOAEL HQ:	1.2E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Copper
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	13.04348
Maximum detected value (mg/kg, dry weight):	16.90141

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	150
Maximum detected value (mg/kg, dry weight):	150

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.67
BTAG High (mg/kg-day):	632

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.9E-01	mean
Daily exposure (mg/kg-day)	4.7E-01	max

Hazard Quotients

BTAG Low HQ:	1.5E-01	mean
BTAG High HQ:	6.2E-04	mean
BTAG Low HQ:	1.8E-01	max
BTAG High HQ:	7.5E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Lead
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.328191
Maximum detected value (mg/kg, dry weight):	2.676056

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	59
Maximum detected value (mg/kg, dry weight):	59

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1
BTAG High (mg/kg-day):	241

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.2E-02	mean
Daily exposure (mg/kg-day)	9.9E-02	max

Hazard Quotients

BTAG Low HQ:	9.2E-02	mean
BTAG High HQ:	3.8E-04	mean
BTAG Low HQ:	9.9E-02	max
BTAG High HQ:	4.1E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Total Mercury
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.106592
Maximum detected value (mg/kg, dry weight):	0.142857

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.62
Maximum detected value (mg/kg, dry weight):	0.62

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.027
BTAG High (mg/kg-day):	0.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.8E-03	mean
Daily exposure (mg/kg-day)	3.6E-03	max

Hazard Quotients

BTAG HQ:	1.0E-01	mean
BTAG HQ:	1.0E-02	mean
BTAG Low HQ:	1.3E-01	max
BTAG High HQ:	1.3E-02	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Nickel
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.30014
Maximum detected value (mg/kg, dry weight):	2.517007

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	15
Maximum detected value (mg/kg, dry weight):	15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.133
BTAG High (mg/kg-day):	31.6

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.1E-02	mean
Daily exposure (mg/kg-day)	6.6E-02	max

Hazard Quotients

BTAG Low HQ:	4.6E-01	mean
BTAG High HQ:	1.9E-03	mean
BTAG Low HQ:	4.9E-01	max
BTAG High HQ:	2.1E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Selenium
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.103787
Maximum detected value (mg/kg, dry weight):	2.857143

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.1
Maximum detected value (mg/kg, dry weight):	1.1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.05
BTAG High (mg/kg-day):	1.21

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.7E-02	mean
Daily exposure (mg/kg-day)	6.4E-02	max

Hazard Quotients

BTAG Low HQ:	9.4E-01	mean
BTAG High HQ:	3.9E-02	mean
BTAG Low HQ:	1.3E+00	max
BTAG High HQ:	5.3E-02	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Zinc
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	113.6045
Maximum detected value (mg/kg, dry weight):	126.7606

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	210
Maximum detected value (mg/kg, dry weight):	210

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	9.6
BTAG High (mg/kg-day):	411

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.6E+00	mean
Daily exposure (mg/kg-day)	2.9E+00	max

Hazard Quotients

BTAG Low HQ:	2.8E-01	mean
BTAG High HQ:	6.4E-03	mean
BTAG Low HQ:	3.1E-01	max
BTAG High HQ:	7.1E-03	max

Tier I - Summary of Hazard Quotients

Receptor: CA Least Tern
Location: NA12

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	1.8E-01	--	--	--	4.4E-01	--	--	--	--	--	--
LOAEL HQ:	#VALUE!	--	--	--	8.7E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	1.7E-01	1.8E-02	4.3E-01	#VALUE!	8.9E-01	**3.3E+01**	3.8E-01	2.4E-01	**1.1E+00**	8.4E-01
BTAG High HQ:	#DIV/0!	1.2E-02	2.8E-04	1.1E-01	#VALUE!	3.9E-02	5.3E-02	8.3E-02	5.8E-03	2.8E-01	8.4E-02
MAXIMUM											
NOAEL HQ:	1.9E-01	--	--	--	5.0E-01	--	--	--	--	--	--
LOAEL HQ:	#VALUE!	--	--	--	1.0E-01	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	2.2E-01	2.2E-02	4.4E-01	#VALUE!	**1.1E+00**	**3.6E+01**	5.0E-01	2.6E-01	**1.5E+00**	9.4E-01
BTAG High HQ:	#DIV/0!	1.6E-02	3.5E-04	1.1E-01	#VALUE!	4.8E-02	5.8E-02	1.1E-01	6.3E-03	3.8E-01	9.4E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Benzo[a]pyrene
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.199158
Maximum detected value (mg/kg, dry weight):	0.210884

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.26
Maximum detected value (mg/kg, dry weight):	0.26

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	Not Available
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.5E-02	mean
Daily exposure (mg/kg-day)	2.7E-02	max

Hazard Quotients

NOAEL HQ:	1.8E-01	mean
LOAEL HQ:	#VALUE!	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#DIV/0!	mean
NOAEL HQ:	1.9E-01	max
LOAEL HQ:	#VALUE!	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#DIV/0!	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Total PCB Congeners
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.124965
Maximum detected value (mg/kg, dry weight):	0.159184

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.15
Maximum detected value (mg/kg, dry weight):	0.15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.6E-02	mean
Daily exposure (mg/kg-day)	2.0E-02	max

Hazard Quotients

BTAG Low HQ:	1.7E-01	mean
BTAG High HQ:	1.2E-02	mean
BTAG Low HQ:	2.2E-01	max
BTAG High HQ:	1.6E-02	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Tributyltin
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.103506
Maximum detected value (mg/kg, dry weight):	0.129252

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.08
Maximum detected value (mg/kg, dry weight):	0.08

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.3E-02	mean
Daily exposure (mg/kg-day)	1.6E-02	max

Hazard Quotients

BTAG Low HQ:	1.8E-02	mean
BTAG High HQ:	2.8E-04	mean
BTAG Low HQ:	2.2E-02	max
BTAG High HQ:	3.5E-04	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Arsenic
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	18.93408
Maximum detected value (mg/kg, dry weight):	19.72789

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	9.5
Maximum detected value (mg/kg, dry weight):	9.5

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.3E+00	mean
Daily exposure (mg/kg-day)	2.4E+00	max

Hazard Quotients

BTAG Low HQ:	4.3E-01	mean
BTAG High HQ:	1.1E-01	mean
BTAG Low HQ:	4.4E-01	max
BTAG High HQ:	1.1E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Cadmium
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.210379
Maximum detected value (mg/kg, dry weight):	0.272727

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.18
Maximum detected value (mg/kg, dry weight):	0.18

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.6E-02	mean
Daily exposure (mg/kg-day)	3.4E-02	max

Hazard Quotients

BTAG Low HQ:	3.3E-01	mean
BTAG High HQ:	2.5E-03	mean
BTAG Low HQ:	4.2E-01	max
BTAG High HQ:	3.3E-03	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Chromium
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.725105
Maximum detected value (mg/kg, dry weight):	2.176871

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	54
Maximum detected value (mg/kg, dry weight):	54

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.8E-01	mean
Daily exposure (mg/kg-day)	4.3E-01	max

Hazard Quotients

NOAEL HQ:	4.4E-01	mean
LOAEL HQ:	8.7E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	5.0E-01	max
LOAEL HQ:	1.0E-01	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Copper
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	13.04348
Maximum detected value (mg/kg, dry weight):	16.90141

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	150
Maximum detected value (mg/kg, dry weight):	150

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.1E+00	mean
Daily exposure (mg/kg-day)	2.5E+00	max

Hazard Quotients

BTAG Low HQ:	8.9E-01	mean
BTAG High HQ:	3.9E-02	mean
BTAG Low HQ:	1.1E+00	max
BTAG High HQ:	4.8E-02	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Lead
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.328191
Maximum detected value (mg/kg, dry weight):	2.676056

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	59
Maximum detected value (mg/kg, dry weight):	59

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.6E-01	mean
Daily exposure (mg/kg-day)	5.1E-01	max

Hazard Quotients

BTAG Low HQ:	3.3E+01	mean
BTAG High HQ:	5.3E-02	mean
BTAG Low HQ:	3.6E+01	max
BTAG High HQ:	5.8E-02	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Total Mercury
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.106592
Maximum detected value (mg/kg, dry weight):	0.142857

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.62
Maximum detected value (mg/kg, dry weight):	0.62

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.5E-02	mean
Daily exposure (mg/kg-day)	1.9E-02	max

Hazard Quotients

BTAG HQ:	3.8E-01	mean
BTAG HQ:	8.3E-02	mean
BTAG Low HQ:	5.0E-01	max
BTAG High HQ:	1.1E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Nickel
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.30014
Maximum detected value (mg/kg, dry weight):	2.517007

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	15
Maximum detected value (mg/kg, dry weight):	15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.3E-01	mean
Daily exposure (mg/kg-day)	3.5E-01	max

Hazard Quotients

BTAG Low HQ:	2.4E-01	mean
BTAG High HQ:	5.8E-03	mean
BTAG Low HQ:	2.6E-01	max
BTAG High HQ:	6.3E-03	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Selenium
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.103787
Maximum detected value (mg/kg, dry weight):	2.857143

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.1
Maximum detected value (mg/kg, dry weight):	1.1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.6E-01	mean
Daily exposure (mg/kg-day)	3.5E-01	max

Hazard Quotients

BTAG Low HQ:	1.1E+00	mean
BTAG High HQ:	2.8E-01	mean
BTAG Low HQ:	1.5E+00	max
BTAG High HQ:	3.8E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Zinc
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	113.6045
Maximum detected value (mg/kg, dry weight):	126.7606

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	210
Maximum detected value (mg/kg, dry weight):	210

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.5E+01	mean
Daily exposure (mg/kg-day)	1.6E+01	max

Hazard Quotients

BTAG Low HQ:	8.4E-01	mean
BTAG High HQ:	8.4E-02	mean
BTAG Low HQ:	9.4E-01	max
BTAG High HQ:	9.4E-02	max

Tier I - Summary of Hazard Quotients

Receptor: Green Turtle
Location: NA12

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	5.0E-03	--	--	--	1.9E-02	--	--	--	--	--	--
LOAEL HQ:	5.0E-04	--	--	--	3.8E-03	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	4.9E-03	4.8E-04	1.2E-02	#VALUE!	3.1E-02	**1.4E+00**	1.2E-02	7.6E-03	3.1E-02	2.4E-02
BTAG High HQ:	#VALUE!	3.4E-04	7.7E-06	2.9E-03	#VALUE!	1.4E-03	2.2E-03	2.6E-03	1.9E-04	7.6E-03	2.4E-03
MAXIMUM											
NOAEL HQ:	5.3E-03	--	--	--	2.1E-02	--	--	--	--	--	--
LOAEL HQ:	5.3E-04	--	--	--	4.1E-03	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	6.1E-03	6.0E-04	1.2E-02	#VALUE!	3.7E-02	**1.4E+00**	1.5E-02	8.1E-03	4.1E-02	2.6E-02
BTAG High HQ:	#VALUE!	4.3E-04	9.5E-06	3.0E-03	#VALUE!	1.6E-03	2.3E-03	3.3E-03	2.0E-04	1.0E-02	2.6E-03

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Benzo[a]pyrene
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.199158
Maximum detected value (mg/kg, dry weight):	0.210884

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.26
Maximum detected value (mg/kg, dry weight):	0.26

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.0E-04	mean
Daily exposure (mg/kg-day)	7.4E-04	max

Hazard Quotients

NOAEL HQ:	5.0E-03	mean
LOAEL HQ:	5.0E-04	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	5.3E-03	max
LOAEL HQ:	5.3E-04	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Total PCB Congeners
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.124965
Maximum detected value (mg/kg, dry weight):	0.159184

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.15
Maximum detected value (mg/kg, dry weight):	0.15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.4E-04	mean
Daily exposure (mg/kg-day)	5.5E-04	max

Hazard Quotients

BTAG Low HQ:	4.9E-03	mean
BTAG High HQ:	3.4E-04	mean
BTAG Low HQ:	6.1E-03	max
BTAG High HQ:	4.3E-04	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Tributyltin
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.103506
Maximum detected value (mg/kg, dry weight):	0.129252

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.08
Maximum detected value (mg/kg, dry weight):	0.08

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.5E-04	mean
Daily exposure (mg/kg-day)	4.4E-04	max

Hazard Quotients

BTAG Low HQ:	4.8E-04	mean
BTAG High HQ:	7.7E-06	mean
BTAG Low HQ:	6.0E-04	max
BTAG High HQ:	9.5E-06	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Arsenic
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	18.93408
Maximum detected value (mg/kg, dry weight):	19.72789

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	9.5
Maximum detected value (mg/kg, dry weight):	9.5

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.4E-02	mean
Daily exposure (mg/kg-day)	6.6E-02	max

Hazard Quotients

BTAG Low HQ:	1.2E-02	mean
BTAG High HQ:	2.9E-03	mean
BTAG Low HQ:	1.2E-02	max
BTAG High HQ:	3.0E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Cadmium
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.210379
Maximum detected value (mg/kg, dry weight):	0.272727

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.18
Maximum detected value (mg/kg, dry weight):	0.18

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.2E-04	mean
Daily exposure (mg/kg-day)	9.3E-04	max

Hazard Quotients

BTAG Low HQ:	9.0E-03	mean
BTAG High HQ:	6.9E-05	mean
BTAG Low HQ:	1.2E-02	max
BTAG High HQ:	8.9E-05	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Chromium
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.725105
Maximum detected value (mg/kg, dry weight):	2.176871

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	54
Maximum detected value (mg/kg, dry weight):	54

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.6E-02	mean
Daily exposure (mg/kg-day)	1.8E-02	max

Hazard Quotients

NOAEL HQ:	1.9E-02	mean
LOAEL HQ:	3.8E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	2.1E-02	max
LOAEL HQ:	4.1E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Copper
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	13.04348
Maximum detected value (mg/kg, dry weight):	16.90141

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	150
Maximum detected value (mg/kg, dry weight):	150

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.2E-02	mean
Daily exposure (mg/kg-day)	8.5E-02	max

Hazard Quotients

BTAG Low HQ:	3.1E-02	mean
BTAG High HQ:	1.4E-03	mean
BTAG Low HQ:	3.7E-02	max
BTAG High HQ:	1.6E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Lead
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.328191
Maximum detected value (mg/kg, dry weight):	2.676056

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	59
Maximum detected value (mg/kg, dry weight):	59

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.9E-02	mean
Daily exposure (mg/kg-day)	2.0E-02	max

Hazard Quotients

BTAG Low HQ:	1.4E+00	mean
BTAG High HQ:	2.2E-03	mean
BTAG Low HQ:	1.4E+00	max
BTAG High HQ:	2.3E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Total Mercury
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.106592
Maximum detected value (mg/kg, dry weight):	0.142857

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.62
Maximum detected value (mg/kg, dry weight):	0.62

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.7E-04	mean
Daily exposure (mg/kg-day)	5.9E-04	max

Hazard Quotients

BTAG Low HQ:	1.2E-02	mean
BTAG High HQ:	2.6E-03	mean
BTAG Low HQ:	1.5E-02	max
BTAG High HQ:	3.3E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Nickel
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.30014
Maximum detected value (mg/kg, dry weight):	2.517007

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	15
Maximum detected value (mg/kg, dry weight):	15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.0E-02	mean
Daily exposure (mg/kg-day)	1.1E-02	max

Hazard Quotients

BTAG Low HQ:	7.6E-03	mean
BTAG High HQ:	1.9E-04	mean
BTAG Low HQ:	8.1E-03	max
BTAG High HQ:	2.0E-04	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Selenium
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.103787
Maximum detected value (mg/kg, dry weight):	2.857143

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.1
Maximum detected value (mg/kg, dry weight):	1.1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.1E-03	mean
Daily exposure (mg/kg-day)	9.5E-03	max

Hazard Quotients

BTAG Low HQ:	3.1E-02	mean
BTAG High HQ:	7.6E-03	mean
BTAG Low HQ:	4.1E-02	max
BTAG High HQ:	1.0E-02	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Zinc
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	113.6045
Maximum detected value (mg/kg, dry weight):	126.7606

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	210
Maximum detected value (mg/kg, dry weight):	210

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.1E-01	mean
Daily exposure (mg/kg-day)	4.5E-01	max

Hazard Quotients

BTAG Low HQ:	2.4E-02	mean
BTAG High HQ:	2.4E-03	mean
BTAG Low HQ:	2.6E-02	max
BTAG High HQ:	2.6E-03	max

Tier I - Summary of Hazard Quotients

Receptor: **Brown Pelican**
Location: **NA12**

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	1.2E-01	--	--	--	2.7E-01	--	--	--	--	--	--
LOAEL HQ:	1.2E-02	--	--	--	5.5E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	1.2E-01	1.2E-02	2.8E-01	#VALUE!	5.7E-01	**2.1E+01**	2.5E-01	1.5E-01	7.5E-01	5.6E-01
BTAG High HQ:	#VALUE!	8.2E-03	1.9E-04	7.0E-02	#VALUE!	2.5E-02	3.3E-02	5.4E-02	3.8E-03	1.8E-01	5.6E-02
MAXIMUM											
NOAEL HQ:	1.3E-01	--	--	--	3.1E-01	--	--	--	--	--	--
LOAEL HQ:	1.3E-02	--	--	--	6.3E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	1.5E-01	1.5E-02	2.9E-01	#VALUE!	7.1E-01	**2.3E+01**	3.2E-01	1.7E-01	**1.0E+00**	6.2E-01
BTAG High HQ:	#VALUE!	1.0E-02	2.3E-04	7.3E-02	#VALUE!	3.1E-02	3.7E-02	7.0E-02	4.1E-03	2.5E-01	6.2E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Benzo[a]pyrene
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.199158
Maximum detected value (mg/kg, dry weight):	0.210884

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.26
Maximum detected value (mg/kg, dry weight):	0.26

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.7E-02	mean
Daily exposure (mg/kg-day)	1.8E-02	max

Hazard Quotients

NOAEL HQ:	1.2E-01	mean
LOAEL HQ:	1.2E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	1.3E-01	max
LOAEL HQ:	1.3E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

BAP						
28	14	100	0.14			
26	13.2	100	0.132			
30	15.2	100	0.152			
31	14.7	100	0.147			
27	14.2	100	0.142			
28.4			**0.1426**	199.1585		
210.8844						

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Total PCB Congeners
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.124965
Maximum detected value (mg/kg, dry weight):	0.159184

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.15
Maximum detected value (mg/kg, dry weight):	0.15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.0E-02	mean
Daily exposure (mg/kg-day)	1.3E-02	max

Hazard Quotients

BTAG Low HQ:	1.2E-01	mean
BTAG High HQ:	8.2E-03	mean
BTAG Low HQ:	1.5E-01	max
BTAG High HQ:	1.0E-02	max

	PCB Cong	Total Solids			
	16.1	14	100	0.14	
	15.2	13.2	100	0.132	
	17.3	15.2	100	0.152	
	23.4	14.7	100	0.147	
	17.1	14.2	100	0.142	
	17.82			**0.1426**	**124.9649**
	159.1837				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Tributyltin
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.103506
Maximum detected value (mg/kg, dry weight):	0.129252

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.08
Maximum detected value (mg/kg, dry weight):	0.08

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	8.5E-03	mean
Daily exposure (mg/kg-day)	1.1E-02	max

Hazard Quotients

BTAG Low HQ:	1.2E-02	mean
BTAG High HQ:	1.9E-04	mean
BTAG Low HQ:	1.5E-02	max
BTAG High HQ:	2.3E-04	max

TBT	Total Solids				
18	14	100	0.14		
15	13.2	100	0.132		
13	15.2	100	0.152		
19	14.7	100	0.147		
8.8	14.2	100	0.142		
14.76			**0.1426**	**103.5063**	
129.2517					

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Arsenic
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	18.93408
Maximum detected value (mg/kg, dry weight):	19.72789

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	9.5
Maximum detected value (mg/kg, dry weight):	9.5

Arsenic	Total Solids			
2.8	14	100	0.14	
2.6	13.2	100	0.132	
2.6	15.2	100	0.152	
2.9	14.7	100	0.147	
2.6	14.2	100	0.142	
2.7			**0.1426**	**18.93408**

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1) 19.72789

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.5E+00	mean
Daily exposure (mg/kg-day)	1.6E+00	max

Hazard Quotients

BTAG Low HQ:	2.8E-01	mean
BTAG High HQ:	7.0E-02	mean
BTAG Low HQ:	2.9E-01	max
BTAG High HQ:	7.3E-02	max

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Cadmium
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.210379
Maximum detected value (mg/kg, dry weight):	0.272727

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.18
Maximum detected value (mg/kg, dry weight):	0.18

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.7E-02	mean
Daily exposure (mg/kg-day)	2.2E-02	max

Hazard Quotients

BTAG Low HQ:	2.2E-01	mean
BTAG High HQ:	1.7E-03	mean
BTAG Low HQ:	2.8E-01	max
BTAG High HQ:	2.2E-03	max

Cadmium	Total Solids			
0.02	14	100	0.14	
0.036	13.2	100	0.132	
0.031	15.2	100	0.152	
0.035	14.7	100	0.147	
0.028	14.2	100	0.142	
0.03			**0.1426**	**0.210379**

0.272727

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Chromium
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.725105
Maximum detected value (mg/kg, dry weight):	2.176871

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	54
Maximum detected value (mg/kg, dry weight):	54

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.3E-01	mean
Daily exposure (mg/kg-day)	2.7E-01	max

Hazard Quotients

NOAEL HQ:	2.7E-01	mean
LOAEL HQ:	5.5E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	3.1E-01	max
LOAEL HQ:	6.3E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

	Chromium	Total Solids			
	0.2	14	100	0.14	
	0.26	13.2	100	0.132	
	0.26	15.2	100	0.152	
	0.32	14.7	100	0.147	
	0.19	14.2	100	0.142	
	0.246			**0.1426**	**1.725105**
	2.176871				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Copper
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	13.04348
Maximum detected value (mg/kg, dry weight):	16.90141

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	150
Maximum detected value (mg/kg, dry weight):	150

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.3E+00	mean
Daily exposure (mg/kg-day)	1.6E+00	max

Hazard Quotients

BTAG Low HQ:	5.7E-01	mean
BTAG High HQ:	2.5E-02	mean
BTAG Low HQ:	7.1E-01	max
BTAG High HQ:	3.1E-02	max

Copper	Total Solids			
1.7	14	100	0.14	
2	13.2	100	0.132	
1.5	15.2	100	0.152	
1.7	14.7	100	0.147	
2.4	14.2	100	0.142	
1.86			**0.1426**	**13.04348**
16.90141				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Lead
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.328191
Maximum detected value (mg/kg, dry weight):	2.676056

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	59
Maximum detected value (mg/kg, dry weight):	59

Lead	Total Solids			
0.3	14	100	0.14	
0.31	13.2	100	0.132	
0.3	15.2	100	0.152	
0.37	14.7	100	0.147	
0.38	14.2	100	0.142	
0.332			**0.1426**	**2.328191**

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

2.676056

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.9E-01	mean
Daily exposure (mg/kg-day)	3.2E-01	max

Hazard Quotients

BTAG Low HQ:	2.1E+01	mean
BTAG High HQ:	3.3E-02	mean
BTAG Low HQ:	2.3E+01	max
BTAG High HQ:	3.7E-02	max

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Total Mercury
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.106592
Maximum detected value (mg/kg, dry weight):	0.142857

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.62
Maximum detected value (mg/kg, dry weight):	0.62

Mercury	Total Solids			
0.02	14	100	0.14	
0.015	13.2	100	0.132	
0.013	15.2	100	0.152	
0.014	14.7	100	0.147	
0.014	14.2	100	0.142	
0.0152			**0.1426**	**0.106592**
0.142857				

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.7E-03	mean
Daily exposure (mg/kg-day)	1.3E-02	max

Hazard Quotients

BTAG HQ:	2.5E-01	mean
BTAG HQ:	5.4E-02	mean
BTAG Low HQ:	3.2E-01	max
BTAG High HQ:	7.0E-02	max

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Nickel
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.30014
Maximum detected value (mg/kg, dry weight):	2.517007

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	15
Maximum detected value (mg/kg, dry weight):	15

Nickel	Total Solids			
0.32	14	100	0.14	
0.36	13.2	100	0.132	
0.3	15.2	100	0.152	
0.37	14.7	100	0.147	
0.29	14.2	100	0.142	
0.328			**0.1426**	**2.30014**

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

2.517007

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.1E-01	mean
Daily exposure (mg/kg-day)	2.3E-01	max

Hazard Quotients

BTAG Low HQ:	1.5E-01	mean
BTAG High HQ:	3.8E-03	mean
BTAG Low HQ:	1.7E-01	max
BTAG High HQ:	4.1E-03	max

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Selenium
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.103787
Maximum detected value (mg/kg, dry weight):	2.857143

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.1
Maximum detected value (mg/kg, dry weight):	1.1

Selenium	Total Solids		
0.4	14	100	0.14
0.3	13.2	100	0.132
0.2	15.2	100	0.152
0.4	14.7	100	0.147
0.2	14.2	100	0.142
0.3			**0.1426**

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

2.857143

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.7E-01	mean
Daily exposure (mg/kg-day)	2.3E-01	max

Hazard Quotients

BTAG Low HQ:	7.5E-01	mean
BTAG High HQ:	1.8E-01	mean
BTAG Low HQ:	1.0E+00	max
BTAG High HQ:	2.5E-01	max

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Zinc
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	113.6045
Maximum detected value (mg/kg, dry weight):	126.7606

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	210
Maximum detected value (mg/kg, dry weight):	210

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.6E+00	mean
Daily exposure (mg/kg-day)	1.1E+01	max

Hazard Quotients

BTAG Low HQ:	5.6E-01	mean
BTAG High HQ:	5.6E-02	mean
BTAG Low HQ:	6.2E-01	max
BTAG High HQ:	6.2E-02	max

Zinc	Total Solids				
12	14	100	0.14		
17	13.2	100	0.132		
17	15.2	100	0.152		
17	14.7	100	0.147		
18	14.2	100	0.142		
16.2			**0.1426**	**113.6045**	
126.7606					

Tier I - Summary of Hazard Quotients

Receptor: **Western Grebe**
Location: **NA12**

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	8.8E-02	--	--	--	3.6E-01	--	--	--	--	--	--
LOAEL HQ:	8.8E-03	--	--	--	7.1E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	8.5E-02	8.5E-03	2.0E-01	#VALUE!	5.7E-01	**2.6E+01**	2.2E-01	1.4E-01	5.4E-01	4.2E-01
BTAG High HQ:	#VALUE!	6.1E-03	1.4E-04	5.1E-02	#VALUE!	2.5E-02	4.1E-02	4.7E-02	3.3E-03	1.3E-01	4.2E-02
MAXIMUM											
NOAEL HQ:	9.3E-02	--	--	--	3.9E-01	--	--	--	--	--	--
LOAEL HQ:	9.3E-03	--	--	--	7.7E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	1.1E-01	1.1E-02	2.1E-01	#VALUE!	6.7E-01	**2.7E+01**	2.7E-01	1.5E-01	7.3E-01	4.7E-01
BTAG High HQ:	#VALUE!	7.6E-03	1.7E-04	5.3E-02	#VALUE!	2.9E-02	4.3E-02	5.8E-02	3.6E-03	1.8E-01	4.7E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Benzo[a]pyrene
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.199158
Maximum detected value (mg/kg, dry weight):	0.210884

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.26
Maximum detected value (mg/kg, dry weight):	0.26

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E-02	mean
Daily exposure (mg/kg-day)	1.3E-02	max

Hazard Quotients

NOAEL HQ:	8.8E-02	mean
LOAEL HQ:	8.8E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	9.3E-02	max
LOAEL HQ:	9.3E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Total PCB Congeners
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.124965
Maximum detected value (mg/kg, dry weight):	0.159184

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.15
Maximum detected value (mg/kg, dry weight):	0.15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.7E-03	mean
Daily exposure (mg/kg-day)	9.6E-03	max

Hazard Quotients

BTAG Low HQ:	8.5E-02	mean
BTAG High HQ:	6.1E-03	mean
BTAG Low HQ:	1.1E-01	max
BTAG High HQ:	7.6E-03	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Tributyltin
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.103506
Maximum detected value (mg/kg, dry weight):	0.129252

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.08
Maximum detected value (mg/kg, dry weight):	0.08

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.2E-03	mean
Daily exposure (mg/kg-day)	7.7E-03	max

Hazard Quotients

BTAG Low HQ:	8.5E-03	mean
BTAG High HQ:	1.4E-04	mean
BTAG Low HQ:	1.1E-02	max
BTAG High HQ:	1.7E-04	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Arsenic
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	18.93408
Maximum detected value (mg/kg, dry weight):	19.72789

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	9.5
Maximum detected value (mg/kg, dry weight):	9.5

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E+00	mean
Daily exposure (mg/kg-day)	1.2E+00	max

Hazard Quotients

BTAG Low HQ:	2.0E-01	mean
BTAG High HQ:	5.1E-02	mean
BTAG Low HQ:	2.1E-01	max
BTAG High HQ:	5.3E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Cadmium
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.210379
Maximum detected value (mg/kg, dry weight):	0.272727

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.18
Maximum detected value (mg/kg, dry weight):	0.18

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.3E-02	mean
Daily exposure (mg/kg-day)	1.6E-02	max

Hazard Quotients

BTAG Low HQ:	1.6E-01	mean
BTAG High HQ:	1.2E-03	mean
BTAG Low HQ:	2.0E-01	max
BTAG High HQ:	1.6E-03	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Chromium
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.725105
Maximum detected value (mg/kg, dry weight):	2.176871

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	54
Maximum detected value (mg/kg, dry weight):	54

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.1E-01	mean
Daily exposure (mg/kg-day)	3.3E-01	max

Hazard Quotients

NOAEL HQ:	3.6E-01	mean
LOAEL HQ:	7.1E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	3.9E-01	max
LOAEL HQ:	7.7E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Copper
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	13.04348
Maximum detected value (mg/kg, dry weight):	16.90141

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	150
Maximum detected value (mg/kg, dry weight):	150

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.3E+00	mean
Daily exposure (mg/kg-day)	1.5E+00	max

Hazard Quotients

BTAG Low HQ:	5.7E-01	mean
BTAG High HQ:	2.5E-02	mean
BTAG Low HQ:	6.7E-01	max
BTAG High HQ:	2.9E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Lead
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.328191
Maximum detected value (mg/kg, dry weight):	2.676056

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	59
Maximum detected value (mg/kg, dry weight):	59

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.6E-01	mean
Daily exposure (mg/kg-day)	3.8E-01	max

Hazard Quotients

BTAG Low HQ:	2.6E+01	mean
BTAG High HQ:	4.1E-02	mean
BTAG Low HQ:	2.7E+01	max
BTAG High HQ:	4.3E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Total Mercury
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.106592
Maximum detected value (mg/kg, dry weight):	0.142857

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.62
Maximum detected value (mg/kg, dry weight):	0.62

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	8.4E-03	mean
Daily exposure (mg/kg-day)	1.1E-02	max

Hazard Quotients

BTAG Low HQ:	2.2E-01	mean
BTAG High HQ:	4.7E-02	mean
BTAG Low HQ:	2.7E-01	max
BTAG High HQ:	5.8E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Nickel
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.30014
Maximum detected value (mg/kg, dry weight):	2.517007

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	15
Maximum detected value (mg/kg, dry weight):	15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.9E-01	mean
Daily exposure (mg/kg-day)	2.0E-01	max

Hazard Quotients

BTAG Low HQ:	1.4E-01	mean
BTAG High HQ:	3.3E-03	mean
BTAG Low HQ:	1.5E-01	max
BTAG High HQ:	3.6E-03	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Selenium
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.103787
Maximum detected value (mg/kg, dry weight):	2.857143

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.1
Maximum detected value (mg/kg, dry weight):	1.1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E-01	mean
Daily exposure (mg/kg-day)	1.7E-01	max

Hazard Quotients

BTAG Low HQ:	5.4E-01	mean
BTAG High HQ:	1.3E-01	mean
BTAG Low HQ:	7.3E-01	max
BTAG High HQ:	1.8E-01	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Zinc
Location: NA12

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	113.6045
Maximum detected value (mg/kg, dry weight):	126.7606

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	210
Maximum detected value (mg/kg, dry weight):	210

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.3E+00	mean
Daily exposure (mg/kg-day)	8.0E+00	max

Hazard Quotients

BTAG Low HQ:	4.2E-01	mean
BTAG High HQ:	4.2E-02	mean
BTAG Low HQ:	4.7E-01	max
BTAG High HQ:	4.7E-02	max

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Tier I - Summary of Hazard Quotients

Receptor: Surf Scoter
Location: NA20

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	1.1E-01	--	--	--	2.3E-01	--	--	--	--	--	--
LOAEL HQ:	1.1E-02	--	--	--	4.6E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	8.0E-02	1.3E-02	1.9E-01	#VALUE!	4.1E-01	**2.4E+01**	2.0E-01	1.3E-01	3.7E-01	4.0E-01
BTAG High HQ:	#VALUE!	5.7E-03	2.1E-04	4.8E-02	#VALUE!	1.8E-02	3.9E-02	4.4E-02	3.3E-03	9.0E-02	4.0E-02
MAXIMUM											
NOAEL HQ:	1.2E-01	--	--	--	2.6E-01	--	--	--	--	--	--
LOAEL HQ:	1.2E-02	--	--	--	5.2E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	1.0E-01	1.4E-02	2.3E-01	#VALUE!	4.7E-01	**2.7E+01**	2.4E-01	1.6E-01	4.6E-01	4.2E-01
BTAG High HQ:	#VALUE!	7.2E-03	2.3E-04	5.6E-02	#VALUE!	2.1E-02	4.4E-02	5.3E-02	3.9E-03	1.1E-01	4.2E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Benzo[a]pyrene
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.249671
Maximum detected value (mg/kg, dry weight):	0.283951

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.39
Maximum detected value (mg/kg, dry weight):	0.39

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.5E-02	mean
Daily exposure (mg/kg-day)	1.7E-02	max

Hazard Quotients

NOAEL HQ:	1.1E-01	mean
LOAEL HQ:	1.1E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	1.2E-01	max
LOAEL HQ:	1.2E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Total PCB Congeners
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.117477
Maximum detected value (mg/kg, dry weight):	0.151235

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.2
Maximum detected value (mg/kg, dry weight):	0.2

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.2E-03	mean
Daily exposure (mg/kg-day)	9.1E-03	max

Hazard Quotients

BTAG Low HQ:	8.0E-02	mean
BTAG High HQ:	5.7E-03	mean
BTAG Low HQ:	1.0E-01	max
BTAG High HQ:	7.2E-03	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Tributyltin
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.155059
Maximum detected value (mg/kg, dry weight):	0.170886

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.28
Maximum detected value (mg/kg, dry weight):	0.28

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.6E-03	mean
Daily exposure (mg/kg-day)	1.0E-02	max

Hazard Quotients

BTAG Low HQ:	1.3E-02	mean
BTAG High HQ:	2.1E-04	mean
BTAG Low HQ:	1.4E-02	max
BTAG High HQ:	2.3E-04	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Arsenic
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	18.52825
Maximum detected value (mg/kg, dry weight):	21.76871

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	6.6
Maximum detected value (mg/kg, dry weight):	6.6

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E+00	mean
Daily exposure (mg/kg-day)	1.2E+00	max

Hazard Quotients

BTAG Low HQ:	1.9E-01	mean
BTAG High HQ:	4.8E-02	mean
BTAG Low HQ:	2.3E-01	max
BTAG High HQ:	5.6E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Cadmium
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.198423
Maximum detected value (mg/kg, dry weight):	0.238095

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.44
Maximum detected value (mg/kg, dry weight):	0.44

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.3E-02	mean
Daily exposure (mg/kg-day)	1.5E-02	max

Hazard Quotients

BTAG Low HQ:	1.6E-01	mean
BTAG High HQ:	1.2E-03	mean
BTAG Low HQ:	1.8E-01	max
BTAG High HQ:	1.4E-03	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Chromium
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.049934
Maximum detected value (mg/kg, dry weight):	2.517007

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	26
Maximum detected value (mg/kg, dry weight):	26

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.0E-01	mean
Daily exposure (mg/kg-day)	2.3E-01	max

Hazard Quotients

NOAEL HQ:	2.3E-01	mean
LOAEL HQ:	4.6E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	2.6E-01	max
LOAEL HQ:	5.2E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Copper
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	11.43233
Maximum detected value (mg/kg, dry weight):	13.60544

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	96
Maximum detected value (mg/kg, dry weight):	96

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.5E-01	mean
Daily exposure (mg/kg-day)	1.1E+00	max

Hazard Quotients

BTAG Low HQ:	4.1E-01	mean
BTAG High HQ:	1.8E-02	mean
BTAG Low HQ:	4.7E-01	max
BTAG High HQ:	2.1E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Lead
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.969777
Maximum detected value (mg/kg, dry weight):	3.741497

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	53
Maximum detected value (mg/kg, dry weight):	53

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.4E-01	mean
Daily exposure (mg/kg-day)	3.8E-01	max

Hazard Quotients

BTAG Low HQ:	2.4E+01	mean
BTAG High HQ:	3.9E-02	mean
BTAG Low HQ:	2.7E+01	max
BTAG High HQ:	4.4E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Total Mercury
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.127464
Maximum detected value (mg/kg, dry weight):	0.156463

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.24
Maximum detected value (mg/kg, dry weight):	0.24

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.9E-03	mean
Daily exposure (mg/kg-day)	9.5E-03	max

Hazard Quotients

BTAG Low HQ:	2.0E-01	mean
BTAG High HQ:	4.4E-02	mean
BTAG Low HQ:	2.4E-01	max
BTAG High HQ:	5.3E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Nickel
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.812089
Maximum detected value (mg/kg, dry weight):	3.401361

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	8.4
Maximum detected value (mg/kg, dry weight):	8.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.8E-01	mean
Daily exposure (mg/kg-day)	2.2E-01	max

Hazard Quotients

BTAG Low HQ:	1.3E-01	mean
BTAG High HQ:	3.3E-03	mean
BTAG Low HQ:	1.6E-01	max
BTAG High HQ:	3.9E-03	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Selenium
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.445466
Maximum detected value (mg/kg, dry weight):	1.851852

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	8.4E-02	mean
Daily exposure (mg/kg-day)	1.1E-01	max

Hazard Quotients

BTAG Low HQ:	3.7E-01	mean
BTAG High HQ:	9.0E-02	mean
BTAG Low HQ:	4.6E-01	max
BTAG High HQ:	1.1E-01	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Zinc
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	113.0092
Maximum detected value (mg/kg, dry weight):	117.284

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	190
Maximum detected value (mg/kg, dry weight):	190

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.9E+00	mean
Daily exposure (mg/kg-day)	7.2E+00	max

Hazard Quotients

BTAG Low HQ:	4.0E-01	mean
BTAG High HQ:	4.0E-02	mean
BTAG Low HQ:	4.2E-01	max
BTAG High HQ:	4.2E-02	max

Tier I - Summary of Hazard Quotients

Receptor: Sea Lion
Location: NA20

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	--	--	--	--	1.9E-02	--	--	--	--	--	--
LOAEL HQ:	--	--	--	--	9.1E-04	--	--	--	--	--	--
BTAG Low HQ:	4.4E-03	7.6E-03	1.4E-02	**1.3E+00**	#VALUE!	1.2E-01	1.0E-01	1.1E-01	5.1E-01	6.5E-01	2.7E-01
BTAG High HQ:	1.8E-04	2.1E-03	2.4E-04	8.8E-02	#VALUE!	5.0E-04	4.2E-04	1.1E-02	2.1E-03	2.7E-02	6.4E-03
MAXIMUM											
NOAEL HQ:	--	--	--	--	2.2E-02	--	--	--	--	--	--
LOAEL HQ:	--	--	--	--	1.1E-03	--	--	--	--	--	--
BTAG Low HQ:	5.0E-03	9.6E-03	1.6E-02	**1.5E+00**	#VALUE!	1.4E-01	1.2E-01	1.3E-01	6.1E-01	8.3E-01	2.8E-01
BTAG High HQ:	2.0E-04	2.7E-03	2.6E-04	1.0E-01	#VALUE!	5.8E-04	4.9E-04	1.3E-02	2.5E-03	3.4E-02	6.6E-03

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Benzo[a]pyrene
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.249671
Maximum detected value (mg/kg, dry weight):	0.283951

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.39
Maximum detected value (mg/kg, dry weight):	0.39

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.31
BTAG High (mg/kg-day):	32.8

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.8E-03	mean
Daily exposure (mg/kg-day)	6.5E-03	max

Hazard Quotients

BTAG Low HQ:	4.4E-03	mean
BTAG High HQ:	1.8E-04	mean
BTAG Low HQ:	5.0E-03	max
BTAG High HQ:	2.0E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Total PCB Congeners
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.117477
Maximum detected value (mg/kg, dry weight):	0.151235

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.2
Maximum detected value (mg/kg, dry weight):	0.2

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.36
BTAG High (mg/kg-day):	1.28

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.7E-03	mean
Daily exposure (mg/kg-day)	3.5E-03	max

Hazard Quotients

BTAG Low HQ:	7.6E-03	mean
BTAG High HQ:	2.1E-03	mean
BTAG Low HQ:	9.6E-03	max
BTAG High HQ:	2.7E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Tributyltin
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.155059
Maximum detected value (mg/kg, dry weight):	0.170886

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.28
Maximum detected value (mg/kg, dry weight):	0.28

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.25
BTAG High (mg/kg-day):	15

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.6E-03	mean
Daily exposure (mg/kg-day)	4.0E-03	max

Hazard Quotients

BTAG Low HQ:	1.4E-02	mean
BTAG High HQ:	2.4E-04	mean
BTAG Low HQ:	1.6E-02	max
BTAG High HQ:	2.6E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Arsenic
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	18.52825
Maximum detected value (mg/kg, dry weight):	21.76871

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	6.6
Maximum detected value (mg/kg, dry weight):	6.6

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.32
BTAG High (mg/kg-day):	4.7

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.1E-01	mean
Daily exposure (mg/kg-day)	4.8E-01	max

Hazard Quotients

BTAG Low HQ:	1.3E+00	mean
BTAG High HQ:	8.8E-02	mean
BTAG Low HQ:	1.5E+00	max
BTAG High HQ:	1.0E-01	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Cadmium
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.198423
Maximum detected value (mg/kg, dry weight):	0.238095

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.44
Maximum detected value (mg/kg, dry weight):	0.44

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.06
BTAG High (mg/kg-day):	2.64

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.7E-03	mean
Daily exposure (mg/kg-day)	5.5E-03	max

Hazard Quotients

BTAG Low HQ:	7.8E-02	mean
BTAG High HQ:	1.8E-03	mean
BTAG Low HQ:	9.2E-02	max
BTAG High HQ:	2.1E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Chromium
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.049934
Maximum detected value (mg/kg, dry weight):	2.517007

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	26
Maximum detected value (mg/kg, dry weight):	26

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	3.3
LOAEL (mg/kg-day):	69
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.3E-02	mean
Daily exposure (mg/kg-day)	7.3E-02	max

Hazard Quotients

NOAEL HQ:	1.9E-02	mean
LOAEL HQ:	9.1E-04	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	2.2E-02	max
LOAEL HQ:	1.1E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Copper
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	11.43233
Maximum detected value (mg/kg, dry weight):	13.60544

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	96
Maximum detected value (mg/kg, dry weight):	96

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.67
BTAG High (mg/kg-day):	632

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.2E-01	mean
Daily exposure (mg/kg-day)	3.7E-01	max

Hazard Quotients

BTAG Low HQ:	1.2E-01	mean
BTAG High HQ:	5.0E-04	mean
BTAG Low HQ:	1.4E-01	max
BTAG High HQ:	5.8E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Lead
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.969777
Maximum detected value (mg/kg, dry weight):	3.741497

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	53
Maximum detected value (mg/kg, dry weight):	53

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1
BTAG High (mg/kg-day):	241

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.0E-01	mean
Daily exposure (mg/kg-day)	1.2E-01	max

Hazard Quotients

BTAG Low HQ:	1.0E-01	mean
BTAG High HQ:	4.2E-04	mean
BTAG Low HQ:	1.2E-01	max
BTAG High HQ:	4.9E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Total Mercury
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.127464
Maximum detected value (mg/kg, dry weight):	0.156463

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.24
Maximum detected value (mg/kg, dry weight):	0.24

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.027
BTAG High (mg/kg-day):	0.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.0E-03	mean
Daily exposure (mg/kg-day)	3.6E-03	max

Hazard Quotients

BTAG Low HQ:	1.1E-01	mean
BTAG High HQ:	1.1E-02	mean
BTAG Low HQ:	1.3E-01	max
BTAG High HQ:	1.3E-02	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Nickel
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.812089
Maximum detected value (mg/kg, dry weight):	3.401361

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	8.4
Maximum detected value (mg/kg, dry weight):	8.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.133
BTAG High (mg/kg-day):	31.6

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.8E-02	mean
Daily exposure (mg/kg-day)	8.1E-02	max

Hazard Quotients

BTAG Low HQ:	5.1E-01	mean
BTAG High HQ:	2.1E-03	mean
BTAG Low HQ:	6.1E-01	max
BTAG High HQ:	2.5E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Selenium
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.445466
Maximum detected value (mg/kg, dry weight):	1.851852

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.05
BTAG High (mg/kg-day):	1.21

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.2E-02	mean
Daily exposure (mg/kg-day)	4.1E-02	max

Hazard Quotients

BTAG Low HQ:	6.5E-01	mean
BTAG High HQ:	2.7E-02	mean
BTAG Low HQ:	8.3E-01	max
BTAG High HQ:	3.4E-02	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Zinc
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	113.0092
Maximum detected value (mg/kg, dry weight):	117.284

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	190
Maximum detected value (mg/kg, dry weight):	190

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	9.6
BTAG High (mg/kg-day):	411

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.6E+00	mean
Daily exposure (mg/kg-day)	2.7E+00	max

Hazard Quotients

BTAG Low HQ:	2.7E-01	mean
BTAG High HQ:	6.4E-03	mean
BTAG Low HQ:	2.8E-01	max
BTAG High HQ:	6.6E-03	max

Tier I - Summary of Hazard Quotients

Receptor: CA Least Tern
Location: NA20

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	2.3E-01	--	--	--	3.8E-01	--	--	--	--	--	--
LOAEL HQ:	2.3E-02	--	--	--	7.7E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	1.7E-01	2.7E-02	4.2E-01	#VALUE!	7.4E-01	**3.7E+01**	4.2E-01	2.7E-01	7.8E-01	8.4E-01
BTAG High HQ:	#VALUE!	1.2E-02	4.3E-04	1.0E-01	#VALUE!	3.2E-02	6.0E-02	9.1E-02	6.6E-03	1.9E-01	8.4E-02
MAXIMUM											
NOAEL HQ:	2.6E-01	--	--	--	4.5E-01	--	--	--	--	--	--
LOAEL HQ:	2.6E-02	--	--	--	9.0E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	2.1E-01	3.0E-02	4.9E-01	#VALUE!	8.5E-01	**4.4E+01**	5.1E-01	3.2E-01	**1.0E+00**	8.7E-01
BTAG High HQ:	#VALUE!	1.5E-02	4.7E-04	1.2E-01	#VALUE!	3.7E-02	7.1E-02	1.1E-01	7.8E-03	2.5E-01	8.7E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Benzo[a]pyrene
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.249671
Maximum detected value (mg/kg, dry weight):	0.283951

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.39
Maximum detected value (mg/kg, dry weight):	0.39

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.2E-02	mean
Daily exposure (mg/kg-day)	3.6E-02	max

Hazard Quotients

NOAEL HQ:	2.3E-01	mean
LOAEL HQ:	2.3E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	2.6E-01	max
LOAEL HQ:	2.6E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Total PCB Congeners
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.117477
Maximum detected value (mg/kg, dry weight):	0.151235

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.2
Maximum detected value (mg/kg, dry weight):	0.2

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.5E-02	mean
Daily exposure (mg/kg-day)	1.9E-02	max

Hazard Quotients

BTAG Low HQ:	1.7E-01	mean
BTAG High HQ:	1.2E-02	mean
BTAG Low HQ:	2.1E-01	max
BTAG High HQ:	1.5E-02	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Tributyltin
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.155059
Maximum detected value (mg/kg, dry weight):	0.170886

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.28
Maximum detected value (mg/kg, dry weight):	0.28

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.0E-02	mean
Daily exposure (mg/kg-day)	2.2E-02	max

Hazard Quotients

BTAG Low HQ:	2.7E-02	mean
BTAG High HQ:	4.3E-04	mean
BTAG Low HQ:	3.0E-02	max
BTAG High HQ:	4.7E-04	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Arsenic
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	18.52825
Maximum detected value (mg/kg, dry weight):	21.76871

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	6.6
Maximum detected value (mg/kg, dry weight):	6.6

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.3E+00	mean
Daily exposure (mg/kg-day)	2.7E+00	max

Hazard Quotients

BTAG Low HQ:	4.2E-01	mean
BTAG High HQ:	1.0E-01	mean
BTAG Low HQ:	4.9E-01	max
BTAG High HQ:	1.2E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Cadmium
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.198423
Maximum detected value (mg/kg, dry weight):	0.238095

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.44
Maximum detected value (mg/kg, dry weight):	0.44

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.6E-02	mean
Daily exposure (mg/kg-day)	3.0E-02	max

Hazard Quotients

BTAG Low HQ:	3.2E-01	mean
BTAG High HQ:	2.5E-03	mean
BTAG Low HQ:	3.8E-01	max
BTAG High HQ:	2.9E-03	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Chromium
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.049934
Maximum detected value (mg/kg, dry weight):	2.517007

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	26
Maximum detected value (mg/kg, dry weight):	26

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.3E-01	mean
Daily exposure (mg/kg-day)	3.9E-01	max

Hazard Quotients

NOAEL HQ:	3.8E-01	mean
LOAEL HQ:	7.7E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	4.5E-01	max
LOAEL HQ:	9.0E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Copper
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	11.43233
Maximum detected value (mg/kg, dry weight):	13.60544

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	96
Maximum detected value (mg/kg, dry weight):	96

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.7E+00	mean
Daily exposure (mg/kg-day)	2.0E+00	max

Hazard Quotients

BTAG Low HQ:	7.4E-01	mean
BTAG High HQ:	3.2E-02	mean
BTAG Low HQ:	8.5E-01	max
BTAG High HQ:	3.7E-02	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Lead
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.969777
Maximum detected value (mg/kg, dry weight):	3.741497

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	53
Maximum detected value (mg/kg, dry weight):	53

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.2E-01	mean
Daily exposure (mg/kg-day)	6.2E-01	max

Hazard Quotients

BTAG Low HQ:	3.7E+01	mean
BTAG High HQ:	6.0E-02	mean
BTAG Low HQ:	4.4E+01	max
BTAG High HQ:	7.1E-02	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Total Mercury
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.127464
Maximum detected value (mg/kg, dry weight):	0.156463

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.24
Maximum detected value (mg/kg, dry weight):	0.24

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.6E-02	mean
Daily exposure (mg/kg-day)	2.0E-02	max

Hazard Quotients

BTAG Low HQ:	4.2E-01	mean
BTAG High HQ:	9.1E-02	mean
BTAG Low HQ:	5.1E-01	max
BTAG High HQ:	1.1E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Nickel
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.812089
Maximum detected value (mg/kg, dry weight):	3.401361

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	8.4
Maximum detected value (mg/kg, dry weight):	8.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.7E-01	mean
Daily exposure (mg/kg-day)	4.4E-01	max

Hazard Quotients

BTAG Low HQ:	2.7E-01	mean
BTAG High HQ:	6.6E-03	mean
BTAG Low HQ:	3.2E-01	max
BTAG High HQ:	7.8E-03	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Selenium
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.445466
Maximum detected value (mg/kg, dry weight):	1.851852

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.8E-01	mean
Daily exposure (mg/kg-day)	2.3E-01	max

Hazard Quotients

BTAG Low HQ:	7.8E-01	mean
BTAG High HQ:	1.9E-01	mean
BTAG Low HQ:	1.0E+00	max
BTAG High HQ:	2.5E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Zinc
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	113.0092
Maximum detected value (mg/kg, dry weight):	117.284

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	190
Maximum detected value (mg/kg, dry weight):	190

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.4E+01	mean
Daily exposure (mg/kg-day)	1.5E+01	max

Hazard Quotients

BTAG Low HQ:	8.4E-01	mean
BTAG High HQ:	8.4E-02	mean
BTAG Low HQ:	8.7E-01	max
BTAG High HQ:	8.7E-02	max

Tier I - Summary of Hazard Quotients

Receptor: **Green Turtle**
Location: **NA20**

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	6.4E-03	--	--	--	1.4E-02	--	--	--	--	--	--
LOAEL HQ:	6.4E-04	--	--	--	2.7E-03	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	4.7E-03	7.7E-04	1.1E-02	#VALUE!	2.4E-02	**1.4E+00**	1.2E-02	7.8E-03	2.1E-02	2.4E-02
BTAG High HQ:	#VALUE!	3.3E-04	1.2E-05	2.8E-03	#VALUE!	1.1E-03	2.3E-03	2.6E-03	1.9E-04	5.3E-03	2.4E-03
MAXIMUM											
NOAEL HQ:	7.2E-03	--	--	--	1.5E-02	--	--	--	--	--	--
LOAEL HQ:	7.2E-04	--	--	--	3.1E-03	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	5.9E-03	8.4E-04	1.3E-02	#VALUE!	2.7E-02	**1.6E+00**	1.4E-02	9.2E-03	2.7E-02	2.4E-02
BTAG High HQ:	#VALUE!	4.2E-04	1.3E-05	3.3E-03	#VALUE!	1.2E-03	2.6E-03	3.1E-03	2.3E-04	6.7E-03	2.4E-03

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Benzo[a]pyrene
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.249671
Maximum detected value (mg/kg, dry weight):	0.283951

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.39
Maximum detected value (mg/kg, dry weight):	0.39

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	8.9E-04	mean
Daily exposure (mg/kg-day)	1.0E-03	max

Hazard Quotients

NOAEL HQ:	6.4E-03	mean
LOAEL HQ:	6.4E-04	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	7.2E-03	max
LOAEL HQ:	7.2E-04	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Total PCB Congeners
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.117477
Maximum detected value (mg/kg, dry weight):	0.151235

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.2
Maximum detected value (mg/kg, dry weight):	0.2

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.2E-04	mean
Daily exposure (mg/kg-day)	5.3E-04	max

Hazard Quotients

BTAG Low HQ:	4.7E-03	mean
BTAG High HQ:	3.3E-04	mean
BTAG Low HQ:	5.9E-03	max
BTAG High HQ:	4.2E-04	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Tributyltin
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.155059
Maximum detected value (mg/kg, dry weight):	0.170886

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.28
Maximum detected value (mg/kg, dry weight):	0.28

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.6E-04	mean
Daily exposure (mg/kg-day)	6.1E-04	max

Hazard Quotients

BTAG Low HQ:	7.7E-04	mean
BTAG High HQ:	1.2E-05	mean
BTAG Low HQ:	8.4E-04	max
BTAG High HQ:	1.3E-05	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Arsenic
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	18.52825
Maximum detected value (mg/kg, dry weight):	21.76871

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	6.6
Maximum detected value (mg/kg, dry weight):	6.6

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.2E-02	mean
Daily exposure (mg/kg-day)	7.2E-02	max

Hazard Quotients

BTAG Low HQ:	1.1E-02	mean
BTAG High HQ:	2.8E-03	mean
BTAG Low HQ:	1.3E-02	max
BTAG High HQ:	3.3E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Cadmium
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.198423
Maximum detected value (mg/kg, dry weight):	0.238095

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.44
Maximum detected value (mg/kg, dry weight):	0.44

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.3E-04	mean
Daily exposure (mg/kg-day)	8.6E-04	max

Hazard Quotients

BTAG Low HQ:	9.2E-03	mean
BTAG High HQ:	7.1E-05	mean
BTAG Low HQ:	1.1E-02	max
BTAG High HQ:	8.3E-05	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Chromium
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.049934
Maximum detected value (mg/kg, dry weight):	2.517007

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	26
Maximum detected value (mg/kg, dry weight):	26

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E-02	mean
Daily exposure (mg/kg-day)	1.3E-02	max

Hazard Quotients

NOAEL HQ:	1.4E-02	mean
LOAEL HQ:	2.7E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	1.5E-02	max
LOAEL HQ:	3.1E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Copper
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	11.43233
Maximum detected value (mg/kg, dry weight):	13.60544

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	96
Maximum detected value (mg/kg, dry weight):	96

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.6E-02	mean
Daily exposure (mg/kg-day)	6.3E-02	max

Hazard Quotients

BTAG Low HQ:	2.4E-02	mean
BTAG High HQ:	1.1E-03	mean
BTAG Low HQ:	2.7E-02	max
BTAG High HQ:	1.2E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Lead
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.969777
Maximum detected value (mg/kg, dry weight):	3.741497

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	53
Maximum detected value (mg/kg, dry weight):	53

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.0E-02	mean
Daily exposure (mg/kg-day)	2.3E-02	max

Hazard Quotients

BTAG Low HQ:	1.4E+00	mean
BTAG High HQ:	2.3E-03	mean
BTAG Low HQ:	1.6E+00	max
BTAG High HQ:	2.6E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Total Mercury
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.127464
Maximum detected value (mg/kg, dry weight):	0.156463

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.24
Maximum detected value (mg/kg, dry weight):	0.24

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.6E-04	mean
Daily exposure (mg/kg-day)	5.6E-04	max

Hazard Quotients

BTAG Low HQ:	1.2E-02	mean
BTAG High HQ:	2.6E-03	mean
BTAG Low HQ:	1.4E-02	max
BTAG High HQ:	3.1E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Nickel
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.812089
Maximum detected value (mg/kg, dry weight):	3.401361

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	8.4
Maximum detected value (mg/kg, dry weight):	8.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E-02	mean
Daily exposure (mg/kg-day)	1.3E-02	max

Hazard Quotients

BTAG Low HQ:	7.8E-03	mean
BTAG High HQ:	1.9E-04	mean
BTAG Low HQ:	9.2E-03	max
BTAG High HQ:	2.3E-04	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Selenium
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.445466
Maximum detected value (mg/kg, dry weight):	1.851852

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.9E-03	mean
Daily exposure (mg/kg-day)	6.2E-03	max

Hazard Quotients

BTAG Low HQ:	2.1E-02	mean
BTAG High HQ:	5.3E-03	mean
BTAG Low HQ:	2.7E-02	max
BTAG High HQ:	6.7E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Zinc
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	113.0092
Maximum detected value (mg/kg, dry weight):	117.284

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	190
Maximum detected value (mg/kg, dry weight):	190

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.1E-01	mean
Daily exposure (mg/kg-day)	4.2E-01	max

Hazard Quotients

BTAG Low HQ:	2.4E-02	mean
BTAG High HQ:	2.4E-03	mean
BTAG Low HQ:	2.4E-02	max
BTAG High HQ:	2.4E-03	max

Tier I - Summary of Hazard Quotients

Receptor: **Brown Pelican**
Location: **NA20**

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	1.5E-01	--	--	--	2.5E-01	--	--	--	--	--	--
LOAEL HQ:	1.5E-02	--	--	--	4.9E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	1.1E-01	1.8E-02	2.7E-01	#VALUE!	4.8E-01	**2.4E+01**	2.8E-01	1.8E-01	5.2E-01	5.5E-01
BTAG High HQ:	#VALUE!	7.8E-03	2.8E-04	6.9E-02	#VALUE!	2.1E-02	3.8E-02	6.0E-02	4.3E-03	1.3E-01	5.5E-02
MAXIMUM											
NOAEL HQ:	1.7E-01	--	--	--	2.9E-01	--	--	--	--	--	--
LOAEL HQ:	1.7E-02	--	--	--	5.8E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	1.4E-01	2.0E-02	3.2E-01	#VALUE!	5.5E-01	**2.8E+01**	3.4E-01	2.1E-01	6.6E-01	5.7E-01
BTAG High HQ:	#VALUE!	9.9E-03	3.1E-04	8.1E-02	#VALUE!	2.4E-02	4.5E-02	7.3E-02	5.1E-03	1.6E-01	5.7E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Benzo[a]pyrene
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.249671
Maximum detected value (mg/kg, dry weight):	0.283951

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.39
Maximum detected value (mg/kg, dry weight):	0.39

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.1E-02	mean
Daily exposure (mg/kg-day)	2.4E-02	max

Hazard Quotients

NOAEL HQ:	1.5E-01	mean
LOAEL HQ:	1.5E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	1.7E-01	max
LOAEL HQ:	1.7E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

BAP						
	46	16.2	100	0.162		
	23	13.6	100	0.136		
	35	14.7	100	0.147		
	43	15.8	100	0.158		
	43	15.8	100	0.158		
	38			**0.1522**	249.6715	
283.9506						

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Total PCB Congeners
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.117477
Maximum detected value (mg/kg, dry weight):	0.151235

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.2
Maximum detected value (mg/kg, dry weight):	0.2

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.8E-03	mean
Daily exposure (mg/kg-day)	1.3E-02	max

Hazard Quotients

BTAG Low HQ:	1.1E-01	mean
BTAG High HQ:	7.8E-03	mean
BTAG Low HQ:	1.4E-01	max
BTAG High HQ:	9.9E-03	max

	PCB Cong	Total Solids			
	24.5	16.2	100	0.162	
	16.9	13.6	100	0.136	
	13.2	14.7	100	0.147	
	13.2	15.8	100	0.158	
	21.6	15.8	100	0.158	
	17.88			**0.1522**	**117.477**
	151.2346				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Tributyltin
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.155059
Maximum detected value (mg/kg, dry weight):	0.170886

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.28
Maximum detected value (mg/kg, dry weight):	0.28

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.3E-02	mean
Daily exposure (mg/kg-day)	1.4E-02	max

Hazard Quotients

BTAG Low HQ:	1.8E-02	mean
BTAG High HQ:	2.8E-04	mean
BTAG Low HQ:	2.0E-02	max
BTAG High HQ:	3.1E-04	max

TBT	Total Solids				
22	16.2	100	0.162		
26	13.6	100	0.136		
27	14.7	100	0.147		
27	15.8	100	0.158		
16	15.8	100	0.158		
23.6			**0.1522**	**155.0591**	
170.8861					

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Arsenic
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	18.52825
Maximum detected value (mg/kg, dry weight):	21.76871

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	6.6
Maximum detected value (mg/kg, dry weight):	6.6

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.5E+00	mean
Daily exposure (mg/kg-day)	1.8E+00	max

Hazard Quotients

BTAG Low HQ:	2.7E-01	mean
BTAG High HQ:	6.9E-02	mean
BTAG Low HQ:	3.2E-01	max
BTAG High HQ:	8.1E-02	max

Arsenic	Total Solids			
3	16.2	100	0.162	
2.2	13.6	100	0.136	
3.2	14.7	100	0.147	
3.2	15.8	100	0.158	
2.5	15.8	100	0.158	
2.82			**0.1522**	**18.52825**

21.76871

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Cadmium
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.198423
Maximum detected value (mg/kg, dry weight):	0.238095

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.44
Maximum detected value (mg/kg, dry weight):	0.44

Cadmium	Total Solids			
0.029	16.2	100	0.162	
0.023	13.6	100	0.136	
0.035	14.7	100	0.147	
0.035	15.8	100	0.158	
0.029	15.8	100	0.158	
0.0302			**0.1522**	**0.198423**
0.238095				

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.7E-02	mean
Daily exposure (mg/kg-day)	2.0E-02	max

Hazard Quotients

BTAG Low HQ:	2.1E-01	mean
BTAG High HQ:	1.6E-03	mean
BTAG Low HQ:	2.5E-01	max
BTAG High HQ:	1.9E-03	max

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Chromium
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.049934
Maximum detected value (mg/kg, dry weight):	2.517007

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	26
Maximum detected value (mg/kg, dry weight):	26

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.1E-01	mean
Daily exposure (mg/kg-day)	2.5E-01	max

Hazard Quotients

NOAEL HQ:	2.5E-01	mean
LOAEL HQ:	4.9E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	2.9E-01	max
LOAEL HQ:	5.8E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Chromium	Total Solids				
0.25	16.2	100	0.162		
0.27	13.6	100	0.136		
0.37	14.7	100	0.147		
0.37	15.8	100	0.158		
0.3	15.8	100	0.158		
0.312			**0.1522**	**2.049934**	

2.517007

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Copper
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	11.43233
Maximum detected value (mg/kg, dry weight):	13.60544

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	96
Maximum detected value (mg/kg, dry weight):	96

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E+00	mean
Daily exposure (mg/kg-day)	1.3E+00	max

Hazard Quotients

BTAG Low HQ:	4.8E-01	mean
BTAG High HQ:	2.1E-02	mean
BTAG Low HQ:	5.5E-01	max
BTAG High HQ:	2.4E-02	max

Copper	Total Solids			
1.7	16.2	100	0.162	
1.6	13.6	100	0.136	
2	14.7	100	0.147	
2	15.8	100	0.158	
1.4	15.8	100	0.158	
1.74			**0.1522**	**11.43233**
13.60544				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Lead
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.969777
Maximum detected value (mg/kg, dry weight):	3.741497

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	53
Maximum detected value (mg/kg, dry weight):	53

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.3E-01	mean
Daily exposure (mg/kg-day)	4.0E-01	max

Hazard Quotients

BTAG Low HQ:	2.4E+01	mean
BTAG High HQ:	3.8E-02	mean
BTAG Low HQ:	2.8E+01	max
BTAG High HQ:	4.5E-02	max

	Lead	Total Solids		
	0.41	16.2	100	0.162
	0.38	13.6	100	0.136
	0.55	14.7	100	0.147
	0.55	15.8	100	0.158
	0.37	15.8	100	0.158
	0.452			**0.1522**
	3.741497			

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Total Mercury
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.127464
Maximum detected value (mg/kg, dry weight):	0.156463

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.24
Maximum detected value (mg/kg, dry weight):	0.24

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E-02	mean
Daily exposure (mg/kg-day)	1.3E-02	max

Hazard Quotients

BTAG HQ:	2.8E-01	mean
BTAG HQ:	6.0E-02	mean
BTAG Low HQ:	3.4E-01	max
BTAG High HQ:	7.3E-02	max

Mercury	Total Solids		
0.017	16.2	100	0.162
0.017	13.6	100	0.136
0.023	14.7	100	0.147
0.023	15.8	100	0.158
0.017	15.8	100	0.158
0.0194			**0.1522**
0.156463			

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Nickel
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.812089
Maximum detected value (mg/kg, dry weight):	3.401361

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	8.4
Maximum detected value (mg/kg, dry weight):	8.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.4E-01	mean
Daily exposure (mg/kg-day)	2.9E-01	max

Hazard Quotients

BTAG Low HQ:	1.8E-01	mean
BTAG High HQ:	4.3E-03	mean
BTAG Low HQ:	2.1E-01	max
BTAG High HQ:	5.1E-03	max

Nickel	Total Solids			
0.42	16.2	100	0.162	
0.34	13.6	100	0.136	
0.5	14.7	100	0.147	
0.5	15.8	100	0.158	
0.38	15.8	100	0.158	
0.428			**0.1522**	**2.812089**
3.401361				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Selenium
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.445466
Maximum detected value (mg/kg, dry weight):	1.851852

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E-01	mean
Daily exposure (mg/kg-day)	1.5E-01	max

Hazard Quotients

BTAG Low HQ:	5.2E-01	mean
BTAG High HQ:	1.3E-01	mean
BTAG Low HQ:	6.6E-01	max
BTAG High HQ:	1.6E-01	max

Selenium	Total Solids			
0.3	16.2	100	0.162	
0.2	13.6	100	0.136	
0.2	14.7	100	0.147	
0.2	15.8	100	0.158	
0.2	15.8	100	0.158	
0.22			**0.1522**	**1.445466**
1.851852				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Zinc
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	113.0092
Maximum detected value (mg/kg, dry weight):	117.284

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	190
Maximum detected value (mg/kg, dry weight):	190

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.5E+00	mean
Daily exposure (mg/kg-day)	9.8E+00	max

Hazard Quotients

BTAG Low HQ:	5.5E-01	mean
BTAG High HQ:	5.5E-02	mean
BTAG Low HQ:	5.7E-01	max
BTAG High HQ:	5.7E-02	max

Zinc	Total Solids				
19	16.2	100	0.162		
15	13.6	100	0.136		
18	14.7	100	0.147		
18	15.8	100	0.158		
16	15.8	100	0.158		
17.2			**0.1522**	**113.0092**	
117.284					

Tier I - Summary of Hazard Quotients

Receptor: **Western Grebe**
Location: **NA20**

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	1.1E-01	--	--	--	2.5E-01	--	--	--	--	--	--
LOAEL HQ:	1.1E-02	--	--	--	5.0E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	8.3E-02	1.4E-02	2.0E-01	#VALUE!	4.4E-01	**2.7E+01**	2.1E-01	1.4E-01	3.7E-01	4.2E-01
BTAG High HQ:	#VALUE!	5.9E-03	2.2E-04	4.9E-02	#VALUE!	1.9E-02	4.3E-02	4.5E-02	3.4E-03	9.3E-02	4.2E-02
MAXIMUM											
NOAEL HQ:	1.3E-01	--	--	--	2.8E-01	--	--	--	--	--	--
LOAEL HQ:	1.3E-02	--	--	--	5.7E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	1.0E-01	1.5E-02	2.3E-01	#VALUE!	5.0E-01	**3.0E+01**	2.5E-01	1.6E-01	4.8E-01	4.3E-01
BTAG High HQ:	#VALUE!	7.4E-03	2.4E-04	5.7E-02	#VALUE!	2.2E-02	4.8E-02	5.5E-02	4.0E-03	1.2E-01	4.3E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Benzo[a]pyrene
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.249671
Maximum detected value (mg/kg, dry weight):	0.283951

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.39
Maximum detected value (mg/kg, dry weight):	0.39

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.6E-02	mean
Daily exposure (mg/kg-day)	1.8E-02	max

Hazard Quotients

NOAEL HQ:	1.1E-01	mean
LOAEL HQ:	1.1E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	1.3E-01	max
LOAEL HQ:	1.3E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Total PCB Congeners
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.117477
Maximum detected value (mg/kg, dry weight):	0.151235

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.2
Maximum detected value (mg/kg, dry weight):	0.2

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.5E-03	mean
Daily exposure (mg/kg-day)	9.4E-03	max

Hazard Quotients

BTAG Low HQ:	8.3E-02	mean
BTAG High HQ:	5.9E-03	mean
BTAG Low HQ:	1.0E-01	max
BTAG High HQ:	7.4E-03	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Tributyltin
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.155059
Maximum detected value (mg/kg, dry weight):	0.170886

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.28
Maximum detected value (mg/kg, dry weight):	0.28

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.9E-03	mean
Daily exposure (mg/kg-day)	1.1E-02	max

Hazard Quotients

BTAG Low HQ:	1.4E-02	mean
BTAG High HQ:	2.2E-04	mean
BTAG Low HQ:	1.5E-02	max
BTAG High HQ:	2.4E-04	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Arsenic
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	18.52825
Maximum detected value (mg/kg, dry weight):	21.76871

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	6.6
Maximum detected value (mg/kg, dry weight):	6.6

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E+00	mean
Daily exposure (mg/kg-day)	1.3E+00	max

Hazard Quotients

BTAG Low HQ:	2.0E-01	mean
BTAG High HQ:	4.9E-02	mean
BTAG Low HQ:	2.3E-01	max
BTAG High HQ:	5.7E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Cadmium
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.198423
Maximum detected value (mg/kg, dry weight):	0.238095

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.44
Maximum detected value (mg/kg, dry weight):	0.44

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.3E-02	mean
Daily exposure (mg/kg-day)	1.5E-02	max

Hazard Quotients

BTAG Low HQ:	1.6E-01	mean
BTAG High HQ:	1.2E-03	mean
BTAG Low HQ:	1.9E-01	max
BTAG High HQ:	1.5E-03	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Chromium
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.049934
Maximum detected value (mg/kg, dry weight):	2.517007

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	26
Maximum detected value (mg/kg, dry weight):	26

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.2E-01	mean
Daily exposure (mg/kg-day)	2.4E-01	max

Hazard Quotients

NOAEL HQ:	2.5E-01	mean
LOAEL HQ:	5.0E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	2.8E-01	max
LOAEL HQ:	5.7E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Copper
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	11.43233
Maximum detected value (mg/kg, dry weight):	13.60544

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	96
Maximum detected value (mg/kg, dry weight):	96

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.0E+00	mean
Daily exposure (mg/kg-day)	1.1E+00	max

Hazard Quotients

BTAG Low HQ:	4.4E-01	mean
BTAG High HQ:	1.9E-02	mean
BTAG Low HQ:	5.0E-01	max
BTAG High HQ:	2.2E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Lead
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.969777
Maximum detected value (mg/kg, dry weight):	3.741497

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	53
Maximum detected value (mg/kg, dry weight):	53

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.7E-01	mean
Daily exposure (mg/kg-day)	4.2E-01	max

Hazard Quotients

BTAG Low HQ:	2.7E+01	mean
BTAG High HQ:	4.3E-02	mean
BTAG Low HQ:	3.0E+01	max
BTAG High HQ:	4.8E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Total Mercury
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.127464
Maximum detected value (mg/kg, dry weight):	0.156463

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.24
Maximum detected value (mg/kg, dry weight):	0.24

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	8.2E-03	mean
Daily exposure (mg/kg-day)	9.8E-03	max

Hazard Quotients

BTAG Low HQ:	2.1E-01	mean
BTAG High HQ:	4.5E-02	mean
BTAG Low HQ:	2.5E-01	max
BTAG High HQ:	5.5E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Nickel
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.812089
Maximum detected value (mg/kg, dry weight):	3.401361

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	8.4
Maximum detected value (mg/kg, dry weight):	8.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.9E-01	mean
Daily exposure (mg/kg-day)	2.3E-01	max

Hazard Quotients

BTAG Low HQ:	1.4E-01	mean
BTAG High HQ:	3.4E-03	mean
BTAG Low HQ:	1.6E-01	max
BTAG High HQ:	4.0E-03	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Selenium
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.445466
Maximum detected value (mg/kg, dry weight):	1.851852

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	8.6E-02	mean
Daily exposure (mg/kg-day)	1.1E-01	max

Hazard Quotients

BTAG Low HQ:	3.7E-01	mean
BTAG High HQ:	9.3E-02	mean
BTAG Low HQ:	4.8E-01	max
BTAG High HQ:	1.2E-01	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Zinc
Location: NA20

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	113.0092
Maximum detected value (mg/kg, dry weight):	117.284

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	190
Maximum detected value (mg/kg, dry weight):	190

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.2E+00	mean
Daily exposure (mg/kg-day)	7.4E+00	max

Hazard Quotients

BTAG Low HQ:	4.2E-01	mean
BTAG High HQ:	4.2E-02	mean
BTAG Low HQ:	4.3E-01	max
BTAG High HQ:	4.3E-02	max

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Tier I - Summary of Hazard Quotients

Receptor: **Surf Scoter**
Location: **SW04**

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	5.0E-01	--	--	--	4.5E-01	--	--	--	--	--	--
LOAEL HQ:	5.0E-02	--	--	--	9.1E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	2.2E-01	1.8E-01	3.0E-01	#VALUE!	**3.5E+00**	**1.5E+02**	3.0E-01	1.7E-01	4.1E-01	**1.5E+00**
BTAG High HQ:	#VALUE!	1.5E-02	2.9E-03	7.5E-02	#VALUE!	1.5E-01	2.4E-01	6.4E-02	4.1E-03	1.0E-01	1.5E-01
MAXIMUM											
NOAEL HQ:	5.7E-01	--	--	--	5.8E-01	--	--	--	--	--	--
LOAEL HQ:	5.7E-02	--	--	--	1.2E-01	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	2.2E-01	4.1E-01	3.2E-01	#VALUE!	**4.0E+00**	**1.6E+02**	3.3E-01	2.3E-01	5.2E-01	**1.9E+00**
BTAG High HQ:	#VALUE!	1.6E-02	6.5E-03	8.0E-02	#VALUE!	1.8E-01	2.6E-01	7.1E-02	5.6E-03	1.3E-01	1.9E-01

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Benzo[a]pyrene
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.172507
Maximum detected value (mg/kg, dry weight):	1.342282

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.5
Maximum detected value (mg/kg, dry weight):	1.5

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.0E-02	mean
Daily exposure (mg/kg-day)	8.0E-02	max

Hazard Quotients

NOAEL HQ:	5.0E-01	mean
LOAEL HQ:	5.0E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	5.7E-01	max
LOAEL HQ:	5.7E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Total PCB Congeners
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.172418
Maximum detected value (mg/kg, dry weight):	0.18129

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	3
Maximum detected value (mg/kg, dry weight):	3

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.9E-02	mean
Daily exposure (mg/kg-day)	2.0E-02	max

Hazard Quotients

BTAG Low HQ:	2.2E-01	mean
BTAG High HQ:	1.5E-02	mean
BTAG Low HQ:	2.2E-01	max
BTAG High HQ:	1.6E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Tributyltin
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.230458
Maximum detected value (mg/kg, dry weight):	5.211268

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.8
Maximum detected value (mg/kg, dry weight):	2.8

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.3E-01	mean
Daily exposure (mg/kg-day)	3.0E-01	max

Hazard Quotients

BTAG Low HQ:	1.8E-01	mean
BTAG High HQ:	2.9E-03	mean
BTAG Low HQ:	4.1E-01	max
BTAG High HQ:	6.5E-03	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Arsenic
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	24.12399
Maximum detected value (mg/kg, dry weight):	26.0274

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	96
Maximum detected value (mg/kg, dry weight):	96

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.7E+00	mean
Daily exposure (mg/kg-day)	1.8E+00	max

Hazard Quotients

BTAG Low HQ:	3.0E-01	mean
BTAG High HQ:	7.5E-02	mean
BTAG Low HQ:	3.2E-01	max
BTAG High HQ:	8.0E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Cadmium
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.260108
Maximum detected value (mg/kg, dry weight):	0.387324

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.4
Maximum detected value (mg/kg, dry weight):	2.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.2E-02	mean
Daily exposure (mg/kg-day)	2.9E-02	max

Hazard Quotients

BTAG Low HQ:	2.8E-01	mean
BTAG High HQ:	2.1E-03	mean
BTAG Low HQ:	3.7E-01	max
BTAG High HQ:	2.8E-03	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Chromium
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	3.207547
Maximum detected value (mg/kg, dry weight):	5.205479

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	65
Maximum detected value (mg/kg, dry weight):	65

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.9E-01	mean
Daily exposure (mg/kg-day)	5.0E-01	max

Hazard Quotients

NOAEL HQ:	4.5E-01	mean
LOAEL HQ:	9.1E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	5.8E-01	max
LOAEL HQ:	1.2E-01	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Copper
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	32.61456
Maximum detected value (mg/kg, dry weight):	55.47945

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1900
Maximum detected value (mg/kg, dry weight):	1900

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	8.0E+00	mean
Daily exposure (mg/kg-day)	9.3E+00	max

Hazard Quotients

BTAG Low HQ:	3.5E+00	mean
BTAG High HQ:	1.5E-01	mean
BTAG Low HQ:	4.0E+00	max
BTAG High HQ:	1.8E-01	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Lead
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	9.02965
Maximum detected value (mg/kg, dry weight):	13.0137

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	480
Maximum detected value (mg/kg, dry weight):	480

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.1E+00	mean
Daily exposure (mg/kg-day)	2.3E+00	max

Hazard Quotients

BTAG Low HQ:	1.5E+02	mean
BTAG High HQ:	2.4E-01	mean
BTAG Low HQ:	1.6E+02	max
BTAG High HQ:	2.6E-01	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Total Mercury
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.136119
Maximum detected value (mg/kg, dry weight):	0.157534

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.2
Maximum detected value (mg/kg, dry weight):	1.2

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E-02	mean
Daily exposure (mg/kg-day)	1.3E-02	max

Hazard Quotients

BTAG HQ:	3.0E-01	mean
BTAG HQ:	6.4E-02	mean
BTAG Low HQ:	3.3E-01	max
BTAG High HQ:	7.1E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Nickel
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.978437
Maximum detected value (mg/kg, dry weight):	4.43662

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	20
Maximum detected value (mg/kg, dry weight):	20

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.3E-01	mean
Daily exposure (mg/kg-day)	3.1E-01	max

Hazard Quotients

BTAG Low HQ:	1.7E-01	mean
BTAG High HQ:	4.1E-03	mean
BTAG Low HQ:	2.3E-01	max
BTAG High HQ:	5.6E-03	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Selenium
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.617251
Maximum detected value (mg/kg, dry weight):	2.054795

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.2
Maximum detected value (mg/kg, dry weight):	1.2

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.4E-02	mean
Daily exposure (mg/kg-day)	1.2E-01	max

Hazard Quotients

BTAG Low HQ:	4.1E-01	mean
BTAG High HQ:	1.0E-01	mean
BTAG Low HQ:	5.2E-01	max
BTAG High HQ:	1.3E-01	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Zinc
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	194.0701
Maximum detected value (mg/kg, dry weight):	315.0685

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	4600
Maximum detected value (mg/kg, dry weight):	4600

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.6E+01	mean
Daily exposure (mg/kg-day)	3.3E+01	max

Hazard Quotients

BTAG Low HQ:	1.5E+00	mean
BTAG High HQ:	1.5E-01	mean
BTAG Low HQ:	1.9E+00	max
BTAG High HQ:	1.9E-01	max

Tier I - Summary of Hazard Quotients

Receptor: Sea Lion
Location: SW04

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	--	--	--	--	3.5E-02	--	--	--	--	--	--
LOAEL HQ:	--	--	--	--	1.7E-03	--	--	--	--	--	--
BTAG Low HQ:	2.0E-02	1.6E-02	2.0E-01	**1.9E+00**	#VALUE!	7.6E-01	5.3E-01	1.4E-01	6.0E-01	7.3E-01	7.7E-01
BTAG High HQ:	8.2E-04	4.6E-03	3.4E-03	1.3E-01	#VALUE!	3.2E-03	2.2E-03	1.4E-02	2.5E-03	3.0E-02	1.8E-02
MAXIMUM											
NOAEL HQ:	--	--	--	--	4.8E-02	--	--	--	--	--	--
LOAEL HQ:	--	--	--	--	2.3E-03	--	--	--	--	--	--
BTAG Low HQ:	2.3E-02	1.7E-02	4.7E-01	**2.0E+00**	#VALUE!	9.4E-01	6.1E-01	1.6E-01	8.4E-01	9.2E-01	**1.0E+00**
BTAG High HQ:	9.3E-04	4.7E-03	7.8E-03	1.4E-01	#VALUE!	4.0E-03	2.6E-03	1.6E-02	3.5E-03	3.8E-02	2.5E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Benzo[a]pyrene
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.172507
Maximum detected value (mg/kg, dry weight):	1.342282

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.5
Maximum detected value (mg/kg, dry weight):	1.5

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.31
BTAG High (mg/kg-day):	32.8

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.7E-02	mean
Daily exposure (mg/kg-day)	3.1E-02	max

Hazard Quotients

BTAG Low HQ:	2.0E-02	mean
BTAG High HQ:	8.2E-04	mean
BTAG Low HQ:	2.3E-02	max
BTAG High HQ:	9.3E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Total PCB Congeners
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.172418
Maximum detected value (mg/kg, dry weight):	0.18129

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	3
Maximum detected value (mg/kg, dry weight):	3

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.36
BTAG High (mg/kg-day):	1.28

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.8E-03	mean
Daily exposure (mg/kg-day)	6.0E-03	max

Hazard Quotients

BTAG Low HQ:	1.6E-02	mean
BTAG High HQ:	4.6E-03	mean
BTAG Low HQ:	1.7E-02	max
BTAG High HQ:	4.7E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Tributyltin
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.230458
Maximum detected value (mg/kg, dry weight):	5.211268

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.8
Maximum detected value (mg/kg, dry weight):	2.8

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.25
BTAG High (mg/kg-day):	15

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.1E-02	mean
Daily exposure (mg/kg-day)	1.2E-01	max

Hazard Quotients

BTAG Low HQ:	2.0E-01	mean
BTAG High HQ:	3.4E-03	mean
BTAG Low HQ:	4.7E-01	max
BTAG High HQ:	7.8E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Arsenic
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	24.12399
Maximum detected value (mg/kg, dry weight):	26.0274

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	96
Maximum detected value (mg/kg, dry weight):	96

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.32
BTAG High (mg/kg-day):	4.7

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.0E-01	mean
Daily exposure (mg/kg-day)	6.4E-01	max

Hazard Quotients

BTAG Low HQ:	1.9E+00	mean
BTAG High HQ:	1.3E-01	mean
BTAG Low HQ:	2.0E+00	max
BTAG High HQ:	1.4E-01	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Cadmium
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.260108
Maximum detected value (mg/kg, dry weight):	0.387324

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.4
Maximum detected value (mg/kg, dry weight):	2.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.06
BTAG High (mg/kg-day):	2.64

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.4E-03	mean
Daily exposure (mg/kg-day)	1.0E-02	max

Hazard Quotients

BTAG Low HQ:	1.2E-01	mean
BTAG High HQ:	2.8E-03	mean
BTAG Low HQ:	1.7E-01	max
BTAG High HQ:	3.8E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Chromium
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	3.207547
Maximum detected value (mg/kg, dry weight):	5.205479

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	65
Maximum detected value (mg/kg, dry weight):	65

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	3.3
LOAEL (mg/kg-day):	69
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E-01	mean
Daily exposure (mg/kg-day)	1.6E-01	max

Hazard Quotients

NOAEL HQ:	3.5E-02	mean
LOAEL HQ:	1.7E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	4.8E-02	max
LOAEL HQ:	2.3E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Copper
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	32.61456
Maximum detected value (mg/kg, dry weight):	55.47945

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1900
Maximum detected value (mg/kg, dry weight):	1900

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.67
BTAG High (mg/kg-day):	632

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.0E+00	mean
Daily exposure (mg/kg-day)	2.5E+00	max

Hazard Quotients

BTAG Low HQ:	7.6E-01	mean
BTAG High HQ:	3.2E-03	mean
BTAG Low HQ:	9.4E-01	max
BTAG High HQ:	4.0E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Lead
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	9.02965
Maximum detected value (mg/kg, dry weight):	13.0137

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	480
Maximum detected value (mg/kg, dry weight):	480

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

LOAEL (mg/kg-day):	90
BTAG Low (mg/kg-day):	1
BTAG High (mg/kg-day):	241

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.3E-01	mean
Daily exposure (mg/kg-day)	6.1E-01	max

Hazard Quotients

BTAG Low HQ:	5.3E-01	mean
BTAG High HQ:	2.2E-03	mean
BTAG Low HQ:	6.1E-01	max
BTAG High HQ:	2.6E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Total Mercury
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.136119
Maximum detected value (mg/kg, dry weight):	0.157534

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.2
Maximum detected value (mg/kg, dry weight):	1.2

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.027
BTAG High (mg/kg-day):	0.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.8E-03	mean
Daily exposure (mg/kg-day)	4.3E-03	max

Hazard Quotients

BTAG Low HQ:	1.4E-01	mean
BTAG High HQ:	1.4E-02	mean
BTAG Low HQ:	1.6E-01	max
BTAG High HQ:	1.6E-02	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Nickel
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.978437
Maximum detected value (mg/kg, dry weight):	4.43662

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	20
Maximum detected value (mg/kg, dry weight):	20

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.133
BTAG High (mg/kg-day):	31.6

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.9E-02	mean
Daily exposure (mg/kg-day)	1.1E-01	max

Hazard Quotients

BTAG Low HQ:	6.0E-01	mean
BTAG High HQ:	2.5E-03	mean
BTAG Low HQ:	8.4E-01	max
BTAG High HQ:	3.5E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Selenium
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.617251
Maximum detected value (mg/kg, dry weight):	2.054795

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.2
Maximum detected value (mg/kg, dry weight):	1.2

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.05
BTAG High (mg/kg-day):	1.21

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.6E-02	mean
Daily exposure (mg/kg-day)	4.6E-02	max

Hazard Quotients

BTAG Low HQ:	7.3E-01	mean
BTAG High HQ:	3.0E-02	mean
BTAG Low HQ:	9.2E-01	max
BTAG High HQ:	3.8E-02	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Zinc
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	194.0701
Maximum detected value (mg/kg, dry weight):	315.0685

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	4600
Maximum detected value (mg/kg, dry weight):	4600

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	9.6
BTAG High (mg/kg-day):	411

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.4E+00	mean
Daily exposure (mg/kg-day)	1.0E+01	max

Hazard Quotients

BTAG Low HQ:	7.7E-01	mean
BTAG High HQ:	1.8E-02	mean
BTAG Low HQ:	1.0E+00	max
BTAG High HQ:	2.5E-02	max

Tier I - Summary of Hazard Quotients

Receptor: CA Least Tern
Location: SW04

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	**1.1E+00**	--	--	--	6.9E-01	--	--	--	--	--	--
LOAEL HQ:	1.1E-01	--	--	--	1.4E-01	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	3.4E-01	3.9E-01	5.9E-01	#VALUE!	**4.3E+00**	**1.8E+02**	5.2E-01	3.1E-01	8.8E-01	**2.2E+00**
BTAG High HQ:	#VALUE!	2.4E-02	6.1E-03	1.5E-01	#VALUE!	1.9E-01	2.9E-01	1.1E-01	7.6E-03	2.2E-01	2.2E-01
MAXIMUM											
NOAEL HQ:	**1.2E+00**	--	--	--	9.7E-01	--	--	--	--	--	--
LOAEL HQ:	1.2E-01	--	--	--	1.9E-01	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	3.5E-01	8.8E-01	6.3E-01	#VALUE!	**5.5E+00**	**2.2E+02**	5.9E-01	4.4E-01	**1.1E+00**	**3.1E+00**
BTAG High HQ:	#VALUE!	2.5E-02	1.4E-02	1.6E-01	#VALUE!	2.4E-01	3.5E-01	1.3E-01	1.1E-02	2.7E-01	3.1E-01

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Benzo[a]pyrene
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.172507
Maximum detected value (mg/kg, dry weight):	1.342282

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.5
Maximum detected value (mg/kg, dry weight):	1.5

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.5E-01	mean
Daily exposure (mg/kg-day)	1.7E-01	max

Hazard Quotients

NOAEL HQ:	1.1E+00	mean
LOAEL HQ:	1.1E-01	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	1.2E+00	max
LOAEL HQ:	1.2E-01	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Total PCB Congeners
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.172418
Maximum detected value (mg/kg, dry weight):	0.18129

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	3
Maximum detected value (mg/kg, dry weight):	3

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.0E-02	mean
Daily exposure (mg/kg-day)	3.1E-02	max

Hazard Quotients

BTAG Low HQ:	3.4E-01	mean
BTAG High HQ:	2.4E-02	mean
BTAG Low HQ:	3.5E-01	max
BTAG High HQ:	2.5E-02	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Tributyltin
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.230458
Maximum detected value (mg/kg, dry weight):	5.211268

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.8
Maximum detected value (mg/kg, dry weight):	2.8

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.8E-01	mean
Daily exposure (mg/kg-day)	6.5E-01	max

Hazard Quotients

BTAG Low HQ:	3.9E-01	mean
BTAG High HQ:	6.1E-03	mean
BTAG Low HQ:	8.8E-01	max
BTAG High HQ:	1.4E-02	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Arsenic
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	24.12399
Maximum detected value (mg/kg, dry weight):	26.0274

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	96
Maximum detected value (mg/kg, dry weight):	96

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.2E+00	mean
Daily exposure (mg/kg-day)	3.5E+00	max

Hazard Quotients

BTAG Low HQ:	5.9E-01	mean
BTAG High HQ:	1.5E-01	mean
BTAG Low HQ:	6.3E-01	max
BTAG High HQ:	1.6E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Cadmium
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.260108
Maximum detected value (mg/kg, dry weight):	0.387324

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.4
Maximum detected value (mg/kg, dry weight):	2.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.9E-02	mean
Daily exposure (mg/kg-day)	5.5E-02	max

Hazard Quotients

BTAG Low HQ:	4.9E-01	mean
BTAG High HQ:	3.8E-03	mean
BTAG Low HQ:	6.8E-01	max
BTAG High HQ:	5.3E-03	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Chromium
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	3.207547
Maximum detected value (mg/kg, dry weight):	5.205479

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	65
Maximum detected value (mg/kg, dry weight):	65

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.9E-01	mean
Daily exposure (mg/kg-day)	8.3E-01	max

Hazard Quotients

NOAEL HQ:	6.9E-01	mean
LOAEL HQ:	1.4E-01	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	9.7E-01	max
LOAEL HQ:	1.9E-01	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Copper
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	32.61456
Maximum detected value (mg/kg, dry weight):	55.47945

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1900
Maximum detected value (mg/kg, dry weight):	1900

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.8E+00	mean
Daily exposure (mg/kg-day)	1.3E+01	max

Hazard Quotients

BTAG Low HQ:	4.3E+00	mean
BTAG High HQ:	1.9E-01	mean
BTAG Low HQ:	5.5E+00	max
BTAG High HQ:	2.4E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Lead
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	9.02965
Maximum detected value (mg/kg, dry weight):	13.0137

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	480
Maximum detected value (mg/kg, dry weight):	480

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.6E+00	mean
Daily exposure (mg/kg-day)	3.1E+00	max

Hazard Quotients

BTAG Low HQ:	1.8E+02	mean
BTAG High HQ:	2.9E-01	mean
BTAG Low HQ:	2.2E+02	max
BTAG High HQ:	3.5E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Total Mercury
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.136119
Maximum detected value (mg/kg, dry weight):	0.157534

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.2
Maximum detected value (mg/kg, dry weight):	1.2

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.0E-02	mean
Daily exposure (mg/kg-day)	2.3E-02	max

Hazard Quotients

BTAG Low HQ:	5.2E-01	mean
BTAG High HQ:	1.1E-01	mean
BTAG Low HQ:	5.9E-01	max
BTAG High HQ:	1.3E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Nickel
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.978437
Maximum detected value (mg/kg, dry weight):	4.43662

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	20
Maximum detected value (mg/kg, dry weight):	20

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.3E-01	mean
Daily exposure (mg/kg-day)	6.0E-01	max

Hazard Quotients

BTAG Low HQ:	3.1E-01	mean
BTAG High HQ:	7.6E-03	mean
BTAG Low HQ:	4.4E-01	max
BTAG High HQ:	1.1E-02	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Selenium
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.617251
Maximum detected value (mg/kg, dry weight):	2.054795

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.2
Maximum detected value (mg/kg, dry weight):	1.2

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.0E-01	mean
Daily exposure (mg/kg-day)	2.5E-01	max

Hazard Quotients

BTAG Low HQ:	8.8E-01	mean
BTAG High HQ:	2.2E-01	mean
BTAG Low HQ:	1.1E+00	max
BTAG High HQ:	2.7E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Zinc
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	194.0701
Maximum detected value (mg/kg, dry weight):	315.0685

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	4600
Maximum detected value (mg/kg, dry weight):	4600

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.8E+01	mean
Daily exposure (mg/kg-day)	5.3E+01	max

Hazard Quotients

BTAG Low HQ:	2.2E+00	mean
BTAG High HQ:	2.2E-01	mean
BTAG Low HQ:	3.1E+00	max
BTAG High HQ:	3.1E-01	max

Tier I - Summary of Hazard Quotients

Receptor: Green Turtle
Location: SW04

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	2.9E-02	--	--	--	2.7E-02	--	--	--	--	--	--
LOAEL HQ:	2.9E-03	--	--	--	5.4E-03	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	1.3E-02	1.1E-02	1.8E-02	#VALUE!	2.1E-01	**8.8E+00**	1.7E-02	9.9E-03	2.4E-02	8.9E-02
BTAG High HQ:	#VALUE!	9.1E-04	1.7E-04	4.4E-03	#VALUE!	9.1E-03	1.4E-02	3.8E-03	2.4E-04	5.9E-03	8.9E-03
MAXIMUM											
NOAEL HQ:	3.3E-02	--	--	--	3.5E-02	--	--	--	--	--	--
LOAEL HQ:	3.3E-03	--	--	--	6.9E-03	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	1.3E-02	2.4E-02	1.9E-02	#VALUE!	2.4E-01	**9.7E+00**	1.9E-02	1.3E-02	3.0E-02	1.1E-01
BTAG High HQ:	#VALUE!	9.3E-04	3.8E-04	4.7E-03	#VALUE!	1.1E-02	1.6E-02	4.2E-03	3.3E-04	7.5E-03	1.1E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Benzo[a]pyrene
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.172507
Maximum detected value (mg/kg, dry weight):	1.342282

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.5
Maximum detected value (mg/kg, dry weight):	1.5

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.1E-03	mean
Daily exposure (mg/kg-day)	4.7E-03	max

Hazard Quotients

NOAEL HQ:	2.9E-02	mean
LOAEL HQ:	2.9E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	3.3E-02	max
LOAEL HQ:	3.3E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Total PCB Congeners
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.172418
Maximum detected value (mg/kg, dry weight):	0.18129

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	3
Maximum detected value (mg/kg, dry weight):	3

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E-03	mean
Daily exposure (mg/kg-day)	1.2E-03	max

Hazard Quotients

BTAG Low HQ:	1.3E-02	mean
BTAG High HQ:	9.1E-04	mean
BTAG Low HQ:	1.3E-02	max
BTAG High HQ:	9.3E-04	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Tributyltin
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.230458
Maximum detected value (mg/kg, dry weight):	5.211268

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.8
Maximum detected value (mg/kg, dry weight):	2.8

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.8E-03	mean
Daily exposure (mg/kg-day)	1.8E-02	max

Hazard Quotients

BTAG Low HQ:	1.1E-02	mean
BTAG High HQ:	1.7E-04	mean
BTAG Low HQ:	2.4E-02	max
BTAG High HQ:	3.8E-04	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Arsenic
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	24.12399
Maximum detected value (mg/kg, dry weight):	26.0274

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	96
Maximum detected value (mg/kg, dry weight):	96

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.8E-02	mean
Daily exposure (mg/kg-day)	1.0E-01	max

Hazard Quotients

BTAG Low HQ:	1.8E-02	mean
BTAG High HQ:	4.4E-03	mean
BTAG Low HQ:	1.9E-02	max
BTAG High HQ:	4.7E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Cadmium
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.260108
Maximum detected value (mg/kg, dry weight):	0.387324

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.4
Maximum detected value (mg/kg, dry weight):	2.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.3E-03	mean
Daily exposure (mg/kg-day)	1.7E-03	max

Hazard Quotients

BTAG Low HQ:	1.6E-02	mean
BTAG High HQ:	1.3E-04	mean
BTAG Low HQ:	2.2E-02	max
BTAG High HQ:	1.7E-04	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Chromium
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	3.207547
Maximum detected value (mg/kg, dry weight):	5.205479

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	65
Maximum detected value (mg/kg, dry weight):	65

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.3E-02	mean
Daily exposure (mg/kg-day)	3.0E-02	max

Hazard Quotients

NOAEL HQ:	2.7E-02	mean
LOAEL HQ:	5.4E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	3.5E-02	max
LOAEL HQ:	6.9E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Copper
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	32.61456
Maximum detected value (mg/kg, dry weight):	55.47945

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1900
Maximum detected value (mg/kg, dry weight):	1900

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.8E-01	mean
Daily exposure (mg/kg-day)	5.5E-01	max

Hazard Quotients

BTAG Low HQ:	2.1E-01	mean
BTAG High HQ:	9.1E-03	mean
BTAG Low HQ:	2.4E-01	max
BTAG High HQ:	1.1E-02	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Lead
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	9.02965
Maximum detected value (mg/kg, dry weight):	13.0137

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	480
Maximum detected value (mg/kg, dry weight):	480

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E-01	mean
Daily exposure (mg/kg-day)	1.4E-01	max

Hazard Quotients

BTAG Low HQ:	8.8E+00	mean
BTAG High HQ:	1.4E-02	mean
BTAG Low HQ:	9.7E+00	max
BTAG High HQ:	1.6E-02	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Total Mercury
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.136119
Maximum detected value (mg/kg, dry weight):	0.157534

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.2
Maximum detected value (mg/kg, dry weight):	1.2

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.8E-04	mean
Daily exposure (mg/kg-day)	7.5E-04	max

Hazard Quotients

BTAG Low HQ:	1.7E-02	mean
BTAG High HQ:	3.8E-03	mean
BTAG Low HQ:	1.9E-02	max
BTAG High HQ:	4.2E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Nickel
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.978437
Maximum detected value (mg/kg, dry weight):	4.43662

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	20
Maximum detected value (mg/kg, dry weight):	20

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.4E-02	mean
Daily exposure (mg/kg-day)	1.8E-02	max

Hazard Quotients

BTAG Low HQ:	9.9E-03	mean
BTAG High HQ:	2.4E-04	mean
BTAG Low HQ:	1.3E-02	max
BTAG High HQ:	3.3E-04	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Selenium
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.617251
Maximum detected value (mg/kg, dry weight):	2.054795

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.2
Maximum detected value (mg/kg, dry weight):	1.2

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.5E-03	mean
Daily exposure (mg/kg-day)	6.9E-03	max

Hazard Quotients

BTAG Low HQ:	2.4E-02	mean
BTAG High HQ:	5.9E-03	mean
BTAG Low HQ:	3.0E-02	max
BTAG High HQ:	7.5E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Zinc
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	194.0701
Maximum detected value (mg/kg, dry weight):	315.0685

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	4600
Maximum detected value (mg/kg, dry weight):	4600

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.5E+00	mean
Daily exposure (mg/kg-day)	1.9E+00	max

Hazard Quotients

BTAG Low HQ:	8.9E-02	mean
BTAG High HQ:	8.9E-03	mean
BTAG Low HQ:	1.1E-01	max
BTAG High HQ:	1.1E-02	max

Tier I - Summary of Hazard Quotients

Receptor: **Brown Pelican**
Location: **SW04**

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	7.0E-01	--	--	--	4.3E-01	--	--	--	--	--	--
LOAEL HQ:	7.0E-02	--	--	--	8.7E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	2.1E-01	2.5E-01	3.9E-01	#VALUE!	**2.6E+00**	**1.1E+02**	3.4E-01	2.0E-01	5.8E-01	**1.4E+00**
BTAG High HQ:	#VALUE!	1.5E-02	4.0E-03	9.6E-02	#VALUE!	1.1E-01	1.8E-01	7.3E-02	4.9E-03	1.4E-01	1.4E-01
MAXIMUM											
NOAEL HQ:	7.9E-01	--	--	--	6.2E-01	--	--	--	--	--	--
LOAEL HQ:	7.9E-02	--	--	--	1.2E-01	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	2.2E-01	5.8E-01	4.1E-01	#VALUE!	**3.4E+00**	**1.4E+02**	3.8E-01	2.9E-01	7.3E-01	**2.0E+00**
BTAG High HQ:	#VALUE!	1.6E-02	9.3E-03	1.0E-01	#VALUE!	1.5E-01	2.2E-01	8.2E-02	7.0E-03	1.8E-01	2.0E-01

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Benzo[a]pyrene
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.172507
Maximum detected value (mg/kg, dry weight):	1.342282

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.5
Maximum detected value (mg/kg, dry weight):	1.5

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.7E-02	mean
Daily exposure (mg/kg-day)	1.1E-01	max

Hazard Quotients

NOAEL HQ:	7.0E-01	mean
LOAEL HQ:	7.0E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	7.9E-01	max
LOAEL HQ:	7.9E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

BAP					
170	14.6	100	0.146		
170	14.2	100	0.142		
150	15.2	100	0.152		
180	15.3	100	0.153		
200	14.9	100	0.149		
174			**0.1484**	1172.507	
1342.282					

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Total PCB Congeners
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.172418
Maximum detected value (mg/kg, dry weight):	0.18129

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	3
Maximum detected value (mg/kg, dry weight):	3

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.9E-02	mean
Daily exposure (mg/kg-day)	2.0E-02	max

Hazard Quotients

BTAG Low HQ:	2.1E-01	mean
BTAG High HQ:	1.5E-02	mean
BTAG Low HQ:	2.2E-01	max
BTAG High HQ:	1.6E-02	max

PCB Cong	Total Solids					
195	14.6	100	0.155			
161	14.2	100	0.148			
15	15.2	100	0.131			
136	15.3	100	0.155			
196	14.9	100	0.147			
25.38			0.1472	**172.4185**		
181.2903						

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Tributyltin
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.230458
Maximum detected value (mg/kg, dry weight):	5.211268

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.8
Maximum detected value (mg/kg, dry weight):	2.8

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.9E-01	mean
Daily exposure (mg/kg-day)	4.3E-01	max

Hazard Quotients

BTAG Low HQ:	2.5E-01	mean
BTAG High HQ:	4.0E-03	mean
BTAG Low HQ:	5.8E-01	max
BTAG High HQ:	9.3E-03	max

TBT	Total Solids				
330	14.6	100	0.146		
740	14.2	100	0.142		
420	15.2	100	0.152		
150	15.3	100	0.153		
15	14.9	100	0.149		
331			**0.1484**	**2230.458**	

5211.268

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Arsenic
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	24.12399
Maximum detected value (mg/kg, dry weight):	26.0274

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	96
Maximum detected value (mg/kg, dry weight):	96

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.1E+00	mean
Daily exposure (mg/kg-day)	2.3E+00	max

Hazard Quotients

BTAG Low HQ:	3.9E-01	mean
BTAG High HQ:	9.6E-02	mean
BTAG Low HQ:	4.1E-01	max
BTAG High HQ:	1.0E-01	max

Arsenic	Total Solids			
3.8	14.6	100	0.146	
3.8	14.2	100	0.142	
3.1	15.2	100	0.152	
3.6	15.3	100	0.153	
3.6	14.9	100	0.149	
3.58			**0.1484**	**24.12399**
26.0274				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Cadmium
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.260108
Maximum detected value (mg/kg, dry weight):	0.387324

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.4
Maximum detected value (mg/kg, dry weight):	2.4

Cadmium	Total Solids				
0.043	14.6	100	0.146		
0.055	14.2	100	0.142		
0.037	15.2	100	0.152		
0.031	15.3	100	0.153		
0.027	14.9	100	0.149		
0.0386			**0.1484**	**0.260108**	

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

0.387324

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.5E-02	mean
Daily exposure (mg/kg-day)	3.6E-02	max

Hazard Quotients

BTAG Low HQ:	3.2E-01	mean
BTAG High HQ:	2.4E-03	mean
BTAG Low HQ:	4.4E-01	max
BTAG High HQ:	3.4E-03	max

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Chromium
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	3.207547
Maximum detected value (mg/kg, dry weight):	5.205479

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	65
Maximum detected value (mg/kg, dry weight):	65

Chromium	Total Solids		
0.76	14.6	100	0.146
0.49	14.2	100	0.142
0.53	15.2	100	0.152
0.18	15.3	100	0.153
0.42	14.9	100	0.149
0.476			**0.1484**

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

5.205479

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.7E-01	mean
Daily exposure (mg/kg-day)	5.4E-01	max

Hazard Quotients

NOAEL HQ:	4.3E-01	mean
LOAEL HQ:	8.7E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	6.2E-01	max
LOAEL HQ:	1.2E-01	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Copper
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	32.61456
Maximum detected value (mg/kg, dry weight):	55.47945

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1900
Maximum detected value (mg/kg, dry weight):	1900

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.0E+00	mean
Daily exposure (mg/kg-day)	7.8E+00	max

Hazard Quotients

BTAG Low HQ:	2.6E+00	mean
BTAG High HQ:	1.1E-01	mean
BTAG Low HQ:	3.4E+00	max
BTAG High HQ:	1.5E-01	max

Copper	Total Solids			
8.1	14.6	100	0.146	
5	14.2	100	0.142	
4	15.2	100	0.152	
2.5	15.3	100	0.153	
4.6	14.9	100	0.149	
4.84			**0.1484**	**32.61456**

55.47945

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Lead
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	9.02965
Maximum detected value (mg/kg, dry weight):	13.0137

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	480
Maximum detected value (mg/kg, dry weight):	480

Lead	Total Solids				
1.9	14.6	100	0.146		
1.7	14.2	100	0.142		
1.3	15.2	100	0.152		
0.7	15.3	100	0.153		
1.1	14.9	100	0.149		
1.34			**0.1484**	**9.02965**	

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

13.0137

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.6E+00	mean
Daily exposure (mg/kg-day)	1.9E+00	max

Hazard Quotients

BTAG Low HQ:	1.1E+02	mean
BTAG High HQ:	1.8E-01	mean
BTAG Low HQ:	1.4E+02	max
BTAG High HQ:	2.2E-01	max

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Total Mercury
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.136119
Maximum detected value (mg/kg, dry weight):	0.157534

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.2
Maximum detected value (mg/kg, dry weight):	1.2

Mercury	Total Solids		
0.023	14.6	100	0.146
0.021	14.2	100	0.142
0.022	15.2	100	0.152
0.016	15.3	100	0.153
0.019	14.9	100	0.149
0.0202			**0.1484**

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

0.157534

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.3E-02	mean
Daily exposure (mg/kg-day)	1.5E-02	max

Hazard Quotients

BTAG Low HQ:	3.4E-01	mean
BTAG High HQ:	7.3E-02	mean
BTAG Low HQ:	3.8E-01	max
BTAG High HQ:	8.2E-02	max

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Nickel
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.978437
Maximum detected value (mg/kg, dry weight):	4.43662

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	20
Maximum detected value (mg/kg, dry weight):	20

Nickel	Total Solids			
0.48	14.6	100	0.146	
0.63	14.2	100	0.142	
0.35	15.2	100	0.152	
0.37	15.3	100	0.153	
0.38	14.9	100	0.149	
0.442			**0.1484**	**2.978437**

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

4.43662

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.8E-01	mean
Daily exposure (mg/kg-day)	3.9E-01	max

Hazard Quotients

BTAG Low HQ:	2.0E-01	mean
BTAG High HQ:	4.9E-03	mean
BTAG Low HQ:	2.9E-01	max
BTAG High HQ:	7.0E-03	max

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Selenium
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.617251
Maximum detected value (mg/kg, dry weight):	2.054795

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.2
Maximum detected value (mg/kg, dry weight):	1.2

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.3E-01	mean
Daily exposure (mg/kg-day)	1.7E-01	max

Hazard Quotients

BTAG Low HQ:	5.8E-01	mean
BTAG High HQ:	1.4E-01	mean
BTAG Low HQ:	7.3E-01	max
BTAG High HQ:	1.8E-01	max

Selenium	Total Solids			
0.3	14.6	100	0.146	
0.2	14.2	100	0.142	
0.2	15.2	100	0.152	
0.2	15.3	100	0.153	
0.3	14.9	100	0.149	
0.24			**0.1484**	**1.617251**
2.054795				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Zinc
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	194.0701
Maximum detected value (mg/kg, dry weight):	315.0685

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	4600
Maximum detected value (mg/kg, dry weight):	4600

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.4E+01	mean
Daily exposure (mg/kg-day)	3.4E+01	max

Hazard Quotients

BTAG Low HQ:	1.4E+00	mean
BTAG High HQ:	1.4E-01	mean
BTAG Low HQ:	2.0E+00	max
BTAG High HQ:	2.0E-01	max

Zinc	Total Solids					
46	14.6	100	0.146			
31	14.2	100	0.142			
27	15.2	100	0.152			
19	15.3	100	0.153			
21	14.9	100	0.149			
28.8			**0.1484**	**194.0701**		

315.0685

Tier I - Summary of Hazard Quotients

Receptor: **Western Grebe**
Location: **SW04**

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	5.2E-01	--	--	--	5.0E-01	--	--	--	--	--	--
LOAEL HQ:	5.2E-02	--	--	--	1.0E-01	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	2.4E-01	1.9E-01	3.2E-01	#VALUE!	**4.0E+00**	**1.7E+02**	3.2E-01	1.8E-01	4.2E-01	**1.7E+00**
BTAG High HQ:	#VALUE!	1.7E-02	3.0E-03	7.9E-02	#VALUE!	1.7E-01	2.7E-01	6.9E-02	4.4E-03	1.0E-01	1.7E-01
MAXIMUM											
NOAEL HQ:	5.9E-01	--	--	--	6.3E-01	--	--	--	--	--	--
LOAEL HQ:	5.9E-02	--	--	--	1.3E-01	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	2.4E-01	4.2E-01	3.4E-01	#VALUE!	**4.5E+00**	**1.8E+02**	3.5E-01	2.4E-01	5.3E-01	**2.1E+00**
BTAG High HQ:	#VALUE!	1.7E-02	6.7E-03	8.4E-02	#VALUE!	2.0E-01	3.0E-01	7.5E-02	5.8E-03	1.3E-01	2.1E-01

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Benzo[a]pyrene
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.172507
Maximum detected value (mg/kg, dry weight):	1.342282

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.5
Maximum detected value (mg/kg, dry weight):	1.5

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.3E-02	mean
Daily exposure (mg/kg-day)	8.2E-02	max

Hazard Quotients

NOAEL HQ:	5.2E-01	mean
LOAEL HQ:	5.2E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	5.9E-01	max
LOAEL HQ:	5.9E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Total PCB Congeners
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.172418
Maximum detected value (mg/kg, dry weight):	0.18129

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	3
Maximum detected value (mg/kg, dry weight):	3

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.1E-02	mean
Daily exposure (mg/kg-day)	2.2E-02	max

Hazard Quotients

BTAG Low HQ:	2.4E-01	mean
BTAG High HQ:	1.7E-02	mean
BTAG Low HQ:	2.4E-01	max
BTAG High HQ:	1.7E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Tributyltin
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.230458
Maximum detected value (mg/kg, dry weight):	5.211268

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.8
Maximum detected value (mg/kg, dry weight):	2.8

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.4E-01	mean
Daily exposure (mg/kg-day)	3.1E-01	max

Hazard Quotients

BTAG Low HQ:	1.9E-01	mean
BTAG High HQ:	3.0E-03	mean
BTAG Low HQ:	4.2E-01	max
BTAG High HQ:	6.7E-03	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Arsenic
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	24.12399
Maximum detected value (mg/kg, dry weight):	26.0274

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	96
Maximum detected value (mg/kg, dry weight):	96

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.7E+00	mean
Daily exposure (mg/kg-day)	1.9E+00	max

Hazard Quotients

BTAG Low HQ:	3.2E-01	mean
BTAG High HQ:	7.9E-02	mean
BTAG Low HQ:	3.4E-01	max
BTAG High HQ:	8.4E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Cadmium
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.260108
Maximum detected value (mg/kg, dry weight):	0.387324

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.4
Maximum detected value (mg/kg, dry weight):	2.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.4E-02	mean
Daily exposure (mg/kg-day)	3.1E-02	max

Hazard Quotients

BTAG Low HQ:	3.0E-01	mean
BTAG High HQ:	2.3E-03	mean
BTAG Low HQ:	3.9E-01	max
BTAG High HQ:	3.0E-03	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Chromium
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	3.207547
Maximum detected value (mg/kg, dry weight):	5.205479

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	65
Maximum detected value (mg/kg, dry weight):	65

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.3E-01	mean
Daily exposure (mg/kg-day)	5.5E-01	max

Hazard Quotients

NOAEL HQ:	5.0E-01	mean
LOAEL HQ:	1.0E-01	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	6.3E-01	max
LOAEL HQ:	1.3E-01	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Copper
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	32.61456
Maximum detected value (mg/kg, dry weight):	55.47945

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1900
Maximum detected value (mg/kg, dry weight):	1900

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.1E+00	mean
Daily exposure (mg/kg-day)	1.0E+01	max

Hazard Quotients

BTAG Low HQ:	4.0E+00	mean
BTAG High HQ:	1.7E-01	mean
BTAG Low HQ:	4.5E+00	max
BTAG High HQ:	2.0E-01	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Lead
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	9.02965
Maximum detected value (mg/kg, dry weight):	13.0137

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	480
Maximum detected value (mg/kg, dry weight):	480

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.4E+00	mean
Daily exposure (mg/kg-day)	2.6E+00	max

Hazard Quotients

BTAG Low HQ:	1.7E+02	mean
BTAG High HQ:	2.7E-01	mean
BTAG Low HQ:	1.8E+02	max
BTAG High HQ:	3.0E-01	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Total Mercury
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.136119
Maximum detected value (mg/kg, dry weight):	0.157534

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.2
Maximum detected value (mg/kg, dry weight):	1.2

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E-02	mean
Daily exposure (mg/kg-day)	1.4E-02	max

Hazard Quotients

BTAG Low HQ:	3.2E-01	mean
BTAG High HQ:	6.9E-02	mean
BTAG Low HQ:	3.5E-01	max
BTAG High HQ:	7.5E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Nickel
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.978437
Maximum detected value (mg/kg, dry weight):	4.43662

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	20
Maximum detected value (mg/kg, dry weight):	20

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.5E-01	mean
Daily exposure (mg/kg-day)	3.3E-01	max

Hazard Quotients

BTAG Low HQ:	1.8E-01	mean
BTAG High HQ:	4.4E-03	mean
BTAG Low HQ:	2.4E-01	max
BTAG High HQ:	5.8E-03	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Selenium
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.617251
Maximum detected value (mg/kg, dry weight):	2.054795

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.2
Maximum detected value (mg/kg, dry weight):	1.2

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.7E-02	mean
Daily exposure (mg/kg-day)	1.2E-01	max

Hazard Quotients

BTAG Low HQ:	4.2E-01	mean
BTAG High HQ:	1.0E-01	mean
BTAG Low HQ:	5.3E-01	max
BTAG High HQ:	1.3E-01	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Zinc
Location: SW04

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	194.0701
Maximum detected value (mg/kg, dry weight):	315.0685

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	4600
Maximum detected value (mg/kg, dry weight):	4600

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.9E+01	mean
Daily exposure (mg/kg-day)	3.6E+01	max

Hazard Quotients

BTAG Low HQ:	1.7E+00	mean
BTAG High HQ:	1.7E-01	mean
BTAG Low HQ:	2.1E+00	max
BTAG High HQ:	2.1E-01	max

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Tier I - Summary of Hazard Quotients

Receptor: Surf Scoter
Location: SW08

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	5.3E-01	--	--	--	4.6E-01	--	--	--	--	--	--
LOAEL HQ:	5.3E-02	--	--	--	9.2E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	5.9E-01	8.8E-02	2.1E-01	#VALUE!	**2.0E+00**	**8.2E+01**	4.0E-01	1.5E-01	3.9E-01	5.2E-01
BTAG High HQ:	#VALUE!	4.2E-02	1.4E-03	5.3E-02	#VALUE!	8.7E-02	1.3E-01	8.6E-02	3.7E-03	9.6E-02	5.2E-02
MAXIMUM											
NOAEL HQ:	5.5E-01	--	--	--	5.3E-01	--	--	--	--	--	--
LOAEL HQ:	5.5E-02	--	--	--	1.1E-01	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	6.8E-01	1.4E-01	2.1E-01	#VALUE!	**2.2E+00**	**1.0E+02**	4.6E-01	1.7E-01	5.1E-01	5.6E-01
BTAG High HQ:	#VALUE!	4.8E-02	2.3E-03	5.2E-02	#VALUE!	9.6E-02	1.7E-01	1.0E-01	4.2E-03	1.3E-01	5.6E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Benzo[a]pyrene
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.16737
Maximum detected value (mg/kg, dry weight):	1.210191

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.9
Maximum detected value (mg/kg, dry weight):	2.9

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.5E-02	mean
Daily exposure (mg/kg-day)	7.7E-02	max

Hazard Quotients

NOAEL HQ:	5.3E-01	mean
LOAEL HQ:	5.3E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	5.5E-01	max
LOAEL HQ:	5.5E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Total PCB Congeners
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.720816
Maximum detected value (mg/kg, dry weight):	0.859873

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	4
Maximum detected value (mg/kg, dry weight):	4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.3E-02	mean
Daily exposure (mg/kg-day)	6.1E-02	max

Hazard Quotients

BTAG Low HQ:	5.9E-01	mean
BTAG High HQ:	4.2E-02	mean
BTAG Low HQ:	6.8E-01	max
BTAG High HQ:	4.8E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Tributyltin
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.040788
Maximum detected value (mg/kg, dry weight):	1.75

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.9
Maximum detected value (mg/kg, dry weight):	1.9

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.4E-02	mean
Daily exposure (mg/kg-day)	1.0E-01	max

Hazard Quotients

BTAG Low HQ:	8.8E-02	mean
BTAG High HQ:	1.4E-03	mean
BTAG Low HQ:	1.4E-01	max
BTAG High HQ:	2.3E-03	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Arsenic
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	19.40928
Maximum detected value (mg/kg, dry weight):	19.10828

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	26
Maximum detected value (mg/kg, dry weight):	26

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E+00	mean
Daily exposure (mg/kg-day)	1.2E+00	max

Hazard Quotients

BTAG Low HQ:	2.1E-01	mean
BTAG High HQ:	5.3E-02	mean
BTAG Low HQ:	2.1E-01	max
BTAG High HQ:	5.2E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Cadmium
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.21519
Maximum detected value (mg/kg, dry weight):	0.235669

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.67
Maximum detected value (mg/kg, dry weight):	0.67

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.4E-02	mean
Daily exposure (mg/kg-day)	1.5E-02	max

Hazard Quotients

BTAG Low HQ:	1.8E-01	mean
BTAG High HQ:	1.4E-03	mean
BTAG Low HQ:	1.9E-01	max
BTAG High HQ:	1.5E-03	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Chromium
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.559775
Maximum detected value (mg/kg, dry weight):	3.581081

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	78
Maximum detected value (mg/kg, dry weight):	78

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.0E-01	mean
Daily exposure (mg/kg-day)	4.5E-01	max

Hazard Quotients

NOAEL HQ:	4.6E-01	mean
LOAEL HQ:	9.2E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	5.3E-01	max
LOAEL HQ:	1.1E-01	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Copper
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	23.20675
Maximum detected value (mg/kg, dry weight):	31.15942

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1000
Maximum detected value (mg/kg, dry weight):	1000

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.6E+00	mean
Daily exposure (mg/kg-day)	5.0E+00	max

Hazard Quotients

BTAG Low HQ:	2.0E+00	mean
BTAG High HQ:	8.7E-02	mean
BTAG Low HQ:	2.2E+00	max
BTAG High HQ:	9.6E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Lead
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	5.921238
Maximum detected value (mg/kg, dry weight):	11.66667

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	250
Maximum detected value (mg/kg, dry weight):	250

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E+00	mean
Daily exposure (mg/kg-day)	1.5E+00	max

Hazard Quotients

BTAG Low HQ:	8.2E+01	mean
BTAG High HQ:	1.3E-01	mean
BTAG Low HQ:	1.0E+02	max
BTAG High HQ:	1.7E-01	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Total Mercury
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.130802
Maximum detected value (mg/kg, dry weight):	0.175676

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.5
Maximum detected value (mg/kg, dry weight):	2.5

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.5E-02	mean
Daily exposure (mg/kg-day)	1.8E-02	max

Hazard Quotients

BTAG Low HQ:	4.0E-01	mean
BTAG High HQ:	8.6E-02	mean
BTAG Low HQ:	4.6E-01	max
BTAG High HQ:	1.0E-01	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Nickel
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.362869
Maximum detected value (mg/kg, dry weight):	2.905405

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	23
Maximum detected value (mg/kg, dry weight):	23

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.1E-01	mean
Daily exposure (mg/kg-day)	2.4E-01	max

Hazard Quotients

BTAG Low HQ:	1.5E-01	mean
BTAG High HQ:	3.7E-03	mean
BTAG Low HQ:	1.7E-01	max
BTAG High HQ:	4.2E-03	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Selenium
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.547117
Maximum detected value (mg/kg, dry weight):	2.027027

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.0E-02	mean
Daily exposure (mg/kg-day)	1.2E-01	max

Hazard Quotients

BTAG Low HQ:	3.9E-01	mean
BTAG High HQ:	9.6E-02	mean
BTAG Low HQ:	5.1E-01	max
BTAG High HQ:	1.3E-01	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Zinc
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	111.1111
Maximum detected value (mg/kg, dry weight):	121.0191

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	860
Maximum detected value (mg/kg, dry weight):	860

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.0E+00	mean
Daily exposure (mg/kg-day)	9.6E+00	max

Hazard Quotients

BTAG Low HQ:	5.2E-01	mean
BTAG High HQ:	5.2E-02	mean
BTAG Low HQ:	5.6E-01	max
BTAG High HQ:	5.6E-02	max

Tier I - Summary of Hazard Quotients

Receptor: Sea Lion
Location: SW08

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	--	--	--	--	3.3E-02	--	--	--	--	--	--
LOAEL HQ:	--	--	--	--	1.6E-03	--	--	--	--	--	--
BTAG Low HQ:	2.1E-02	5.2E-02	9.7E-02	**1.4E+00**	#VALUE!	4.5E-01	3.0E-01	1.7E-01	5.1E-01	6.9E-01	3.2E-01
BTAG High HQ:	8.4E-04	1.5E-02	1.6E-03	9.5E-02	#VALUE!	1.9E-03	1.3E-03	1.7E-02	2.1E-03	2.9E-02	7.4E-03
MAXIMUM											
NOAEL HQ:	--	--	--	--	4.0E-02	--	--	--	--	--	--
LOAEL HQ:	--	--	--	--	1.9E-03	--	--	--	--	--	--
BTAG Low HQ:	2.2E-02	6.0E-02	1.6E-01	**1.4E+00**	#VALUE!	5.1E-01	4.3E-01	2.1E-01	6.0E-01	9.1E-01	3.4E-01
BTAG High HQ:	8.7E-04	1.7E-02	2.7E-03	9.3E-02	#VALUE!	2.2E-03	1.8E-03	2.1E-02	2.5E-03	3.7E-02	7.9E-03

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Benzo[a]pyrene
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45	
Food ingestion rate (kg/day dry wt):	0.99	
Sediment ingestion rate (kg/day dry wt):	0.0308	
Area Use Factor (unitless):	1	0.004
Time Use Factor (unitless):	1	

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.16737
Maximum detected value (mg/kg, dry weight):	1.210191

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.9
Maximum detected value (mg/kg, dry weight):	2.9

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.31
BTAG High (mg/kg-day):	32.8

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.8E-02	mean
Daily exposure (mg/kg-day)	2.9E-02	max

Hazard Quotients

BTAG Low HQ:	2.1E-02	mean
BTAG High HQ:	8.4E-04	mean
BTAG Low HQ:	2.2E-02	max
BTAG High HQ:	8.7E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Total PCB Congeners
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.720816
Maximum detected value (mg/kg, dry weight):	0.859873

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	4
Maximum detected value (mg/kg, dry weight):	4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.36
BTAG High (mg/kg-day):	1.28

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.9E-02	mean
Daily exposure (mg/kg-day)	2.2E-02	max

Hazard Quotients

BTAG Low HQ:	5.2E-02	mean
BTAG High HQ:	1.5E-02	mean
BTAG Low HQ:	6.0E-02	max
BTAG High HQ:	1.7E-02	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Tributyltin
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.040788
Maximum detected value (mg/kg, dry weight):	1.75

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.9
Maximum detected value (mg/kg, dry weight):	1.9

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.25
BTAG High (mg/kg-day):	15

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.4E-02	mean
Daily exposure (mg/kg-day)	4.0E-02	max

Hazard Quotients

BTAG Low HQ:	9.7E-02	mean
BTAG High HQ:	1.6E-03	mean
BTAG Low HQ:	1.6E-01	max
BTAG High HQ:	2.7E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Arsenic
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	19.40928
Maximum detected value (mg/kg, dry weight):	19.10828

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	26
Maximum detected value (mg/kg, dry weight):	26

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.32
BTAG High (mg/kg-day):	4.7

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.4E-01	mean
Daily exposure (mg/kg-day)	4.4E-01	max

Hazard Quotients

BTAG Low HQ:	1.4E+00	mean
BTAG High HQ:	9.5E-02	mean
BTAG Low HQ:	1.4E+00	max
BTAG High HQ:	9.3E-02	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Cadmium
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.21519
Maximum detected value (mg/kg, dry weight):	0.235669

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.67
Maximum detected value (mg/kg, dry weight):	0.67

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.06
BTAG High (mg/kg-day):	2.64

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.2E-03	mean
Daily exposure (mg/kg-day)	5.6E-03	max

Hazard Quotients

BTAG Low HQ:	8.7E-02	mean
BTAG High HQ:	2.0E-03	mean
BTAG Low HQ:	9.4E-02	max
BTAG High HQ:	2.1E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Chromium
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.559775
Maximum detected value (mg/kg, dry weight):	3.581081

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	78
Maximum detected value (mg/kg, dry weight):	78

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	3.3
LOAEL (mg/kg-day):	69
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E-01	mean
Daily exposure (mg/kg-day)	1.3E-01	max

Hazard Quotients

NOAEL HQ:	3.3E-02	mean
LOAEL HQ:	1.6E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	4.0E-02	max
LOAEL HQ:	1.9E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Copper
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	23.20675
Maximum detected value (mg/kg, dry weight):	31.15942

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1000
Maximum detected value (mg/kg, dry weight):	1000

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.67
BTAG High (mg/kg-day):	632

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E+00	mean
Daily exposure (mg/kg-day)	1.4E+00	max

Hazard Quotients

BTAG Low HQ:	4.5E-01	mean
BTAG High HQ:	1.9E-03	mean
BTAG Low HQ:	5.1E-01	max
BTAG High HQ:	2.2E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Lead
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	5.921238
Maximum detected value (mg/kg, dry weight):	11.66667

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	250
Maximum detected value (mg/kg, dry weight):	250

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1
BTAG High (mg/kg-day):	241

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.0E-01	mean
Daily exposure (mg/kg-day)	4.3E-01	max

Hazard Quotients

BTAG Low HQ:	3.0E-01	mean
BTAG High HQ:	1.3E-03	mean
BTAG Low HQ:	4.3E-01	max
BTAG High HQ:	1.8E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Total Mercury
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.130802
Maximum detected value (mg/kg, dry weight):	0.175676

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.5
Maximum detected value (mg/kg, dry weight):	2.5

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.027
BTAG High (mg/kg-day):	0.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.6E-03	mean
Daily exposure (mg/kg-day)	5.6E-03	max

Hazard Quotients

BTAG Low HQ:	1.7E-01	mean
BTAG High HQ:	1.7E-02	mean
BTAG Low HQ:	2.1E-01	max
BTAG High HQ:	2.1E-02	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Nickel
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.362869
Maximum detected value (mg/kg, dry weight):	2.905405

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	23
Maximum detected value (mg/kg, dry weight):	23

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.133
BTAG High (mg/kg-day):	31.6

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.8E-02	mean
Daily exposure (mg/kg-day)	8.0E-02	max

Hazard Quotients

BTAG Low HQ:	5.1E-01	mean
BTAG High HQ:	2.1E-03	mean
BTAG Low HQ:	6.0E-01	max
BTAG High HQ:	2.5E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Selenium
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.547117
Maximum detected value (mg/kg, dry weight):	2.027027

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.05
BTAG High (mg/kg-day):	1.21

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.5E-02	mean
Daily exposure (mg/kg-day)	4.5E-02	max

Hazard Quotients

BTAG Low HQ:	6.9E-01	mean
BTAG High HQ:	2.9E-02	mean
BTAG Low HQ:	9.1E-01	max
BTAG High HQ:	3.7E-02	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Zinc
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	111.1111
Maximum detected value (mg/kg, dry weight):	121.0191

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	860
Maximum detected value (mg/kg, dry weight):	860

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	9.6
BTAG High (mg/kg-day):	411

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.0E+00	mean
Daily exposure (mg/kg-day)	3.3E+00	max

Hazard Quotients

BTAG Low HQ:	3.2E-01	mean
BTAG High HQ:	7.4E-03	mean
BTAG Low HQ:	3.4E-01	max
BTAG High HQ:	7.9E-03	max

Tier I - Summary of Hazard Quotients

Receptor: CA Least Tern
Location: SW08

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	**1.1E+00**	--	--	--	6.4E-01	--	--	--	--	--	--
LOAEL HQ:	1.1E-01	--	--	--	1.3E-01	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	**1.1E+00**	1.8E-01	4.5E-01	#VALUE!	**2.6E+00**	**1.1E+02**	6.1E-01	2.6E-01	8.4E-01	9.4E-01
BTAG High HQ:	#VALUE!	7.9E-02	2.9E-03	1.1E-01	#VALUE!	1.1E-01	1.7E-01	1.3E-01	6.4E-03	2.1E-01	9.4E-02
MAXIMUM											
NOAEL HQ:	**1.1E+00**	--	--	--	7.9E-01	--	--	--	--	--	--
LOAEL HQ:	1.1E-01	--	--	--	1.6E-01	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	**1.3E+00**	3.0E-01	4.4E-01	#VALUE!	**3.0E+00**	**1.6E+02**	7.5E-01	3.1E-01	**1.1E+00**	**1.0E+00**
BTAG High HQ:	#VALUE!	9.2E-02	4.8E-03	1.1E-01	#VALUE!	1.3E-01	2.5E-01	1.6E-01	7.6E-03	2.7E-01	1.0E-01

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Benzo[a]pyrene
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.16737
Maximum detected value (mg/kg, dry weight):	1.210191

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.9
Maximum detected value (mg/kg, dry weight):	2.9

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.5E-01	mean
Daily exposure (mg/kg-day)	1.6E-01	max

Hazard Quotients

NOAEL HQ:	1.1E+00	mean
LOAEL HQ:	1.1E-01	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	1.1E+00	max
LOAEL HQ:	1.1E-01	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Total PCB Congeners
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.720816
Maximum detected value (mg/kg, dry weight):	0.859873

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	4
Maximum detected value (mg/kg, dry weight):	4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.0E-01	mean
Daily exposure (mg/kg-day)	1.2E-01	max

Hazard Quotients

BTAG Low HQ:	1.1E+00	mean
BTAG High HQ:	7.9E-02	mean
BTAG Low HQ:	1.3E+00	max
BTAG High HQ:	9.2E-02	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Tributyltin
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.040788
Maximum detected value (mg/kg, dry weight):	1.75

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.9
Maximum detected value (mg/kg, dry weight):	1.9

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.3E-01	mean
Daily exposure (mg/kg-day)	2.2E-01	max

Hazard Quotients

BTAG Low HQ:	1.8E-01	mean
BTAG High HQ:	2.9E-03	mean
BTAG Low HQ:	3.0E-01	max
BTAG High HQ:	4.8E-03	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Arsenic
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	19.40928
Maximum detected value (mg/kg, dry weight):	19.10828

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	26
Maximum detected value (mg/kg, dry weight):	26

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.5E+00	mean
Daily exposure (mg/kg-day)	2.4E+00	max

Hazard Quotients

BTAG Low HQ:	4.5E-01	mean
BTAG High HQ:	1.1E-01	mean
BTAG Low HQ:	4.4E-01	max
BTAG High HQ:	1.1E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Cadmium
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.21519
Maximum detected value (mg/kg, dry weight):	0.235669

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.67
Maximum detected value (mg/kg, dry weight):	0.67

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.8E-02	mean
Daily exposure (mg/kg-day)	3.1E-02	max

Hazard Quotients

BTAG Low HQ:	3.5E-01	mean
BTAG High HQ:	2.7E-03	mean
BTAG Low HQ:	3.9E-01	max
BTAG High HQ:	3.0E-03	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Chromium
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.559775
Maximum detected value (mg/kg, dry weight):	3.581081

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	78
Maximum detected value (mg/kg, dry weight):	78

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.5E-01	mean
Daily exposure (mg/kg-day)	6.8E-01	max

Hazard Quotients

NOAEL HQ:	6.4E-01	mean
LOAEL HQ:	1.3E-01	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	7.9E-01	max
LOAEL HQ:	1.6E-01	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Copper
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	23.20675
Maximum detected value (mg/kg, dry weight):	31.15942

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1000
Maximum detected value (mg/kg, dry weight):	1000

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.9E+00	mean
Daily exposure (mg/kg-day)	6.9E+00	max

Hazard Quotients

BTAG Low HQ:	2.6E+00	mean
BTAG High HQ:	1.1E-01	mean
BTAG Low HQ:	3.0E+00	max
BTAG High HQ:	1.3E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Lead
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	5.921238
Maximum detected value (mg/kg, dry weight):	11.66667

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	250
Maximum detected value (mg/kg, dry weight):	250

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.5E+00	mean
Daily exposure (mg/kg-day)	2.2E+00	max

Hazard Quotients

BTAG Low HQ:	1.1E+02	mean
BTAG High HQ:	1.7E-01	mean
BTAG Low HQ:	1.6E+02	max
BTAG High HQ:	2.5E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Total Mercury
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.130802
Maximum detected value (mg/kg, dry weight):	0.175676

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.5
Maximum detected value (mg/kg, dry weight):	2.5

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.4E-02	mean
Daily exposure (mg/kg-day)	2.9E-02	max

Hazard Quotients

BTAG Low HQ:	6.1E-01	mean
BTAG High HQ:	1.3E-01	mean
BTAG Low HQ:	7.5E-01	max
BTAG High HQ:	1.6E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Nickel
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.362869
Maximum detected value (mg/kg, dry weight):	2.905405

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	23
Maximum detected value (mg/kg, dry weight):	23

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.6E-01	mean
Daily exposure (mg/kg-day)	4.3E-01	max

Hazard Quotients

BTAG Low HQ:	2.6E-01	mean
BTAG High HQ:	6.4E-03	mean
BTAG Low HQ:	3.1E-01	max
BTAG High HQ:	7.6E-03	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Selenium
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.547117
Maximum detected value (mg/kg, dry weight):	2.027027

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.9E-01	mean
Daily exposure (mg/kg-day)	2.5E-01	max

Hazard Quotients

BTAG Low HQ:	8.4E-01	mean
BTAG High HQ:	2.1E-01	mean
BTAG Low HQ:	1.1E+00	max
BTAG High HQ:	2.7E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Zinc
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	111.1111
Maximum detected value (mg/kg, dry weight):	121.0191

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	860
Maximum detected value (mg/kg, dry weight):	860

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.6E+01	mean
Daily exposure (mg/kg-day)	1.7E+01	max

Hazard Quotients

BTAG Low HQ:	9.4E-01	mean
BTAG High HQ:	9.4E-02	mean
BTAG Low HQ:	1.0E+00	max
BTAG High HQ:	1.0E-01	max

Tier I - Summary of Hazard Quotients

Receptor: Green Turtle
Location: SW08

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	3.1E-02	--	--	--	2.7E-02	--	--	--	--	--	--
LOAEL HQ:	3.1E-03	--	--	--	5.5E-03	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	3.5E-02	5.2E-03	1.2E-02	#VALUE!	1.2E-01	**4.9E+00**	2.3E-02	8.9E-03	2.3E-02	3.1E-02
BTAG High HQ:	#VALUE!	2.5E-03	8.2E-05	3.1E-03	#VALUE!	5.2E-03	7.8E-03	5.1E-03	2.2E-04	5.6E-03	3.1E-03
MAXIMUM											
NOAEL HQ:	3.2E-02	--	--	--	3.1E-02	--	--	--	--	--	--
LOAEL HQ:	3.2E-03	--	--	--	6.3E-03	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	4.0E-02	8.3E-03	1.2E-02	#VALUE!	1.3E-01	**6.2E+00**	2.7E-02	1.0E-02	3.0E-02	3.3E-02
BTAG High HQ:	#VALUE!	2.8E-03	1.3E-04	3.1E-03	#VALUE!	5.7E-03	9.9E-03	5.9E-03	2.5E-04	7.3E-03	3.3E-03

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Benzo[a]pyrene
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.16737
Maximum detected value (mg/kg, dry weight):	1.210191

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.9
Maximum detected value (mg/kg, dry weight):	2.9

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.4E-03	mean
Daily exposure (mg/kg-day)	4.5E-03	max

Hazard Quotients

NOAEL HQ:	3.1E-02	mean
LOAEL HQ:	3.1E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	3.2E-02	max
LOAEL HQ:	3.2E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Total PCB Congeners
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.720816
Maximum detected value (mg/kg, dry weight):	0.859873

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	4
Maximum detected value (mg/kg, dry weight):	4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.1E-03	mean
Daily exposure (mg/kg-day)	3.6E-03	max

Hazard Quotients

BTAG Low HQ:	3.5E-02	mean
BTAG High HQ:	2.5E-03	mean
BTAG Low HQ:	4.0E-02	max
BTAG High HQ:	2.8E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Tributyltin
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.040788
Maximum detected value (mg/kg, dry weight):	1.75

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.9
Maximum detected value (mg/kg, dry weight):	1.9

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.8E-03	mean
Daily exposure (mg/kg-day)	6.1E-03	max

Hazard Quotients

BTAG Low HQ:	5.2E-03	mean
BTAG High HQ:	8.2E-05	mean
BTAG Low HQ:	8.3E-03	max
BTAG High HQ:	1.3E-04	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Arsenic
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	19.40928
Maximum detected value (mg/kg, dry weight):	19.10828

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	26
Maximum detected value (mg/kg, dry weight):	26

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.8E-02	mean
Daily exposure (mg/kg-day)	6.7E-02	max

Hazard Quotients

BTAG Low HQ:	1.2E-02	mean
BTAG High HQ:	3.1E-03	mean
BTAG Low HQ:	1.2E-02	max
BTAG High HQ:	3.1E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Cadmium
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.21519
Maximum detected value (mg/kg, dry weight):	0.235669

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.67
Maximum detected value (mg/kg, dry weight):	0.67

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	8.3E-04	mean
Daily exposure (mg/kg-day)	9.0E-04	max

Hazard Quotients

BTAG Low HQ:	1.0E-02	mean
BTAG High HQ:	8.0E-05	mean
BTAG Low HQ:	1.1E-02	max
BTAG High HQ:	8.7E-05	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Chromium
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.559775
Maximum detected value (mg/kg, dry weight):	3.581081

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	78
Maximum detected value (mg/kg, dry weight):	78

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.4E-02	mean
Daily exposure (mg/kg-day)	2.7E-02	max

Hazard Quotients

NOAEL HQ:	2.7E-02	mean
LOAEL HQ:	5.5E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	3.1E-02	max
LOAEL HQ:	6.3E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Copper
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	23.20675
Maximum detected value (mg/kg, dry weight):	31.15942

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1000
Maximum detected value (mg/kg, dry weight):	1000

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.7E-01	mean
Daily exposure (mg/kg-day)	3.0E-01	max

Hazard Quotients

BTAG Low HQ:	1.2E-01	mean
BTAG High HQ:	5.2E-03	mean
BTAG Low HQ:	1.3E-01	max
BTAG High HQ:	5.7E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Lead
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	5.921238
Maximum detected value (mg/kg, dry weight):	11.66667

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	250
Maximum detected value (mg/kg, dry weight):	250

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.8E-02	mean
Daily exposure (mg/kg-day)	8.7E-02	max

Hazard Quotients

BTAG Low HQ:	4.9E+00	mean
BTAG High HQ:	7.8E-03	mean
BTAG Low HQ:	6.2E+00	max
BTAG High HQ:	9.9E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Total Mercury
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.130802
Maximum detected value (mg/kg, dry weight):	0.175676

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.5
Maximum detected value (mg/kg, dry weight):	2.5

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.2E-04	mean
Daily exposure (mg/kg-day)	1.1E-03	max

Hazard Quotients

BTAG Low HQ:	2.3E-02	mean
BTAG High HQ:	5.1E-03	mean
BTAG Low HQ:	2.7E-02	max
BTAG High HQ:	5.9E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Nickel
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.362869
Maximum detected value (mg/kg, dry weight):	2.905405

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	23
Maximum detected value (mg/kg, dry weight):	23

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E-02	mean
Daily exposure (mg/kg-day)	1.4E-02	max

Hazard Quotients

BTAG Low HQ:	8.9E-03	mean
BTAG High HQ:	2.2E-04	mean
BTAG Low HQ:	1.0E-02	max
BTAG High HQ:	2.5E-04	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Selenium
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.547117
Maximum detected value (mg/kg, dry weight):	2.027027

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.2E-03	mean
Daily exposure (mg/kg-day)	6.8E-03	max

Hazard Quotients

BTAG Low HQ:	2.3E-02	mean
BTAG High HQ:	5.6E-03	mean
BTAG Low HQ:	3.0E-02	max
BTAG High HQ:	7.3E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Zinc
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	111.1111
Maximum detected value (mg/kg, dry weight):	121.0191

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	860
Maximum detected value (mg/kg, dry weight):	860

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.3E-01	mean
Daily exposure (mg/kg-day)	5.6E-01	max

Hazard Quotients

BTAG Low HQ:	3.1E-02	mean
BTAG High HQ:	3.1E-03	mean
BTAG Low HQ:	3.3E-02	max
BTAG High HQ:	3.3E-03	max

Tier I - Summary of Hazard Quotients

Receptor: **Brown Pelican**
Location: **SW08**

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	7.1E-01	--	--	--	4.0E-01	--	--	--	--	--	--
LOAEL HQ:	7.1E-02	--	--	--	8.0E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	7.3E-01	1.2E-01	2.9E-01	#VALUE!	**1.6E+00**	**6.6E+01**	3.8E-01	1.7E-01	5.5E-01	6.1E-01
BTAG High HQ:	#VALUE!	5.1E-02	1.9E-03	7.3E-02	#VALUE!	6.9E-02	1.0E-01	8.3E-02	4.1E-03	1.4E-01	6.1E-02
MAXIMUM											
NOAEL HQ:	7.4E-01	--	--	--	5.0E-01	--	--	--	--	--	--
LOAEL HQ:	7.4E-02	--	--	--	9.9E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	8.5E-01	2.0E-01	2.9E-01	#VALUE!	**1.9E+00**	**9.9E+01**	4.8E-01	2.0E-01	7.2E-01	6.6E-01
BTAG High HQ:	#VALUE!	6.0E-02	3.2E-03	7.2E-02	#VALUE!	8.2E-02	1.6E-01	1.0E-01	4.9E-03	1.8E-01	6.6E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Benzo[a]pyrene
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.16737
Maximum detected value (mg/kg, dry weight):	1.210191

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.9
Maximum detected value (mg/kg, dry weight):	2.9

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.9E-02	mean
Daily exposure (mg/kg-day)	1.0E-01	max

Hazard Quotients

NOAEL HQ:	7.1E-01	mean
LOAEL HQ:	7.1E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	7.4E-01	max
LOAEL HQ:	7.4E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

BAP						
	170	14.8	100	0.148		
	140	12	100	0.12		
	180	14.8	100	0.148		
	190	15.7	100	0.157		
	150	13.8	100	0.138		
	166			**0.1422**	1167.37	
1210.191						

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Total PCB Congeners
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.720816
Maximum detected value (mg/kg, dry weight):	0.859873

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	4
Maximum detected value (mg/kg, dry weight):	4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.5E-02	mean
Daily exposure (mg/kg-day)	7.7E-02	max

Hazard Quotients

BTAG Low HQ:	7.3E-01	mean
BTAG High HQ:	5.1E-02	mean
LOAEL HQ:	4.3E-02	max
BTAG Low HQ:	8.5E-01	max
BTAG High HQ:	6.0E-02	max

	PCB Cong	Total Solids			
	103	14.8	100	0.148	
	98.2	12	100	0.12	
	86.2	14.8	100	0.148	
	135	15.7	100	0.157	
	90.1	13.8	100	0.138	
	102.5			**0.1422**	**720.8158**
	859.8726				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Tributyltin
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.040788
Maximum detected value (mg/kg, dry weight):	1.75

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.9
Maximum detected value (mg/kg, dry weight):	1.9

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	8.7E-02	mean
Daily exposure (mg/kg-day)	1.4E-01	max

Hazard Quotients

BTAG Low HQ:	1.2E-01	mean
BTAG High HQ:	1.9E-03	mean
BTAG Low HQ:	2.0E-01	max
BTAG High HQ:	3.2E-03	max

TBT		Total Solids		
	120	14.8	100	0.148
	210	12	100	0.12
	110	14.8	100	0.148
	180	15.7	100	0.157
	120	13.8	100	0.138
	148			**0.1422**
	1750			

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Arsenic
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	19.40928
Maximum detected value (mg/kg, dry weight):	19.10828

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	26
Maximum detected value (mg/kg, dry weight):	26

Arsenic	Total Solids			
2.6	14.8	100	0.148	
2.8	12	100	0.12	
2.8	14.8	100	0.148	
3	15.7	100	0.157	
2.6	13.8	100	0.138	
2.76			**0.1422**	**19.40928**

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1) 19.10828

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.6E+00	mean
Daily exposure (mg/kg-day)	1.6E+00	max

Hazard Quotients

BTAG Low HQ:	2.9E-01	mean
BTAG High HQ:	7.3E-02	mean
BTAG Low HQ:	2.9E-01	max
BTAG High HQ:	7.2E-02	max

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Cadmium
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.21519
Maximum detected value (mg/kg, dry weight):	0.235669

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.67
Maximum detected value (mg/kg, dry weight):	0.67

Cadmium	Total Solids		
0.022	14.8	100	0.148
0.029	12	100	0.12
0.035	14.8	100	0.148
0.037	15.7	100	0.157
0.03	13.8	100	0.138
0.0306			**0.1422**

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

0.235669

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.9E-02	mean
Daily exposure (mg/kg-day)	2.0E-02	max

Hazard Quotients

BTAG Low HQ:	2.3E-01	mean
BTAG High HQ:	1.8E-03	mean
BTAG Low HQ:	2.5E-01	max
BTAG High HQ:	1.9E-03	max

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Chromium
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.559775
Maximum detected value (mg/kg, dry weight):	3.581081

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	78
Maximum detected value (mg/kg, dry weight):	78

Chromium	Total Solids			
0.33	14.8	100	0.148	
0.35	12	100	0.12	
0.53	14.8	100	0.148	
0.3	15.7	100	0.157	
0.31	13.8	100	0.138	
0.364			**0.1422**	**2.559775**

3.581081

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.4E-01	mean
Daily exposure (mg/kg-day)	4.3E-01	max

Hazard Quotients

NOAEL HQ:	4.0E-01	mean
LOAEL HQ:	8.0E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	5.0E-01	max
LOAEL HQ:	9.9E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Copper
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	23.20675
Maximum detected value (mg/kg, dry weight):	31.15942

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1000
Maximum detected value (mg/kg, dry weight):	1000

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.6E+00	mean
Daily exposure (mg/kg-day)	4.3E+00	max

Hazard Quotients

BTAG Low HQ:	1.6E+00	mean
BTAG High HQ:	6.9E-02	mean
BTAG Low HQ:	1.9E+00	max
BTAG High HQ:	8.2E-02	max

Copper	Total Solids			
3.2	14.8	100	0.148	
3.2	12	100	0.12	
2.6	14.8	100	0.148	
3.2	15.7	100	0.157	
4.3	13.8	100	0.138	
3.3			**0.1422**	**23.20675**

31.15942

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Lead
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	5.921238
Maximum detected value (mg/kg, dry weight):	11.66667

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	250
Maximum detected value (mg/kg, dry weight):	250

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.2E-01	mean
Daily exposure (mg/kg-day)	1.4E+00	max

Hazard Quotients

BTAG Low HQ:	6.6E+01	mean
BTAG High HQ:	1.0E-01	mean
BTAG Low HQ:	9.9E+01	max
BTAG High HQ:	1.6E-01	max

Lead	Total Solids			
0.8	14.8	100	0.148	
1.4	12	100	0.12	
0.6	14.8	100	0.148	
0.66	15.7	100	0.157	
0.75	13.8	100	0.138	
0.842			**0.1422**	**5.921238**
11.66667				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Total Mercury
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.130802
Maximum detected value (mg/kg, dry weight):	0.175676

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.5
Maximum detected value (mg/kg, dry weight):	2.5

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.5E-02	mean
Daily exposure (mg/kg-day)	1.9E-02	max

Hazard Quotients

BTAG HQ:	3.8E-01	mean
BTAG HQ:	8.3E-02	mean
BTAG Low HQ:	4.8E-01	max
BTAG High HQ:	1.0E-01	max

Mercury	Total Solids			
0.026	14.8	100	0.148	
0.015	12	100	0.12	
0.018	14.8	100	0.148	
0.017	15.7	100	0.157	
0.017	13.8	100	0.138	
0.0186			**0.1422**	**0.130802**
0.175676				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Nickel
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.362869
Maximum detected value (mg/kg, dry weight):	2.905405

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	23
Maximum detected value (mg/kg, dry weight):	23

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.3E-01	mean
Daily exposure (mg/kg-day)	2.8E-01	max

Hazard Quotients

BTAG Low HQ:	1.7E-01	mean
BTAG High HQ:	4.1E-03	mean
BTAG Low HQ:	2.0E-01	max
BTAG High HQ:	4.9E-03	max

Nickel	Total Solids			
0.29	14.8	100	0.148	
0.29	12	100	0.12	
0.43	14.8	100	0.148	
0.37	15.7	100	0.157	
0.3	13.8	100	0.138	
0.336			**0.1422**	**2.362869**
2.905405				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Selenium
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.547117
Maximum detected value (mg/kg, dry weight):	2.027027

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.3E-01	mean
Daily exposure (mg/kg-day)	1.7E-01	max

Hazard Quotients

BTAG Low HQ:	5.5E-01	mean
BTAG High HQ:	1.4E-01	mean
BTAG Low HQ:	7.2E-01	max
BTAG High HQ:	1.8E-01	max

	Selenium	Total Solids			
	0.2	14.8	100	0.148	
	0.2	12	100	0.12	
	0.3	14.8	100	0.148	
	0.2	15.7	100	0.157	
	0.2	13.8	100	0.138	
	0.22			**0.1422**	**1.547117**
	2.027027				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Zinc
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	111.1111
Maximum detected value (mg/kg, dry weight):	121.0191

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	860
Maximum detected value (mg/kg, dry weight):	860

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.0E+01	mean
Daily exposure (mg/kg-day)	1.1E+01	max

Hazard Quotients

BTAG Low HQ:	6.1E-01	mean
BTAG High HQ:	6.1E-02	mean
BTAG Low HQ:	6.6E-01	max
BTAG High HQ:	6.6E-02	max

Zinc	Total Solids				
15	14.8	100	0.148		
14	12	100	0.12		
17	14.8	100	0.148		
19	15.7	100	0.157		
14	13.8	100	0.138		
15.8			**0.1422**	**111.1111**	
121.0191					

Tier I - Summary of Hazard Quotients

Receptor: Western Grebe
Location: SW08

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	5.5E-01	--	--	--	5.2E-01	--	--	--	--	--	--
LOAEL HQ:	5.5E-02	--	--	--	1.0E-01	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	6.3E-01	9.1E-02	2.2E-01	#VALUE!	**2.2E+00**	**9.3E+01**	4.4E-01	1.6E-01	4.0E-01	5.6E-01
BTAG High HQ:	#VALUE!	4.4E-02	1.4E-03	5.5E-02	#VALUE!	9.9E-02	1.5E-01	9.5E-02	4.0E-03	9.9E-02	5.6E-02
MAXIMUM											
NOAEL HQ:	5.7E-01	--	--	--	5.9E-01	--	--	--	--	--	--
LOAEL HQ:	5.7E-02	--	--	--	1.2E-01	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	7.1E-01	1.5E-01	2.2E-01	#VALUE!	**2.4E+00**	**1.2E+02**	5.0E-01	1.8E-01	5.2E-01	5.9E-01
BTAG High HQ:	#VALUE!	5.1E-02	2.3E-03	5.4E-02	#VALUE!	1.1E-01	1.9E-01	1.1E-01	4.5E-03	1.3E-01	5.9E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Benzo[a]pyrene
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.16737
Maximum detected value (mg/kg, dry weight):	1.210191

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.9
Maximum detected value (mg/kg, dry weight):	2.9

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.8E-02	mean
Daily exposure (mg/kg-day)	8.0E-02	max

Hazard Quotients

NOAEL HQ:	5.5E-01	mean
LOAEL HQ:	5.5E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	5.7E-01	max
LOAEL HQ:	5.7E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Total PCB Congeners
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.720816
Maximum detected value (mg/kg, dry weight):	0.859873

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	4
Maximum detected value (mg/kg, dry weight):	4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.6E-02	mean
Daily exposure (mg/kg-day)	6.4E-02	max

Hazard Quotients

BTAG Low HQ:	6.3E-01	mean
BTAG High HQ:	4.4E-02	mean
BTAG Low HQ:	7.1E-01	max
BTAG High HQ:	5.1E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Tributyltin
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.040788
Maximum detected value (mg/kg, dry weight):	1.75

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.9
Maximum detected value (mg/kg, dry weight):	1.9

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.7E-02	mean
Daily exposure (mg/kg-day)	1.1E-01	max

Hazard Quotients

BTAG Low HQ:	9.1E-02	mean
BTAG High HQ:	1.4E-03	mean
BTAG Low HQ:	1.5E-01	max
BTAG High HQ:	2.3E-03	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Arsenic
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	19.40928
Maximum detected value (mg/kg, dry weight):	19.10828

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	26
Maximum detected value (mg/kg, dry weight):	26

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E+00	mean
Daily exposure (mg/kg-day)	1.2E+00	max

Hazard Quotients

BTAG Low HQ:	2.2E-01	mean
BTAG High HQ:	5.5E-02	mean
BTAG Low HQ:	2.2E-01	max
BTAG High HQ:	5.4E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Cadmium
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.21519
Maximum detected value (mg/kg, dry weight):	0.235669

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.67
Maximum detected value (mg/kg, dry weight):	0.67

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.5E-02	mean
Daily exposure (mg/kg-day)	1.6E-02	max

Hazard Quotients

BTAG Low HQ:	1.9E-01	mean
BTAG High HQ:	1.4E-03	mean
BTAG Low HQ:	2.0E-01	max
BTAG High HQ:	1.5E-03	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Chromium
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.559775
Maximum detected value (mg/kg, dry weight):	3.581081

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	78
Maximum detected value (mg/kg, dry weight):	78

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.4E-01	mean
Daily exposure (mg/kg-day)	5.0E-01	max

Hazard Quotients

NOAEL HQ:	5.2E-01	mean
LOAEL HQ:	1.0E-01	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	5.9E-01	max
LOAEL HQ:	1.2E-01	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Copper
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	23.20675
Maximum detected value (mg/kg, dry weight):	31.15942

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1000
Maximum detected value (mg/kg, dry weight):	1000

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.2E+00	mean
Daily exposure (mg/kg-day)	5.6E+00	max

Hazard Quotients

BTAG Low HQ:	2.2E+00	mean
BTAG High HQ:	9.9E-02	mean
BTAG Low HQ:	2.4E+00	max
BTAG High HQ:	1.1E-01	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Lead
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	5.921238
Maximum detected value (mg/kg, dry weight):	11.66667

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	250
Maximum detected value (mg/kg, dry weight):	250

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.3E+00	mean
Daily exposure (mg/kg-day)	1.6E+00	max

Hazard Quotients

BTAG Low HQ:	9.3E+01	mean
BTAG High HQ:	1.5E-01	mean
BTAG Low HQ:	1.2E+02	max
BTAG High HQ:	1.9E-01	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Total Mercury
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.130802
Maximum detected value (mg/kg, dry weight):	0.175676

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.5
Maximum detected value (mg/kg, dry weight):	2.5

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.7E-02	mean
Daily exposure (mg/kg-day)	2.0E-02	max

Hazard Quotients

BTAG Low HQ:	4.4E-01	mean
BTAG High HQ:	9.5E-02	mean
BTAG Low HQ:	5.0E-01	max
BTAG High HQ:	1.1E-01	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Nickel
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.362869
Maximum detected value (mg/kg, dry weight):	2.905405

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	23
Maximum detected value (mg/kg, dry weight):	23

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.2E-01	mean
Daily exposure (mg/kg-day)	2.5E-01	max

Hazard Quotients

BTAG Low HQ:	1.6E-01	mean
BTAG High HQ:	4.0E-03	mean
BTAG Low HQ:	1.8E-01	max
BTAG High HQ:	4.5E-03	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Selenium
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.547117
Maximum detected value (mg/kg, dry weight):	2.027027

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.2E-02	mean
Daily exposure (mg/kg-day)	1.2E-01	max

Hazard Quotients

BTAG Low HQ:	4.0E-01	mean
BTAG High HQ:	9.9E-02	mean
BTAG Low HQ:	5.2E-01	max
BTAG High HQ:	1.3E-01	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Zinc
Location: SW08

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	111.1111
Maximum detected value (mg/kg, dry weight):	121.0191

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	860
Maximum detected value (mg/kg, dry weight):	860

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.6E+00	mean
Daily exposure (mg/kg-day)	1.0E+01	max

Hazard Quotients

BTAG Low HQ:	5.6E-01	mean
BTAG High HQ:	5.6E-02	mean
BTAG Low HQ:	5.9E-01	max
BTAG High HQ:	5.9E-02	max

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Tier I - Summary of Hazard Quotients

Receptor: Surf Scoter
Location: SW13

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	3.2E-01	--	--	--	4.1E-01	--	--	--	--	--	--
LOAEL HQ:	3.2E-02	--	--	--	8.2E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	2.8E-01	6.9E-02	2.1E-01	#VALUE!	**1.7E+00**	**3.2E+01**	2.2E-01	1.6E-01	4.8E-01	5.4E-01
BTAG High HQ:	#VALUE!	2.0E-02	1.1E-03	5.1E-02	#VALUE!	7.7E-02	5.1E-02	4.7E-02	3.9E-03	1.2E-01	5.4E-02
MAXIMUM											
NOAEL HQ:	3.8E-01	--	--	--	4.6E-01	--	--	--	--	--	--
LOAEL HQ:	3.8E-02	--	--	--	9.3E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	8.2E-01	7.4E-02	2.4E-01	#VALUE!	**2.0E+00**	**3.2E+01**	2.3E-01	1.7E-01	7.8E-01	6.1E-01
BTAG High HQ:	#VALUE!	5.8E-02	1.2E-03	6.0E-02	#VALUE!	8.8E-02	5.1E-02	5.0E-02	4.2E-03	1.9E-01	6.1E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Benzo[a]pyrene
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.722678
Maximum detected value (mg/kg, dry weight):	0.860927

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.4
Maximum detected value (mg/kg, dry weight):	1.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.5E-02	mean
Daily exposure (mg/kg-day)	5.3E-02	max

Hazard Quotients

NOAEL HQ:	3.2E-01	mean
LOAEL HQ:	3.2E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	3.8E-01	max
LOAEL HQ:	3.8E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Total PCB Congeners
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.423907
Maximum detected value (mg/kg, dry weight):	1.292857

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.52
Maximum detected value (mg/kg, dry weight):	0.52

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.5E-02	mean
Daily exposure (mg/kg-day)	7.4E-02	max

Hazard Quotients

BTAG Low HQ:	2.8E-01	mean
BTAG High HQ:	2.0E-02	mean
BTAG Low HQ:	8.2E-01	max
BTAG High HQ:	5.8E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Tributyltin
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.851093
Maximum detected value (mg/kg, dry weight):	0.920245

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.79
Maximum detected value (mg/kg, dry weight):	0.79

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.0E-02	mean
Daily exposure (mg/kg-day)	5.4E-02	max

Hazard Quotients

BTAG Low HQ:	6.9E-02	mean
BTAG High HQ:	1.1E-03	mean
BTAG Low HQ:	7.4E-02	max
BTAG High HQ:	1.2E-03	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Arsenic
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	19.39891
Maximum detected value (mg/kg, dry weight):	22.78481

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	15
Maximum detected value (mg/kg, dry weight):	15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E+00	mean
Daily exposure (mg/kg-day)	1.3E+00	max

Hazard Quotients

BTAG Low HQ:	2.1E-01	mean
BTAG High HQ:	5.1E-02	mean
BTAG Low HQ:	2.4E-01	max
BTAG High HQ:	6.0E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Cadmium
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.218579
Maximum detected value (mg/kg, dry weight):	0.28481

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.42
Maximum detected value (mg/kg, dry weight):	0.42

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.4E-02	mean
Daily exposure (mg/kg-day)	1.7E-02	max

Hazard Quotients

BTAG Low HQ:	1.7E-01	mean
BTAG High HQ:	1.3E-03	mean
BTAG Low HQ:	2.2E-01	max
BTAG High HQ:	1.7E-03	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Chromium
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.144809
Maximum detected value (mg/kg, dry weight):	2.928571

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	72
Maximum detected value (mg/kg, dry weight):	72

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.5E-01	mean
Daily exposure (mg/kg-day)	4.0E-01	max

Hazard Quotients

NOAEL HQ:	4.1E-01	mean
LOAEL HQ:	8.2E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	4.6E-01	max
LOAEL HQ:	9.3E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Copper
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	25
Maximum detected value (mg/kg, dry weight):	35.44304

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	800
Maximum detected value (mg/kg, dry weight):	800

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.0E+00	mean
Daily exposure (mg/kg-day)	4.6E+00	max

Hazard Quotients

BTAG Low HQ:	1.7E+00	mean
BTAG High HQ:	7.7E-02	mean
BTAG Low HQ:	2.0E+00	max
BTAG High HQ:	8.8E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Lead
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.540984
Maximum detected value (mg/kg, dry weight):	2.638037

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	93
Maximum detected value (mg/kg, dry weight):	93

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.5E-01	mean
Daily exposure (mg/kg-day)	4.5E-01	max

Hazard Quotients

BTAG Low HQ:	3.2E+01	mean
BTAG High HQ:	5.1E-02	mean
BTAG Low HQ:	3.2E+01	max
BTAG High HQ:	5.1E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Total Mercury
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.101093
Maximum detected value (mg/kg, dry weight):	0.110429

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.86
Maximum detected value (mg/kg, dry weight):	0.86

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	8.5E-03	mean
Daily exposure (mg/kg-day)	9.0E-03	max

Hazard Quotients

BTAG Low HQ:	2.2E-01	mean
BTAG High HQ:	4.7E-02	mean
BTAG Low HQ:	2.3E-01	max
BTAG High HQ:	5.0E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Nickel
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.568306
Maximum detected value (mg/kg, dry weight):	2.78481

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	24
Maximum detected value (mg/kg, dry weight):	24

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.2E-01	mean
Daily exposure (mg/kg-day)	2.3E-01	max

Hazard Quotients

BTAG Low HQ:	1.6E-01	mean
BTAG High HQ:	3.9E-03	mean
BTAG Low HQ:	1.7E-01	max
BTAG High HQ:	4.2E-03	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Selenium
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.912568
Maximum detected value (mg/kg, dry weight):	3.164557

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.1
Maximum detected value (mg/kg, dry weight):	1.1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E-01	mean
Daily exposure (mg/kg-day)	1.8E-01	max

Hazard Quotients

BTAG Low HQ:	4.8E-01	mean
BTAG High HQ:	1.2E-01	mean
BTAG Low HQ:	7.8E-01	max
BTAG High HQ:	1.9E-01	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Zinc
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	131.1475
Maximum detected value (mg/kg, dry weight):	153.3742

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	580
Maximum detected value (mg/kg, dry weight):	580

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.2E+00	mean
Daily exposure (mg/kg-day)	1.0E+01	max

Hazard Quotients

BTAG Low HQ:	5.4E-01	mean
BTAG High HQ:	5.4E-02	mean
BTAG Low HQ:	6.1E-01	max
BTAG High HQ:	6.1E-02	max

Hazard Quotient Calculations Using Macoma Tissue

Receptor: Sea Lion
Location: SW13

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	--	--	--	--	2.9E-02	--	--	--	--	--	--
LOAEL HQ:	--	--	--	--	1.4E-03	--	--	--	--	--	--
BTAG Low HQ:	1.3E-02	2.7E-02	7.7E-02	**1.4E+00**	#VALUE!	4.1E-01	1.2E-01	1.0E-01	5.5E-01	8.6E-01	3.4E-01
BTAG High HQ:	5.1E-04	7.6E-03	1.3E-03	9.3E-02	#VALUE!	1.7E-03	5.0E-04	1.0E-02	2.3E-03	3.5E-02	8.0E-03
MAXIMUM											
NOAEL HQ:	--	--	--	--	3.4E-02	--	--	--	--	--	--
LOAEL HQ:	--	--	--	--	1.6E-03	--	--	--	--	--	--
BTAG Low HQ:	1.5E-02	8.0E-02	8.3E-02	1.6E+00	#VALUE!	5.0E-01	1.2E-01	1.1E-01	5.8E-01	1.4E+00	3.9E-01
BTAG High HQ:	6.1E-04	2.2E-02	1.4E-03	1.1E-01	#VALUE!	2.1E-03	5.0E-04	1.1E-02	2.5E-03	5.8E-02	9.2E-03

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Benzo[a]pyrene
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.722678
Maximum detected value (mg/kg, dry weight):	0.860927

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.4
Maximum detected value (mg/kg, dry weight):	1.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.31
BTAG High (mg/kg-day):	32.8

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.7E-02	mean
Daily exposure (mg/kg-day)	2.0E-02	max

Hazard Quotients

BTAG Low HQ:	1.3E-02	mean
BTAG High HQ:	5.1E-04	mean
BTAG Low HQ:	1.5E-02	max
BTAG High HQ:	6.1E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Total PCB Congeners
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.423907
Maximum detected value (mg/kg, dry weight):	1.292857

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.52
Maximum detected value (mg/kg, dry weight):	0.52

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.36
BTAG High (mg/kg-day):	1.28

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.7E-03	mean
Daily exposure (mg/kg-day)	2.9E-02	max

Hazard Quotients

BTAG Low HQ:	2.7E-02	mean
BTAG High HQ:	7.6E-03	mean
BTAG Low HQ:	8.0E-02	max
BTAG High HQ:	2.2E-02	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Tributyltin
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.851093
Maximum detected value (mg/kg, dry weight):	0.920245

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.79
Maximum detected value (mg/kg, dry weight):	0.79

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.25
BTAG High (mg/kg-day):	15

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.9E-02	mean
Daily exposure (mg/kg-day)	2.1E-02	max

Hazard Quotients

BTAG Low HQ:	7.7E-02	mean
BTAG High HQ:	1.3E-03	mean
BTAG Low HQ:	8.3E-02	max
BTAG High HQ:	1.4E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Arsenic
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	19.39891
Maximum detected value (mg/kg, dry weight):	22.78481

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	15
Maximum detected value (mg/kg, dry weight):	15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.32
BTAG High (mg/kg-day):	4.7

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.4E-01	mean
Daily exposure (mg/kg-day)	5.1E-01	max

Hazard Quotients

BTAG Low HQ:	1.4E+00	mean
BTAG High HQ:	9.3E-02	mean
BTAG Low HQ:	1.6E+00	max
BTAG High HQ:	1.1E-01	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Cadmium
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.218579
Maximum detected value (mg/kg, dry weight):	0.28481

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.42
Maximum detected value (mg/kg, dry weight):	0.42

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.06
BTAG High (mg/kg-day):	2.64

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.1E-03	mean
Daily exposure (mg/kg-day)	6.6E-03	max

Hazard Quotients

BTAG Low HQ:	8.5E-02	mean
BTAG High HQ:	1.9E-03	mean
BTAG Low HQ:	1.1E-01	max
BTAG High HQ:	2.5E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Chromium
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.144809
Maximum detected value (mg/kg, dry weight):	2.928571

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	72
Maximum detected value (mg/kg, dry weight):	72

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	3.3
LOAEL (mg/kg-day):	69
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.6E-02	mean
Daily exposure (mg/kg-day)	1.1E-01	max

Hazard Quotients

NOAEL HQ:	2.9E-02	mean
LOAEL HQ:	1.4E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	3.4E-02	max
LOAEL HQ:	1.6E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Copper
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	25
Maximum detected value (mg/kg, dry weight):	35.44304

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	800
Maximum detected value (mg/kg, dry weight):	800

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.67
BTAG High (mg/kg-day):	632

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E+00	mean
Daily exposure (mg/kg-day)	1.3E+00	max

Hazard Quotients

BTAG Low HQ:	4.1E-01	mean
BTAG High HQ:	1.7E-03	mean
BTAG Low HQ:	5.0E-01	max
BTAG High HQ:	2.1E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Lead
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.540984
Maximum detected value (mg/kg, dry weight):	2.638037

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	93
Maximum detected value (mg/kg, dry weight):	93

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1
BTAG High (mg/kg-day):	241

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E-01	mean
Daily exposure (mg/kg-day)	1.2E-01	max

Hazard Quotients

BTAG Low HQ:	1.2E-01	mean
BTAG High HQ:	5.0E-04	mean
BTAG Low HQ:	1.2E-01	max
BTAG High HQ:	5.0E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Total Mercury
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.101093
Maximum detected value (mg/kg, dry weight):	0.110429

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.86
Maximum detected value (mg/kg, dry weight):	0.86

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.027
BTAG High (mg/kg-day):	0.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.8E-03	mean
Daily exposure (mg/kg-day)	3.0E-03	max

Hazard Quotients

BTAG Low HQ:	1.0E-01	mean
BTAG High HQ:	1.0E-02	mean
BTAG Low HQ:	1.1E-01	max
BTAG High HQ:	1.1E-02	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Nickel
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.568306
Maximum detected value (mg/kg, dry weight):	2.78481

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	24
Maximum detected value (mg/kg, dry weight):	24

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.133
BTAG High (mg/kg-day):	31.6

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.3E-02	mean
Daily exposure (mg/kg-day)	7.8E-02	max

Hazard Quotients

BTAG Low HQ:	5.5E-01	mean
BTAG High HQ:	2.3E-03	mean
BTAG Low HQ:	5.8E-01	max
BTAG High HQ:	2.5E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Selenium
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.912568
Maximum detected value (mg/kg, dry weight):	3.164557

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.1
Maximum detected value (mg/kg, dry weight):	1.1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.05
BTAG High (mg/kg-day):	1.21

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.3E-02	mean
Daily exposure (mg/kg-day)	7.0E-02	max

Hazard Quotients

BTAG Low HQ:	8.6E-01	mean
BTAG High HQ:	3.5E-02	mean
BTAG Low HQ:	1.4E+00	max
BTAG High HQ:	5.8E-02	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Zinc
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	131.1475
Maximum detected value (mg/kg, dry weight):	153.3742

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	580
Maximum detected value (mg/kg, dry weight):	580

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	9.6
BTAG High (mg/kg-day):	411

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.3E+00	mean
Daily exposure (mg/kg-day)	3.8E+00	max

Hazard Quotients

BTAG Low HQ:	3.4E-01	mean
BTAG High HQ:	8.0E-03	mean
BTAG Low HQ:	3.9E-01	max
BTAG High HQ:	9.2E-03	max

Tier I - Summary of Hazard Quotients

Receptor: CA Least Tern
Location: SW13

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	6.6E-01	--	--	--	5.6E-01	--	--	--	--	--	--
LOAEL HQ:	6.6E-02	--	--	--	1.1E-01	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	5.9E-01	1.5E-01	4.4E-01	#VALUE!	**2.4E+00**	**4.2E+01**	3.8E-01	2.8E-01	**1.0E+00**	**1.0E+00**
BTAG High HQ:	#VALUE!	4.2E-02	2.3E-03	1.1E-01	#VALUE!	1.1E-01	6.8E-02	8.3E-02	6.9E-03	2.5E-01	1.0E-01
MAXIMUM											
NOAEL HQ:	7.8E-01	--	--	--	6.7E-01	--	--	--	--	--	--
LOAEL HQ:	7.8E-02	--	--	--	1.3E-01	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	**1.8E+00**	1.6E-01	5.1E-01	#VALUE!	**2.9E+00**	**4.3E+01**	4.1E-01	3.0E-01	**1.7E+00**	**1.2E+00**
BTAG High HQ:	#VALUE!	1.3E-01	2.5E-03	1.3E-01	#VALUE!	1.3E-01	6.9E-02	9.0E-02	7.3E-03	4.2E-01	1.2E-01

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Benzo[a]pyrene
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.722678
Maximum detected value (mg/kg, dry weight):	0.860927

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.4
Maximum detected value (mg/kg, dry weight):	1.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.3E-02	mean
Daily exposure (mg/kg-day)	1.1E-01	max

Hazard Quotients

NOAEL HQ:	6.6E-01	mean
LOAEL HQ:	6.6E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	7.8E-01	max
LOAEL HQ:	7.8E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Total PCB Congeners
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.423907
Maximum detected value (mg/kg, dry weight):	1.292857

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.52
Maximum detected value (mg/kg, dry weight):	0.52

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.3E-02	mean
Daily exposure (mg/kg-day)	1.6E-01	max

Hazard Quotients

BTAG Low HQ:	5.9E-01	mean
BTAG High HQ:	4.2E-02	mean
BTAG Low HQ:	1.8E+00	max
BTAG High HQ:	1.3E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Tributyltin
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.851093
Maximum detected value (mg/kg, dry weight):	0.920245

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.79
Maximum detected value (mg/kg, dry weight):	0.79

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E-01	mean
Daily exposure (mg/kg-day)	1.1E-01	max

Hazard Quotients

BTAG Low HQ:	1.5E-01	mean
BTAG High HQ:	2.3E-03	mean
BTAG Low HQ:	1.6E-01	max
BTAG High HQ:	2.5E-03	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Arsenic
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	19.39891
Maximum detected value (mg/kg, dry weight):	22.78481

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	15
Maximum detected value (mg/kg, dry weight):	15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.4E+00	mean
Daily exposure (mg/kg-day)	2.8E+00	max

Hazard Quotients

BTAG Low HQ:	4.4E-01	mean
BTAG High HQ:	1.1E-01	mean
BTAG Low HQ:	5.1E-01	max
BTAG High HQ:	1.3E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Cadmium
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.218579
Maximum detected value (mg/kg, dry weight):	0.28481

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.42
Maximum detected value (mg/kg, dry weight):	0.42

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.8E-02	mean
Daily exposure (mg/kg-day)	3.6E-02	max

Hazard Quotients

BTAG Low HQ:	3.5E-01	mean
BTAG High HQ:	2.7E-03	mean
BTAG Low HQ:	4.5E-01	max
BTAG High HQ:	3.5E-03	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Chromium
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.144809
Maximum detected value (mg/kg, dry weight):	2.928571

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	72
Maximum detected value (mg/kg, dry weight):	72

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.8E-01	mean
Daily exposure (mg/kg-day)	5.8E-01	max

Hazard Quotients

NOAEL HQ:	5.6E-01	mean
LOAEL HQ:	1.1E-01	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	6.7E-01	max
LOAEL HQ:	1.3E-01	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Copper
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	25
Maximum detected value (mg/kg, dry weight):	35.44304

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	800
Maximum detected value (mg/kg, dry weight):	800

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.5E+00	mean
Daily exposure (mg/kg-day)	6.8E+00	max

Hazard Quotients

BTAG Low HQ:	2.4E+00	mean
BTAG High HQ:	1.1E-01	mean
BTAG Low HQ:	2.9E+00	max
BTAG High HQ:	1.3E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Lead
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.540984
Maximum detected value (mg/kg, dry weight):	2.638037

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	93
Maximum detected value (mg/kg, dry weight):	93

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.9E-01	mean
Daily exposure (mg/kg-day)	6.1E-01	max

Hazard Quotients

BTAG Low HQ:	4.2E+01	mean
BTAG High HQ:	6.8E-02	mean
BTAG Low HQ:	4.3E+01	max
BTAG High HQ:	6.9E-02	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Total Mercury
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.101093
Maximum detected value (mg/kg, dry weight):	0.110429

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.86
Maximum detected value (mg/kg, dry weight):	0.86

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.5E-02	mean
Daily exposure (mg/kg-day)	1.6E-02	max

Hazard Quotients

BTAG Low HQ:	3.8E-01	mean
BTAG High HQ:	8.3E-02	mean
BTAG Low HQ:	4.1E-01	max
BTAG High HQ:	9.0E-02	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Nickel
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.568306
Maximum detected value (mg/kg, dry weight):	2.78481

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	24
Maximum detected value (mg/kg, dry weight):	24

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.9E-01	mean
Daily exposure (mg/kg-day)	4.1E-01	max

Hazard Quotients

BTAG Low HQ:	2.8E-01	mean
BTAG High HQ:	6.9E-03	mean
BTAG Low HQ:	3.0E-01	max
BTAG High HQ:	7.3E-03	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Selenium
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.912568
Maximum detected value (mg/kg, dry weight):	3.164557

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.1
Maximum detected value (mg/kg, dry weight):	1.1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.4E-01	mean
Daily exposure (mg/kg-day)	3.9E-01	max

Hazard Quotients

BTAG Low HQ:	1.0E+00	mean
BTAG High HQ:	2.5E-01	mean
BTAG Low HQ:	1.7E+00	max
BTAG High HQ:	4.2E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Zinc
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	131.1475
Maximum detected value (mg/kg, dry weight):	153.3742

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	580
Maximum detected value (mg/kg, dry weight):	580

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.8E+01	mean
Daily exposure (mg/kg-day)	2.1E+01	max

Hazard Quotients

BTAG Low HQ:	1.0E+00	mean
BTAG High HQ:	1.0E-01	mean
BTAG Low HQ:	1.2E+00	max
BTAG High HQ:	1.2E-01	max

Tier I - Summary of Hazard Quotients

Receptor: Green Turtle
Location: SW13

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	1.9E-02	--	--	--	2.5E-02	--	--	--	--	--	--
LOAEL HQ:	1.9E-03	--	--	--	4.9E-03	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	1.7E-02	4.0E-03	1.2E-02	#VALUE!	1.0E-01	**1.9E+00**	1.3E-02	9.5E-03	2.8E-02	3.1E-02
BTAG High HQ:	#VALUE!	1.2E-03	6.4E-05	3.0E-03	#VALUE!	4.6E-03	3.0E-03	2.8E-03	2.3E-04	6.9E-03	3.1E-03
MAXIMUM											
NOAEL HQ:	2.2E-02	--	--	--	2.8E-02	--	--	--	--	--	--
LOAEL HQ:	2.2E-03	--	--	--	5.5E-03	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	4.8E-02	4.3E-03	1.4E-02	#VALUE!	1.2E-01	**1.9E+00**	1.4E-02	1.0E-02	4.6E-02	3.6E-02
BTAG High HQ:	#VALUE!	3.4E-03	6.9E-05	3.5E-03	#VALUE!	5.2E-03	3.1E-03	2.9E-03	2.4E-04	1.1E-02	3.6E-03

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Benzo[a]pyrene
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.722678
Maximum detected value (mg/kg, dry weight):	0.860927

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.4
Maximum detected value (mg/kg, dry weight):	1.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.6E-03	mean
Daily exposure (mg/kg-day)	3.1E-03	max

Hazard Quotients

NOAEL HQ:	1.9E-02	mean
LOAEL HQ:	1.9E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	2.2E-02	max
LOAEL HQ:	2.2E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Total PCB Congeners
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.423907
Maximum detected value (mg/kg, dry weight):	1.292857

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.52
Maximum detected value (mg/kg, dry weight):	0.52

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.5E-03	mean
Daily exposure (mg/kg-day)	4.3E-03	max

Hazard Quotients

BTAG Low HQ:	1.7E-02	mean
BTAG High HQ:	1.2E-03	mean
BTAG Low HQ:	4.8E-02	max
BTAG High HQ:	3.4E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Tributyltin
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.851093
Maximum detected value (mg/kg, dry weight):	0.920245

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.79
Maximum detected value (mg/kg, dry weight):	0.79

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.9E-03	mean
Daily exposure (mg/kg-day)	3.2E-03	max

Hazard Quotients

BTAG Low HQ:	4.0E-03	mean
BTAG High HQ:	6.4E-05	mean
BTAG Low HQ:	4.3E-03	max
BTAG High HQ:	6.9E-05	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Arsenic
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	19.39891
Maximum detected value (mg/kg, dry weight):	22.78481

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	15
Maximum detected value (mg/kg, dry weight):	15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.6E-02	mean
Daily exposure (mg/kg-day)	7.7E-02	max

Hazard Quotients

BTAG Low HQ:	1.2E-02	mean
BTAG High HQ:	3.0E-03	mean
BTAG Low HQ:	1.4E-02	max
BTAG High HQ:	3.5E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Cadmium
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.218579
Maximum detected value (mg/kg, dry weight):	0.28481

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.42
Maximum detected value (mg/kg, dry weight):	0.42

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	8.0E-04	mean
Daily exposure (mg/kg-day)	1.0E-03	max

Hazard Quotients

BTAG Low HQ:	9.9E-03	mean
BTAG High HQ:	7.6E-05	mean
BTAG Low HQ:	1.3E-02	max
BTAG High HQ:	9.7E-05	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Chromium
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.144809
Maximum detected value (mg/kg, dry weight):	2.928571

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	72
Maximum detected value (mg/kg, dry weight):	72

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.1E-02	mean
Daily exposure (mg/kg-day)	2.4E-02	max

Hazard Quotients

NOAEL HQ:	2.5E-02	mean
LOAEL HQ:	4.9E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	2.8E-02	max
LOAEL HQ:	5.5E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Copper
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	25
Maximum detected value (mg/kg, dry weight):	35.44304

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	800
Maximum detected value (mg/kg, dry weight):	800

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.4E-01	mean
Daily exposure (mg/kg-day)	2.7E-01	max

Hazard Quotients

BTAG Low HQ:	1.0E-01	mean
BTAG High HQ:	4.6E-03	mean
BTAG Low HQ:	1.2E-01	max
BTAG High HQ:	5.2E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Lead
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.540984
Maximum detected value (mg/kg, dry weight):	2.638037

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	93
Maximum detected value (mg/kg, dry weight):	93

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.7E-02	mean
Daily exposure (mg/kg-day)	2.7E-02	max

Hazard Quotients

BTAG Low HQ:	1.9E+00	mean
BTAG High HQ:	3.0E-03	mean
BTAG Low HQ:	1.9E+00	max
BTAG High HQ:	3.1E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Total Mercury
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.101093
Maximum detected value (mg/kg, dry weight):	0.110429

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.86
Maximum detected value (mg/kg, dry weight):	0.86

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.0E-04	mean
Daily exposure (mg/kg-day)	5.3E-04	max

Hazard Quotients

BTAG Low HQ:	1.3E-02	mean
BTAG High HQ:	2.8E-03	mean
BTAG Low HQ:	1.4E-02	max
BTAG High HQ:	2.9E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Nickel
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.568306
Maximum detected value (mg/kg, dry weight):	2.78481

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	24
Maximum detected value (mg/kg, dry weight):	24

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.3E-02	mean
Daily exposure (mg/kg-day)	1.4E-02	max

Hazard Quotients

BTAG Low HQ:	9.5E-03	mean
BTAG High HQ:	2.3E-04	mean
BTAG Low HQ:	1.0E-02	max
BTAG High HQ:	2.4E-04	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Selenium
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.912568
Maximum detected value (mg/kg, dry weight):	3.164557

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.1
Maximum detected value (mg/kg, dry weight):	1.1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.5E-03	mean
Daily exposure (mg/kg-day)	1.1E-02	max

Hazard Quotients

BTAG Low HQ:	2.8E-02	mean
BTAG High HQ:	6.9E-03	mean
BTAG Low HQ:	4.6E-02	max
BTAG High HQ:	1.1E-02	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Zinc
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	131.1475
Maximum detected value (mg/kg, dry weight):	153.3742

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	580
Maximum detected value (mg/kg, dry weight):	580

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.4E-01	mean
Daily exposure (mg/kg-day)	6.1E-01	max

Hazard Quotients

BTAG Low HQ:	3.1E-02	mean
BTAG High HQ:	3.1E-03	mean
BTAG Low HQ:	3.6E-02	max
BTAG High HQ:	3.6E-03	max

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Zinc
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	131.1475
Maximum detected value (mg/kg, dry weight):	153.3742

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	580
Maximum detected value (mg/kg, dry weight):	580

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E+01	mean
Daily exposure (mg/kg-day)	1.3E+01	max

Hazard Quotients

BTAG Low HQ:	6.8E-01	mean
BTAG High HQ:	6.8E-02	mean
BTAG Low HQ:	7.8E-01	max
BTAG High HQ:	7.8E-02	max

Zinc	Total Solids				
17	12	100	0.12		
24	15.8	100	0.158		
25	16.3	100	0.163		
16	14	100	0.14		
14	15.1	100	0.151		
19.2			**0.1464**	**131.1475**	
153.3742					

Tier I - Summary of Hazard Quotients

Receptor: Western Grebe
Location: SW13

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	3.3E-01	--	--	--	4.6E-01	--	--	--	--	--	--
LOAEL HQ:	3.3E-02	--	--	--	9.3E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	2.9E-01	7.1E-02	2.1E-01	#VALUE!	**2.0E+00**	**3.6E+01**	2.3E-01	1.7E-01	4.9E-01	5.6E-01
BTAG High HQ:	#VALUE!	2.1E-02	1.1E-03	5.3E-02	#VALUE!	8.6E-02	5.7E-02	5.0E-02	4.2E-03	1.2E-01	5.6E-02
MAXIMUM											
NOAEL HQ:	3.9E-01	--	--	--	5.2E-01	--	--	--	--	--	--
LOAEL HQ:	3.9E-02	--	--	--	1.0E-01	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	8.4E-01	7.6E-02	2.5E-01	#VALUE!	**2.2E+00**	**3.6E+01**	2.5E-01	1.8E-01	8.0E-01	6.4E-01
BTAG High HQ:	#VALUE!	6.0E-02	1.2E-03	6.2E-02	#VALUE!	9.7E-02	5.8E-02	5.3E-02	4.5E-03	2.0E-01	6.4E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Benzo[a]pyrene
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.722678
Maximum detected value (mg/kg, dry weight):	0.860927

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.4
Maximum detected value (mg/kg, dry weight):	1.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.7E-02	mean
Daily exposure (mg/kg-day)	5.4E-02	max

Hazard Quotients

NOAEL HQ:	3.3E-01	mean
LOAEL HQ:	3.3E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	3.9E-01	max
LOAEL HQ:	3.9E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Total PCB Congeners
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.423907
Maximum detected value (mg/kg, dry weight):	1.292857

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.52
Maximum detected value (mg/kg, dry weight):	0.52

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.6E-02	mean
Daily exposure (mg/kg-day)	7.6E-02	max

Hazard Quotients

BTAG Low HQ:	2.9E-01	mean
BTAG High HQ:	2.1E-02	mean
BTAG Low HQ:	8.4E-01	max
BTAG High HQ:	6.0E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Tributyltin
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.851093
Maximum detected value (mg/kg, dry weight):	0.920245

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.79
Maximum detected value (mg/kg, dry weight):	0.79

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.1E-02	mean
Daily exposure (mg/kg-day)	5.5E-02	max

Hazard Quotients

BTAG Low HQ:	7.1E-02	mean
BTAG High HQ:	1.1E-03	mean
BTAG Low HQ:	7.6E-02	max
BTAG High HQ:	1.2E-03	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Arsenic
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	19.39891
Maximum detected value (mg/kg, dry weight):	22.78481

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	15
Maximum detected value (mg/kg, dry weight):	15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E+00	mean
Daily exposure (mg/kg-day)	1.4E+00	max

Hazard Quotients

BTAG Low HQ:	2.1E-01	mean
BTAG High HQ:	5.3E-02	mean
BTAG Low HQ:	2.5E-01	max
BTAG High HQ:	6.2E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Cadmium
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.218579
Maximum detected value (mg/kg, dry weight):	0.28481

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.42
Maximum detected value (mg/kg, dry weight):	0.42

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.4E-02	mean
Daily exposure (mg/kg-day)	1.8E-02	max

Hazard Quotients

BTAG Low HQ:	1.8E-01	mean
BTAG High HQ:	1.4E-03	mean
BTAG Low HQ:	2.2E-01	max
BTAG High HQ:	1.7E-03	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Chromium
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.144809
Maximum detected value (mg/kg, dry weight):	2.928571

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	72
Maximum detected value (mg/kg, dry weight):	72

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.0E-01	mean
Daily exposure (mg/kg-day)	4.4E-01	max

Hazard Quotients

NOAEL HQ:	4.6E-01	mean
LOAEL HQ:	9.3E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	5.2E-01	max
LOAEL HQ:	1.0E-01	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Copper
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	25
Maximum detected value (mg/kg, dry weight):	35.44304

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	800
Maximum detected value (mg/kg, dry weight):	800

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.5E+00	mean
Daily exposure (mg/kg-day)	5.1E+00	max

Hazard Quotients

BTAG Low HQ:	2.0E+00	mean
BTAG High HQ:	8.6E-02	mean
BTAG Low HQ:	2.2E+00	max
BTAG High HQ:	9.7E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Lead
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.540984
Maximum detected value (mg/kg, dry weight):	2.638037

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	93
Maximum detected value (mg/kg, dry weight):	93

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.0E-01	mean
Daily exposure (mg/kg-day)	5.1E-01	max

Hazard Quotients

BTAG Low HQ:	3.6E+01	mean
BTAG High HQ:	5.7E-02	mean
BTAG Low HQ:	3.6E+01	max
BTAG High HQ:	5.8E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Total Mercury
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.101093
Maximum detected value (mg/kg, dry weight):	0.110429

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.86
Maximum detected value (mg/kg, dry weight):	0.86

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.1E-03	mean
Daily exposure (mg/kg-day)	9.6E-03	max

Hazard Quotients

BTAG Low HQ:	2.3E-01	mean
BTAG High HQ:	5.0E-02	mean
BTAG Low HQ:	2.5E-01	max
BTAG High HQ:	5.3E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Nickel
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.568306
Maximum detected value (mg/kg, dry weight):	2.78481

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	24
Maximum detected value (mg/kg, dry weight):	24

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.4E-01	mean
Daily exposure (mg/kg-day)	2.5E-01	max

Hazard Quotients

BTAG Low HQ:	1.7E-01	mean
BTAG High HQ:	4.2E-03	mean
BTAG Low HQ:	1.8E-01	max
BTAG High HQ:	4.5E-03	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Selenium
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.912568
Maximum detected value (mg/kg, dry weight):	3.164557

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.1
Maximum detected value (mg/kg, dry weight):	1.1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E-01	mean
Daily exposure (mg/kg-day)	1.8E-01	max

Hazard Quotients

BTAG Low HQ:	4.9E-01	mean
BTAG High HQ:	1.2E-01	mean
BTAG Low HQ:	8.0E-01	max
BTAG High HQ:	2.0E-01	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Zinc
Location: SW13

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	131.1475
Maximum detected value (mg/kg, dry weight):	153.3742

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	580
Maximum detected value (mg/kg, dry weight):	580

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.7E+00	mean
Daily exposure (mg/kg-day)	1.1E+01	max

Hazard Quotients

BTAG Low HQ:	5.6E-01	mean
BTAG High HQ:	5.6E-02	mean
BTAG Low HQ:	6.4E-01	max
BTAG High HQ:	6.4E-02	max

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Tier I - Summary of Hazard Quotients

Receptor: Surf Scoter
Location: SW21

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	4.1E-01	--	--	--	4.3E-01	--	--	--	--	--	--
LOAEL HQ:	4.1E-02	--	--	--	8.7E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	7.6E-01	9.2E-03	2.2E-01	#VALUE!	7.6E-01	**4.5E+01**	2.7E-01	1.3E-01	4.7E-01	4.9E-01
BTAG High HQ:	#VALUE!	5.4E-02	1.5E-04	5.4E-02	#VALUE!	3.4E-02	7.2E-02	5.8E-02	3.2E-03	1.2E-01	4.9E-02
MAXIMUM											
NOAEL HQ:	4.9E-01	--	--	--	5.7E-01	--	--	--	--	--	--
LOAEL HQ:	4.9E-02	--	--	--	1.1E-01	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	8.7E-01	1.5E-02	2.4E-01	#VALUE!	9.6E-01	**5.6E+01**	2.8E-01	1.3E-01	7.7E-01	5.4E-01
BTAG High HQ:	#VALUE!	6.1E-02	2.4E-04	5.9E-02	#VALUE!	4.2E-02	9.0E-02	6.1E-02	3.3E-03	1.9E-01	5.4E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Benzo[a]pyrene
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.928668
Maximum detected value (mg/kg, dry weight):	1.146497

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.5
Maximum detected value (mg/kg, dry weight):	1.5

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.7E-02	mean
Daily exposure (mg/kg-day)	6.9E-02	max

Hazard Quotients

NOAEL HQ:	4.1E-01	mean
LOAEL HQ:	4.1E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	4.9E-01	max
LOAEL HQ:	4.9E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Total PCB Congeners
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.024226
Maximum detected value (mg/kg, dry weight):	1.19863

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	3.4
Maximum detected value (mg/kg, dry weight):	3.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.8E-02	mean
Daily exposure (mg/kg-day)	7.8E-02	max

Hazard Quotients

BTAG Low HQ:	7.6E-01	mean
BTAG High HQ:	5.4E-02	mean
BTAG Low HQ:	8.7E-01	max
BTAG High HQ:	6.1E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Tributyltin
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.110363
Maximum detected value (mg/kg, dry weight):	0.1875

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.17
Maximum detected value (mg/kg, dry weight):	0.17

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.7E-03	mean
Daily exposure (mg/kg-day)	1.1E-02	max

Hazard Quotients

BTAG Low HQ:	9.2E-03	mean
BTAG High HQ:	1.5E-04	mean
BTAG Low HQ:	1.5E-02	max
BTAG High HQ:	2.4E-04	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Arsenic
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	20.72678
Maximum detected value (mg/kg, dry weight):	22.56098

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	11
Maximum detected value (mg/kg, dry weight):	11

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E+00	mean
Daily exposure (mg/kg-day)	1.3E+00	max

Hazard Quotients

BTAG Low HQ:	2.2E-01	mean
BTAG High HQ:	5.4E-02	mean
BTAG Low HQ:	2.4E-01	max
BTAG High HQ:	5.9E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Cadmium
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.273217
Maximum detected value (mg/kg, dry weight):	0.323171

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.51
Maximum detected value (mg/kg, dry weight):	0.51

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.7E-02	mean
Daily exposure (mg/kg-day)	2.0E-02	max

Hazard Quotients

BTAG Low HQ:	2.1E-01	mean
BTAG High HQ:	1.6E-03	mean
BTAG Low HQ:	2.5E-01	max
BTAG High HQ:	1.9E-03	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Chromium
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.597577
Maximum detected value (mg/kg, dry weight):	4.6875

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	70
Maximum detected value (mg/kg, dry weight):	70

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.7E-01	mean
Daily exposure (mg/kg-day)	4.9E-01	max

Hazard Quotients

NOAEL HQ:	4.3E-01	mean
LOAEL HQ:	8.7E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	5.7E-01	max
LOAEL HQ:	1.1E-01	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Copper
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	16.28533
Maximum detected value (mg/kg, dry weight):	24.21875

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	260
Maximum detected value (mg/kg, dry weight):	260

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.8E+00	mean
Daily exposure (mg/kg-day)	2.2E+00	max

Hazard Quotients

BTAG Low HQ:	7.6E-01	mean
BTAG High HQ:	3.4E-02	mean
BTAG Low HQ:	9.6E-01	max
BTAG High HQ:	4.2E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Lead
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	4.253028
Maximum detected value (mg/kg, dry weight):	7.03125

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	120
Maximum detected value (mg/kg, dry weight):	120

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.3E-01	mean
Daily exposure (mg/kg-day)	7.8E-01	max

Hazard Quotients

BTAG Low HQ:	4.5E+01	mean
BTAG High HQ:	7.2E-02	mean
BTAG Low HQ:	5.6E+01	max
BTAG High HQ:	9.0E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Total Mercury
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.106326
Maximum detected value (mg/kg, dry weight):	0.116438

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.4
Maximum detected value (mg/kg, dry weight):	1.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E-02	mean
Daily exposure (mg/kg-day)	1.1E-02	max

Hazard Quotients

BTAG Low HQ:	2.7E-01	mean
BTAG High HQ:	5.8E-02	mean
BTAG Low HQ:	2.8E-01	max
BTAG High HQ:	6.1E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Nickel
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.43607
Maximum detected value (mg/kg, dry weight):	2.5

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	14
Maximum detected value (mg/kg, dry weight):	14

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.8E-01	mean
Daily exposure (mg/kg-day)	1.9E-01	max

Hazard Quotients

BTAG Low HQ:	1.3E-01	mean
BTAG High HQ:	3.2E-03	mean
BTAG Low HQ:	1.3E-01	max
BTAG High HQ:	3.3E-03	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Selenium
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.884253
Maximum detected value (mg/kg, dry weight):	3.125

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E-01	mean
Daily exposure (mg/kg-day)	1.8E-01	max

Hazard Quotients

BTAG Low HQ:	4.7E-01	mean
BTAG High HQ:	1.2E-01	mean
BTAG Low HQ:	7.7E-01	max
BTAG High HQ:	1.9E-01	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Zinc
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	130.5518
Maximum detected value (mg/kg, dry weight):	146.3415

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	330
Maximum detected value (mg/kg, dry weight):	330

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	8.4E+00	mean
Daily exposure (mg/kg-day)	9.3E+00	max

Hazard Quotients

BTAG Low HQ:	4.9E-01	mean
BTAG High HQ:	4.9E-02	mean
BTAG Low HQ:	5.4E-01	max
BTAG High HQ:	5.4E-02	max

Tier I - Summary of Hazard Quotients

Receptor: Sea Lion
Location: SW21

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	--	--	--	--	3.2E-02	--	--	--	--	--	--
LOAEL HQ:	--	--	--	--	1.5E-03	--	--	--	--	--	--
BTAG Low HQ:	1.6E-02	6.9E-02	1.0E-02	**1.4E+00**	#VALUE!	2.0E-01	1.8E-01	1.2E-01	4.8E-01	8.4E-01	3.2E-01
BTAG High HQ:	6.5E-04	1.9E-02	1.7E-04	9.9E-02	#VALUE!	8.5E-04	7.3E-04	1.2E-02	2.0E-03	3.5E-02	7.5E-03
MAXIMUM											
NOAEL HQ:	--	--	--	--	4.6E-02	--	--	--	--	--	--
LOAEL HQ:	--	--	--	--	2.2E-03	--	--	--	--	--	--
BTAG Low HQ:	2.0E-02	8.0E-02	1.7E-02	**1.6E+00**	#VALUE!	2.7E-01	2.4E-01	1.3E-01	4.9E-01	**1.4E+00**	3.6E-01
BTAG High HQ:	8.0E-04	2.2E-02	2.8E-04	1.1E-01	#VALUE!	1.1E-03	9.8E-04	1.3E-02	2.0E-03	5.7E-02	8.4E-03

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Benzo[a]pyrene
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.928668
Maximum detected value (mg/kg, dry weight):	1.146497

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.5
Maximum detected value (mg/kg, dry weight):	1.5

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.31
BTAG High (mg/kg-day):	32.8

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.1E-02	mean
Daily exposure (mg/kg-day)	2.6E-02	max

Hazard Quotients

BTAG Low HQ:	1.6E-02	mean
BTAG High HQ:	6.5E-04	mean
BTAG Low HQ:	2.0E-02	max
BTAG High HQ:	8.0E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Total PCB Congeners
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.024226
Maximum detected value (mg/kg, dry weight):	1.19863

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	3.4
Maximum detected value (mg/kg, dry weight):	3.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.36
BTAG High (mg/kg-day):	1.28

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.5E-02	mean
Daily exposure (mg/kg-day)	2.9E-02	max

Hazard Quotients

BTAG Low HQ:	6.9E-02	mean
BTAG High HQ:	1.9E-02	mean
BTAG Low HQ:	8.0E-02	max
BTAG High HQ:	2.2E-02	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Tributyltin
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.110363
Maximum detected value (mg/kg, dry weight):	0.1875

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.17
Maximum detected value (mg/kg, dry weight):	0.17

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.25
BTAG High (mg/kg-day):	15

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.5E-03	mean
Daily exposure (mg/kg-day)	4.2E-03	max

Hazard Quotients

BTAG Low HQ:	1.0E-02	mean
BTAG High HQ:	1.7E-04	mean
BTAG Low HQ:	1.7E-02	max
BTAG High HQ:	2.8E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Arsenic
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	20.72678
Maximum detected value (mg/kg, dry weight):	22.56098

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	11
Maximum detected value (mg/kg, dry weight):	11

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.32
BTAG High (mg/kg-day):	4.7

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.6E-01	mean
Daily exposure (mg/kg-day)	5.0E-01	max

Hazard Quotients

BTAG Low HQ:	1.4E+00	mean
BTAG High HQ:	9.9E-02	mean
BTAG Low HQ:	1.6E+00	max
BTAG High HQ:	1.1E-01	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Cadmium
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.273217
Maximum detected value (mg/kg, dry weight):	0.323171

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.51
Maximum detected value (mg/kg, dry weight):	0.51

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.06
BTAG High (mg/kg-day):	2.64

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.4E-03	mean
Daily exposure (mg/kg-day)	7.5E-03	max

Hazard Quotients

BTAG Low HQ:	1.1E-01	mean
BTAG High HQ:	2.4E-03	mean
BTAG Low HQ:	1.2E-01	max
BTAG High HQ:	2.8E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Chromium
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.597577
Maximum detected value (mg/kg, dry weight):	4.6875

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	70
Maximum detected value (mg/kg, dry weight):	70

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	3.3
LOAEL (mg/kg-day):	69
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E-01	mean
Daily exposure (mg/kg-day)	1.5E-01	max

Hazard Quotients

NOAEL HQ:	3.2E-02	mean
LOAEL HQ:	1.5E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	4.6E-02	max
LOAEL HQ:	2.2E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Copper
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	16.28533
Maximum detected value (mg/kg, dry weight):	24.21875

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	260
Maximum detected value (mg/kg, dry weight):	260

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.67
BTAG High (mg/kg-day):	632

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.4E-01	mean
Daily exposure (mg/kg-day)	7.1E-01	max

Hazard Quotients

BTAG Low HQ:	2.0E-01	mean
BTAG High HQ:	8.5E-04	mean
BTAG Low HQ:	2.7E-01	max
BTAG High HQ:	1.1E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Lead
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	4.253028
Maximum detected value (mg/kg, dry weight):	7.03125

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	120
Maximum detected value (mg/kg, dry weight):	120

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1
BTAG High (mg/kg-day):	241

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.8E-01	mean
Daily exposure (mg/kg-day)	2.4E-01	max

Hazard Quotients

BTAG Low HQ:	1.8E-01	mean
BTAG High HQ:	7.3E-04	mean
BTAG Low HQ:	2.4E-01	max
BTAG High HQ:	9.8E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Total Mercury
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.106326
Maximum detected value (mg/kg, dry weight):	0.116438

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.4
Maximum detected value (mg/kg, dry weight):	1.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.027
BTAG High (mg/kg-day):	0.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.3E-03	mean
Daily exposure (mg/kg-day)	3.5E-03	max

Hazard Quotients

BTAG Low HQ:	1.2E-01	mean
BTAG High HQ:	1.2E-02	mean
BTAG Low HQ:	1.3E-01	max
BTAG High HQ:	1.3E-02	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Nickel
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.43607
Maximum detected value (mg/kg, dry weight):	2.5

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	14
Maximum detected value (mg/kg, dry weight):	14

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.133
BTAG High (mg/kg-day):	31.6

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.3E-02	mean
Daily exposure (mg/kg-day)	6.5E-02	max

Hazard Quotients

BTAG Low HQ:	4.8E-01	mean
BTAG High HQ:	2.0E-03	mean
BTAG Low HQ:	4.9E-01	max
BTAG High HQ:	2.0E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Selenium
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.884253
Maximum detected value (mg/kg, dry weight):	3.125

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.05
BTAG High (mg/kg-day):	1.21

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.2E-02	mean
Daily exposure (mg/kg-day)	6.9E-02	max

Hazard Quotients

BTAG Low HQ:	8.4E-01	mean
BTAG High HQ:	3.5E-02	mean
BTAG Low HQ:	1.4E+00	max
BTAG High HQ:	5.7E-02	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Zinc
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	130.5518
Maximum detected value (mg/kg, dry weight):	146.3415

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	330
Maximum detected value (mg/kg, dry weight):	330

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	9.6
BTAG High (mg/kg-day):	411

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.1E+00	mean
Daily exposure (mg/kg-day)	3.4E+00	max

Hazard Quotients

BTAG Low HQ:	3.2E-01	mean
BTAG High HQ:	7.5E-03	mean
BTAG Low HQ:	3.6E-01	max
BTAG High HQ:	8.4E-03	max

Tier I - Summary of Hazard Quotients

Receptor: CA Least Tern
Location: SW21

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	8.4E-01	--	--	--	6.2E-01	--	--	--	--	--	--
LOAEL HQ:	8.4E-02	--	--	--	1.2E-01	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	**1.5E+00**	1.9E-02	4.7E-01	#VALUE!	**1.2E+00**	**6.3E+01**	4.4E-01	2.5E-01	**1.0E+00**	9.9E-01
BTAG High HQ:	#VALUE!	1.1E-01	3.1E-04	1.2E-01	#VALUE!	5.3E-02	1.0E-01	9.6E-02	6.0E-03	2.5E-01	9.9E-02
MAXIMUM											
NOAEL HQ:	**1.0E+00**	--	--	--	9.1E-01	--	--	--	--	--	--
LOAEL HQ:	1.0E-01	--	--	--	1.8E-01	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	**1.7E+00**	3.2E-02	5.1E-01	#VALUE!	**1.6E+00**	**8.8E+01**	4.7E-01	2.5E-01	**1.7E+00**	**1.1E+00**
BTAG High HQ:	#VALUE!	1.2E-01	5.1E-04	1.3E-01	#VALUE!	7.2E-02	1.4E-01	1.0E-01	6.2E-03	4.1E-01	1.1E-01

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Benzo[a]pyrene
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.928668
Maximum detected value (mg/kg, dry weight):	1.146497

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.5
Maximum detected value (mg/kg, dry weight):	1.5

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E-01	mean
Daily exposure (mg/kg-day)	1.4E-01	max

Hazard Quotients

NOAEL HQ:	8.4E-01	mean
LOAEL HQ:	8.4E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	1.0E+00	max
LOAEL HQ:	1.0E-01	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Total PCB Congeners
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.024226
Maximum detected value (mg/kg, dry weight):	1.19863

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	3.4
Maximum detected value (mg/kg, dry weight):	3.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.4E-01	mean
Daily exposure (mg/kg-day)	1.6E-01	max

Hazard Quotients

BTAG Low HQ:	1.5E+00	mean
BTAG High HQ:	1.1E-01	mean
BTAG Low HQ:	1.7E+00	max
BTAG High HQ:	1.2E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Tributyltin
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.110363
Maximum detected value (mg/kg, dry weight):	0.1875

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.17
Maximum detected value (mg/kg, dry weight):	0.17

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.4E-02	mean
Daily exposure (mg/kg-day)	2.3E-02	max

Hazard Quotients

BTAG Low HQ:	1.9E-02	mean
BTAG High HQ:	3.1E-04	mean
BTAG Low HQ:	3.2E-02	max
BTAG High HQ:	5.1E-04	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Arsenic
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	20.72678
Maximum detected value (mg/kg, dry weight):	22.56098

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	11
Maximum detected value (mg/kg, dry weight):	11

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.6E+00	mean
Daily exposure (mg/kg-day)	2.8E+00	max

Hazard Quotients

BTAG Low HQ:	4.7E-01	mean
BTAG High HQ:	1.2E-01	mean
BTAG Low HQ:	5.1E-01	max
BTAG High HQ:	1.3E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Cadmium
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.273217
Maximum detected value (mg/kg, dry weight):	0.323171

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.51
Maximum detected value (mg/kg, dry weight):	0.51

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.5E-02	mean
Daily exposure (mg/kg-day)	4.1E-02	max

Hazard Quotients

BTAG Low HQ:	4.4E-01	mean
BTAG High HQ:	3.4E-03	mean
BTAG Low HQ:	5.1E-01	max
BTAG High HQ:	3.9E-03	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Chromium
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.597577
Maximum detected value (mg/kg, dry weight):	4.6875

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	70
Maximum detected value (mg/kg, dry weight):	70

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.3E-01	mean
Daily exposure (mg/kg-day)	7.9E-01	max

Hazard Quotients

NOAEL HQ:	6.2E-01	mean
LOAEL HQ:	1.2E-01	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	9.1E-01	max
LOAEL HQ:	1.8E-01	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Copper
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	16.28533
Maximum detected value (mg/kg, dry weight):	24.21875

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	260
Maximum detected value (mg/kg, dry weight):	260

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.8E+00	mean
Daily exposure (mg/kg-day)	3.8E+00	max

Hazard Quotients

BTAG Low HQ:	1.2E+00	mean
BTAG High HQ:	5.3E-02	mean
BTAG Low HQ:	1.6E+00	max
BTAG High HQ:	7.2E-02	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Lead
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	4.253028
Maximum detected value (mg/kg, dry weight):	7.03125

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	120
Maximum detected value (mg/kg, dry weight):	120

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	8.9E-01	mean
Daily exposure (mg/kg-day)	1.2E+00	max

Hazard Quotients

BTAG Low HQ:	6.3E+01	mean
BTAG High HQ:	1.0E-01	mean
BTAG Low HQ:	8.8E+01	max
BTAG High HQ:	1.4E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Total Mercury
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.106326
Maximum detected value (mg/kg, dry weight):	0.116438

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.4
Maximum detected value (mg/kg, dry weight):	1.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.7E-02	mean
Daily exposure (mg/kg-day)	1.9E-02	max

Hazard Quotients

BTAG Low HQ:	4.4E-01	mean
BTAG High HQ:	9.6E-02	mean
BTAG Low HQ:	4.7E-01	max
BTAG High HQ:	1.0E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Nickel
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.43607
Maximum detected value (mg/kg, dry weight):	2.5

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	14
Maximum detected value (mg/kg, dry weight):	14

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.4E-01	mean
Daily exposure (mg/kg-day)	3.5E-01	max

Hazard Quotients

BTAG Low HQ:	2.5E-01	mean
BTAG High HQ:	6.0E-03	mean
BTAG Low HQ:	2.5E-01	max
BTAG High HQ:	6.2E-03	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Selenium
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.884253
Maximum detected value (mg/kg, dry weight):	3.125

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.3E-01	mean
Daily exposure (mg/kg-day)	3.9E-01	max

Hazard Quotients

BTAG Low HQ:	1.0E+00	mean
BTAG High HQ:	2.5E-01	mean
BTAG Low HQ:	1.7E+00	max
BTAG High HQ:	4.1E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Zinc
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.036
Food ingestion rate (kg/day dry wt):	0.0044
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	130.5518
Maximum detected value (mg/kg, dry weight):	146.3415

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	330
Maximum detected value (mg/kg, dry weight):	330

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.7E+01	mean
Daily exposure (mg/kg-day)	1.9E+01	max

Hazard Quotients

BTAG Low HQ:	9.9E-01	mean
BTAG High HQ:	9.9E-02	mean
BTAG Low HQ:	1.1E+00	max
BTAG High HQ:	1.1E-01	max

Tier I - Summary of Hazard Quotients

Receptor: Green Turtle
Location: SW21

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	2.4E-02	--	--	--	2.6E-02	--	--	--	--	--	--
LOAEL HQ:	2.4E-03	--	--	--	5.2E-03	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	4.5E-02	5.4E-04	1.3E-02	#VALUE!	4.5E-02	**2.7E+00**	1.6E-02	7.7E-03	2.8E-02	2.9E-02
BTAG High HQ:	#VALUE!	3.2E-03	8.6E-06	3.2E-03	#VALUE!	2.0E-03	4.3E-03	3.5E-03	1.9E-04	6.8E-03	2.9E-03
MAXIMUM											
NOAEL HQ:	2.9E-02	--	--	--	3.4E-02	--	--	--	--	--	--
LOAEL HQ:	2.9E-03	--	--	--	6.7E-03	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	5.1E-02	8.8E-04	1.4E-02	#VALUE!	5.6E-02	**3.3E+00**	1.7E-02	7.9E-03	4.5E-02	3.2E-02
BTAG High HQ:	#VALUE!	3.6E-03	1.4E-05	3.4E-03	#VALUE!	2.5E-03	5.3E-03	3.6E-03	1.9E-04	1.1E-02	3.2E-03

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Benzo[a]pyrene
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.928668
Maximum detected value (mg/kg, dry weight):	1.146497

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.5
Maximum detected value (mg/kg, dry weight):	1.5

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.3E-03	mean
Daily exposure (mg/kg-day)	4.0E-03	max

Hazard Quotients

NOAEL HQ:	2.4E-02	mean
LOAEL HQ:	2.4E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	2.9E-02	max
LOAEL HQ:	2.9E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Total PCB Congeners
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.024226
Maximum detected value (mg/kg, dry weight):	1.19863

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	3.4
Maximum detected value (mg/kg, dry weight):	3.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.0E-03	mean
Daily exposure (mg/kg-day)	4.6E-03	max

Hazard Quotients

BTAG Low HQ:	4.5E-02	mean
BTAG High HQ:	3.2E-03	mean
BTAG Low HQ:	5.1E-02	max
BTAG High HQ:	3.6E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Tributyltin
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.110363
Maximum detected value (mg/kg, dry weight):	0.1875

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.17
Maximum detected value (mg/kg, dry weight):	0.17

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.9E-04	mean
Daily exposure (mg/kg-day)	6.5E-04	max

Hazard Quotients

BTAG Low HQ:	5.4E-04	mean
BTAG High HQ:	8.6E-06	mean
BTAG Low HQ:	8.8E-04	max
BTAG High HQ:	1.4E-05	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Arsenic
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	20.72678
Maximum detected value (mg/kg, dry weight):	22.56098

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	11
Maximum detected value (mg/kg, dry weight):	11

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.0E-02	mean
Daily exposure (mg/kg-day)	7.6E-02	max

Hazard Quotients

BTAG Low HQ:	1.3E-02	mean
BTAG High HQ:	3.2E-03	mean
BTAG Low HQ:	1.4E-02	max
BTAG High HQ:	3.4E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Cadmium
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.273217
Maximum detected value (mg/kg, dry weight):	0.323171

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.51
Maximum detected value (mg/kg, dry weight):	0.51

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.9E-04	mean
Daily exposure (mg/kg-day)	1.2E-03	max

Hazard Quotients

BTAG Low HQ:	1.2E-02	mean
BTAG High HQ:	9.5E-05	mean
BTAG Low HQ:	1.4E-02	max
BTAG High HQ:	1.1E-04	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Chromium
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.597577
Maximum detected value (mg/kg, dry weight):	4.6875

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	70
Maximum detected value (mg/kg, dry weight):	70

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.2E-02	mean
Daily exposure (mg/kg-day)	2.9E-02	max

Hazard Quotients

NOAEL HQ:	2.6E-02	mean
LOAEL HQ:	5.2E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	3.4E-02	max
LOAEL HQ:	6.7E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Copper
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	16.28533
Maximum detected value (mg/kg, dry weight):	24.21875

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	260
Maximum detected value (mg/kg, dry weight):	260

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.0E-01	mean
Daily exposure (mg/kg-day)	1.3E-01	max

Hazard Quotients

BTAG Low HQ:	4.5E-02	mean
BTAG High HQ:	2.0E-03	mean
BTAG Low HQ:	5.6E-02	max
BTAG High HQ:	2.5E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Lead
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	4.253028
Maximum detected value (mg/kg, dry weight):	7.03125

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	120
Maximum detected value (mg/kg, dry weight):	120

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.7E-02	mean
Daily exposure (mg/kg-day)	4.6E-02	max

Hazard Quotients

BTAG Low HQ:	2.7E+00	mean
BTAG High HQ:	4.3E-03	mean
BTAG Low HQ:	3.3E+00	max
BTAG High HQ:	5.3E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Total Mercury
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.106326
Maximum detected value (mg/kg, dry weight):	0.116438

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.4
Maximum detected value (mg/kg, dry weight):	1.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.2E-04	mean
Daily exposure (mg/kg-day)	6.5E-04	max

Hazard Quotients

BTAG Low HQ:	1.6E-02	mean
BTAG High HQ:	3.5E-03	mean
BTAG Low HQ:	1.7E-02	max
BTAG High HQ:	3.6E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Nickel
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.43607
Maximum detected value (mg/kg, dry weight):	2.5

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	14
Maximum detected value (mg/kg, dry weight):	14

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E-02	mean
Daily exposure (mg/kg-day)	1.1E-02	max

Hazard Quotients

BTAG Low HQ:	7.7E-03	mean
BTAG High HQ:	1.9E-04	mean
BTAG Low HQ:	7.9E-03	max
BTAG High HQ:	1.9E-04	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Selenium
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.884253
Maximum detected value (mg/kg, dry weight):	3.125

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.3E-03	mean
Daily exposure (mg/kg-day)	1.0E-02	max

Hazard Quotients

BTAG Low HQ:	2.8E-02	mean
BTAG High HQ:	6.8E-03	mean
BTAG Low HQ:	4.5E-02	max
BTAG High HQ:	1.1E-02	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Zinc
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	130.5518
Maximum detected value (mg/kg, dry weight):	146.3415

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	330
Maximum detected value (mg/kg, dry weight):	330

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.9E-01	mean
Daily exposure (mg/kg-day)	5.4E-01	max

Hazard Quotients

BTAG Low HQ:	2.9E-02	mean
BTAG High HQ:	2.9E-03	mean
BTAG Low HQ:	3.2E-02	max
BTAG High HQ:	3.2E-03	max

Tier I - Summary of Hazard Quotients

Receptor: **Brown Pelican**
Location: **SW21**

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	5.6E-01	--	--	--	3.9E-01	--	--	--	--	--	--
LOAEL HQ:	5.6E-02	--	--	--	7.7E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	9.9E-01	1.3E-02	3.1E-01	#VALUE!	7.7E-01	**4.0E+01**	2.8E-01	1.6E-01	6.7E-01	6.5E-01
BTAG High HQ:	#VALUE!	7.0E-02	2.0E-04	7.7E-02	#VALUE!	3.4E-02	6.3E-02	6.1E-02	3.9E-03	1.7E-01	6.5E-02
MAXIMUM											
NOAEL HQ:	6.8E-01	--	--	--	5.8E-01	--	--	--	--	--	--
LOAEL HQ:	6.8E-02	--	--	--	1.2E-01	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	**1.1E+00**	2.1E-02	3.4E-01	#VALUE!	**1.0E+00**	**5.6E+01**	3.0E-01	1.6E-01	**1.1E+00**	7.2E-01
BTAG High HQ:	#VALUE!	8.1E-02	3.4E-04	8.4E-02	#VALUE!	4.6E-02	8.9E-02	6.6E-02	4.0E-03	2.7E-01	7.2E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Benzo[a]pyrene
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.928668
Maximum detected value (mg/kg, dry weight):	1.146497

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.5
Maximum detected value (mg/kg, dry weight):	1.5

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.8E-02	mean
Daily exposure (mg/kg-day)	9.5E-02	max

Hazard Quotients

NOAEL HQ:	5.6E-01	mean
LOAEL HQ:	5.6E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	6.8E-01	max
LOAEL HQ:	6.8E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

BAP					
180	15.7	100	0.157		
150	14.6	100	0.146		
120	16.4	100	0.164		
130	14.8	100	0.148		
110	12.8	100	0.128		
138			**0.1486**	928.6676	
1146.497					

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Total PCB Congeners
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.024226
Maximum detected value (mg/kg, dry weight):	1.19863

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	3.4
Maximum detected value (mg/kg, dry weight):	3.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	8.9E-02	mean
Daily exposure (mg/kg-day)	1.0E-01	max

Hazard Quotients

BTAG Low HQ:	9.9E-01	mean
BTAG High HQ:	7.0E-02	mean
BTAG Low HQ:	1.1E+00	max
BTAG High HQ:	8.1E-02	max

	PCB Cong	Total Solids			
	143	15.7	100	0.157	
	175	14.6	100	0.146	
	170	16.4	100	0.164	
	167	14.8	100	0.148	
	106	12.8	100	0.128	
	152.2			**0.1486**	**1024.226**
	1198.63				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Tributyltin
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.110363
Maximum detected value (mg/kg, dry weight):	0.1875

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.17
Maximum detected value (mg/kg, dry weight):	0.17

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.2E-03	mean
Daily exposure (mg/kg-day)	1.5E-02	max

Hazard Quotients

BTAG Low HQ:	1.3E-02	mean
BTAG High HQ:	2.0E-04	mean
BTAG Low HQ:	2.1E-02	max
BTAG High HQ:	3.4E-04	max

TBT	Total Solids				
13	15.7	100	0.157		
14	14.6	100	0.146		
16	16.4	100	0.164		
15	14.8	100	0.148		
24	12.8	100	0.128		
16.4			**0.1486**	**110.3634**	
187.5					

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Arsenic
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	20.72678
Maximum detected value (mg/kg, dry weight):	22.56098

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	11
Maximum detected value (mg/kg, dry weight):	11

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.7E+00	mean
Daily exposure (mg/kg-day)	1.8E+00	max

Hazard Quotients

BTAG Low HQ:	3.1E-01	mean
BTAG High HQ:	7.7E-02	mean
BTAG Low HQ:	3.4E-01	max
BTAG High HQ:	8.4E-02	max

	Arsenic	Total Solids			
	3.1	15.7	100	0.157	
	3.1	14.6	100	0.146	
	3.7	16.4	100	0.164	
	2.9	14.8	100	0.148	
	2.6	12.8	100	0.128	
	3.08			**0.1486**	**20.72678**
	22.56098				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Cadmium
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.273217
Maximum detected value (mg/kg, dry weight):	0.323171

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.51
Maximum detected value (mg/kg, dry weight):	0.51

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.3E-02	mean
Daily exposure (mg/kg-day)	2.7E-02	max

Hazard Quotients

BTAG Low HQ:	2.9E-01	mean
BTAG High HQ:	2.2E-03	mean
BTAG Low HQ:	3.4E-01	max
BTAG High HQ:	2.6E-03	max

	Cadmium	Total Solids			
	0.033	15.7	100	0.157	
	0.037	14.6	100	0.146	
	0.053	16.4	100	0.164	
	0.042	14.8	100	0.148	
	0.038	12.8	100	0.128	
	0.0406			**0.1486**	**0.273217**
	0.323171				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Chromium
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.597577
Maximum detected value (mg/kg, dry weight):	4.6875

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	70
Maximum detected value (mg/kg, dry weight):	70

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.3E-01	mean
Daily exposure (mg/kg-day)	5.0E-01	max

Hazard Quotients

NOAEL HQ:	3.9E-01	mean
LOAEL HQ:	7.7E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	5.8E-01	max
LOAEL HQ:	1.2E-01	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

	Chromium	Total Solids			
	0.32	15.7	100	0.157	
	0.32	14.6	100	0.146	
	0.35	16.4	100	0.164	
	0.34	14.8	100	0.148	
	0.6	12.8	100	0.128	
	0.386			**0.1486**	**2.597577**
	4.6875				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Copper
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	16.28533
Maximum detected value (mg/kg, dry weight):	24.21875

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	260
Maximum detected value (mg/kg, dry weight):	260

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.8E+00	mean
Daily exposure (mg/kg-day)	2.4E+00	max

Hazard Quotients

BTAG Low HQ:	7.7E-01	mean
BTAG High HQ:	3.4E-02	mean
BTAG Low HQ:	1.0E+00	max
BTAG High HQ:	4.6E-02	max

Copper	Total Solids			
2.4	15.7	100	0.157	
2	14.6	100	0.146	
2.4	16.4	100	0.164	
2.2	14.8	100	0.148	
3.1	12.8	100	0.128	
2.42			**0.1486**	**16.28533**
24.21875				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Lead
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	4.253028
Maximum detected value (mg/kg, dry weight):	7.03125

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	120
Maximum detected value (mg/kg, dry weight):	120

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.5E-01	mean
Daily exposure (mg/kg-day)	7.8E-01	max

Hazard Quotients

BTAG Low HQ:	4.0E+01	mean
BTAG High HQ:	6.3E-02	mean
BTAG Low HQ:	5.6E+01	max
BTAG High HQ:	8.9E-02	max

Lead	Total Solids			
0.46	15.7	100	0.157	
0.53	14.6	100	0.146	
0.69	16.4	100	0.164	
0.58	14.8	100	0.148	
0.9	12.8	100	0.128	
0.632			**0.1486**	**4.253028**
7.03125				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Total Mercury
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.106326
Maximum detected value (mg/kg, dry weight):	0.116438

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.4
Maximum detected value (mg/kg, dry weight):	1.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E-02	mean
Daily exposure (mg/kg-day)	1.2E-02	max

Hazard Quotients

BTAG HQ:	2.8E-01	mean
BTAG HQ:	6.1E-02	mean
BTAG Low HQ:	3.0E-01	max
BTAG High HQ:	6.6E-02	max

Mercury	Total Solids			
0.016	15.7	100	0.157	
0.017	14.6	100	0.146	
0.017	16.4	100	0.164	
0.017	14.8	100	0.148	
0.012	12.8	100	0.128	
0.0158			**0.1486**	**0.106326**
0.116438				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Nickel
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.43607
Maximum detected value (mg/kg, dry weight):	2.5

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	14
Maximum detected value (mg/kg, dry weight):	14

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.2E-01	mean
Daily exposure (mg/kg-day)	2.3E-01	max

Hazard Quotients

BTAG Low HQ:	1.6E-01	mean
BTAG High HQ:	3.9E-03	mean
BTAG Low HQ:	1.6E-01	max
BTAG High HQ:	4.0E-03	max

Nickel	Total Solids			
0.36	15.7	100	0.157	
0.31	14.6	100	0.146	
0.41	16.4	100	0.164	
0.36	14.8	100	0.148	
0.37	12.8	100	0.128	
0.362			**0.1486**	**2.43607**
2.5				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Selenium
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845	
Food ingestion rate (kg/day dry wt):	0.23	
Sediment ingestion rate (kg/day dry wt):	0.005	
Area Use Factor (unitless):	1	0.004
Time Use Factor (unitless):	1	

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.884253
Maximum detected value (mg/kg, dry weight):	3.125

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.5E-01	mean
Daily exposure (mg/kg-day)	2.5E-01	max

Hazard Quotients

BTAG Low HQ:	6.7E-01	mean
BTAG High HQ:	1.7E-01	mean
BTAG Low HQ:	1.1E+00	max
BTAG High HQ:	2.7E-01	max

Selenium	Total Solids			
0.2	15.7	100	0.157	
0.2	14.6	100	0.146	
0.3	16.4	100	0.164	
0.3	14.8	100	0.148	
0.4	12.8	100	0.128	
0.28			**0.1486**	**1.884253**
3.125				

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Zinc
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	130.5518
Maximum detected value (mg/kg, dry weight):	146.3415

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	330
Maximum detected value (mg/kg, dry weight):	330

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E+01	mean
Daily exposure (mg/kg-day)	1.2E+01	max

Hazard Quotients

BTAG Low HQ:	6.5E-01	mean
BTAG High HQ:	6.5E-02	mean
BTAG Low HQ:	7.2E-01	max
BTAG High HQ:	7.2E-02	max

Zinc	Total Solids				
18	15.7	100	0.157		
18	14.6	100	0.146		
24	16.4	100	0.164		
18	14.8	100	0.148		
19	12.8	100	0.128		
19.4			**0.1486**	**130.5518**	
146.3415					

Tier I - Summary of Hazard Quotients

Receptor: Western Grebe
Location: SW21

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	4.2E-01	--	--	--	4.8E-01	--	--	--	--	--	--
LOAEL HQ:	4.2E-02	--	--	--	9.7E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	7.9E-01	9.5E-03	2.2E-01	#VALUE!	8.4E-01	**5.0E+01**	2.9E-01	1.4E-01	4.8E-01	5.1E-01
BTAG High HQ:	#VALUE!	5.6E-02	1.5E-04	5.6E-02	#VALUE!	3.7E-02	8.0E-02	6.3E-02	3.4E-03	1.2E-01	5.1E-02
MAXIMUM											
NOAEL HQ:	5.1E-01	--	--	--	6.2E-01	--	--	--	--	--	--
LOAEL HQ:	5.1E-02	--	--	--	1.2E-01	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	9.0E-01	1.6E-02	2.4E-01	#VALUE!	**1.0E+00**	**6.1E+01**	3.1E-01	1.4E-01	7.9E-01	5.6E-01
BTAG High HQ:	#VALUE!	6.4E-02	2.5E-04	6.0E-02	#VALUE!	4.5E-02	9.8E-02	6.7E-02	3.5E-03	2.0E-01	5.6E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Benzo[a]pyrene
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.928668
Maximum detected value (mg/kg, dry weight):	1.146497

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.5
Maximum detected value (mg/kg, dry weight):	1.5

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.9E-02	mean
Daily exposure (mg/kg-day)	7.1E-02	max

Hazard Quotients

NOAEL HQ:	4.2E-01	mean
LOAEL HQ:	4.2E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	5.1E-01	max
LOAEL HQ:	5.1E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Total PCB Congeners
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.024226
Maximum detected value (mg/kg, dry weight):	1.19863

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	3.4
Maximum detected value (mg/kg, dry weight):	3.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.1E-02	mean
Daily exposure (mg/kg-day)	8.1E-02	max

Hazard Quotients

BTAG Low HQ:	7.9E-01	mean
BTAG High HQ:	5.6E-02	mean
BTAG Low HQ:	9.0E-01	max
BTAG High HQ:	6.4E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Tributyltin
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.110363
Maximum detected value (mg/kg, dry weight):	0.1875

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.17
Maximum detected value (mg/kg, dry weight):	0.17

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.9E-03	mean
Daily exposure (mg/kg-day)	1.1E-02	max

Hazard Quotients

BTAG Low HQ:	9.5E-03	mean
BTAG High HQ:	1.5E-04	mean
BTAG Low HQ:	1.6E-02	max
BTAG High HQ:	2.5E-04	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Arsenic
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	20.72678
Maximum detected value (mg/kg, dry weight):	22.56098

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	11
Maximum detected value (mg/kg, dry weight):	11

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E+00	mean
Daily exposure (mg/kg-day)	1.3E+00	max

Hazard Quotients

BTAG Low HQ:	2.2E-01	mean
BTAG High HQ:	5.6E-02	mean
BTAG Low HQ:	2.4E-01	max
BTAG High HQ:	6.0E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Cadmium
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.273217
Maximum detected value (mg/kg, dry weight):	0.323171

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.51
Maximum detected value (mg/kg, dry weight):	0.51

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.8E-02	mean
Daily exposure (mg/kg-day)	2.0E-02	max

Hazard Quotients

BTAG Low HQ:	2.2E-01	mean
BTAG High HQ:	1.7E-03	mean
BTAG Low HQ:	2.5E-01	max
BTAG High HQ:	2.0E-03	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Chromium
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.597577
Maximum detected value (mg/kg, dry weight):	4.6875

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	70
Maximum detected value (mg/kg, dry weight):	70

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.2E-01	mean
Daily exposure (mg/kg-day)	5.4E-01	max

Hazard Quotients

NOAEL HQ:	4.8E-01	mean
LOAEL HQ:	9.7E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	6.2E-01	max
LOAEL HQ:	1.2E-01	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Copper
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	16.28533
Maximum detected value (mg/kg, dry weight):	24.21875

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	260
Maximum detected value (mg/kg, dry weight):	260

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.9E+00	mean
Daily exposure (mg/kg-day)	2.4E+00	max

Hazard Quotients

BTAG Low HQ:	8.4E-01	mean
BTAG High HQ:	3.7E-02	mean
BTAG Low HQ:	1.0E+00	max
BTAG High HQ:	4.5E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Lead
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	4.253028
Maximum detected value (mg/kg, dry weight):	7.03125

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	120
Maximum detected value (mg/kg, dry weight):	120

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.0E-01	mean
Daily exposure (mg/kg-day)	8.6E-01	max

Hazard Quotients

BTAG Low HQ:	5.0E+01	mean
BTAG High HQ:	8.0E-02	mean
BTAG Low HQ:	6.1E+01	max
BTAG High HQ:	9.8E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Total Mercury
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.106326
Maximum detected value (mg/kg, dry weight):	0.116438

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.4
Maximum detected value (mg/kg, dry weight):	1.4

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E-02	mean
Daily exposure (mg/kg-day)	1.2E-02	max

Hazard Quotients

BTAG Low HQ:	2.9E-01	mean
BTAG High HQ:	6.3E-02	mean
BTAG Low HQ:	3.1E-01	max
BTAG High HQ:	6.7E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Nickel
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.43607
Maximum detected value (mg/kg, dry weight):	2.5

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	14
Maximum detected value (mg/kg, dry weight):	14

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.9E-01	mean
Daily exposure (mg/kg-day)	2.0E-01	max

Hazard Quotients

BTAG Low HQ:	1.4E-01	mean
BTAG High HQ:	3.4E-03	mean
BTAG Low HQ:	1.4E-01	max
BTAG High HQ:	3.5E-03	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Selenium
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.884253
Maximum detected value (mg/kg, dry weight):	3.125

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1
Maximum detected value (mg/kg, dry weight):	1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E-01	mean
Daily exposure (mg/kg-day)	1.8E-01	max

Hazard Quotients

BTAG Low HQ:	4.8E-01	mean
BTAG High HQ:	1.2E-01	mean
BTAG Low HQ:	7.9E-01	max
BTAG High HQ:	2.0E-01	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Zinc
Location: SW21

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	130.5518
Maximum detected value (mg/kg, dry weight):	146.3415

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	330
Maximum detected value (mg/kg, dry weight):	330

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	8.7E+00	mean
Daily exposure (mg/kg-day)	9.6E+00	max

Hazard Quotients

BTAG Low HQ:	5.1E-01	mean
BTAG High HQ:	5.1E-02	mean
BTAG Low HQ:	5.6E-01	max
BTAG High HQ:	5.6E-02	max

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Tier I - Summary of Hazard Quotients

Receptor: **Surf Scoter**
Location: **SW28**

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	4.2E-01	--	--	--	3.4E-01	--	--	--	--	--	--
LOAEL HQ:	4.2E-02	--	--	--	6.8E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	5.6E-01	7.2E-03	2.1E-01	#VALUE!	7.1E-01	**3.4E+01**	2.4E-01	1.4E-01	4.1E-01	4.7E-01
BTAG High HQ:	#VALUE!	4.0E-02	1.2E-04	5.3E-02	#VALUE!	3.1E-02	5.5E-02	5.3E-02	3.5E-03	1.0E-01	4.7E-02
MAXIMUM											
NOAEL HQ:	4.1E-01	--	--	--	3.6E-01	--	--	--	--	--	--
LOAEL HQ:	4.1E-02	--	--	--	7.2E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	6.2E-01	8.7E-03	2.3E-01	#VALUE!	7.9E-01	**3.6E+01**	2.7E-01	1.6E-01	6.4E-01	5.6E-01
BTAG High HQ:	#VALUE!	4.4E-02	1.4E-04	5.7E-02	#VALUE!	3.5E-02	5.7E-02	5.8E-02	3.9E-03	1.6E-01	5.6E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Benzo[a]pyrene
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.87969
Maximum detected value (mg/kg, dry weight):	0.858896

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	3.1
Maximum detected value (mg/kg, dry weight):	3.1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.9E-02	mean
Daily exposure (mg/kg-day)	5.8E-02	max

Hazard Quotients

NOAEL HQ:	4.2E-01	mean
LOAEL HQ:	4.2E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	4.1E-01	max
LOAEL HQ:	4.1E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Total PCB Congeners
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.786546
Maximum detected value (mg/kg, dry weight):	0.877419

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.1
Maximum detected value (mg/kg, dry weight):	2.1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.1E-02	mean
Daily exposure (mg/kg-day)	5.6E-02	max

Hazard Quotients

BTAG Low HQ:	5.6E-01	mean
BTAG High HQ:	4.0E-02	mean
BTAG Low HQ:	6.2E-01	max
BTAG High HQ:	4.4E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Tributyltin
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.084088
Maximum detected value (mg/kg, dry weight):	0.103226

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.18
Maximum detected value (mg/kg, dry weight):	0.18

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.3E-03	mean
Daily exposure (mg/kg-day)	6.4E-03	max

Hazard Quotients

BTAG Low HQ:	7.2E-03	mean
BTAG High HQ:	1.2E-04	mean
BTAG Low HQ:	8.7E-03	max
BTAG High HQ:	1.4E-04	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Arsenic
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	19.92238
Maximum detected value (mg/kg, dry weight):	21.47239

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	15
Maximum detected value (mg/kg, dry weight):	15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E+00	mean
Daily exposure (mg/kg-day)	1.2E+00	max

Hazard Quotients

BTAG Low HQ:	2.1E-01	mean
BTAG High HQ:	5.3E-02	mean
BTAG Low HQ:	2.3E-01	max
BTAG High HQ:	5.7E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Cadmium
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.241915
Maximum detected value (mg/kg, dry weight):	0.325153

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.36
Maximum detected value (mg/kg, dry weight):	0.36

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.5E-02	mean
Daily exposure (mg/kg-day)	1.9E-02	max

Hazard Quotients

BTAG Low HQ:	1.8E-01	mean
BTAG High HQ:	1.4E-03	mean
BTAG Low HQ:	2.4E-01	max
BTAG High HQ:	1.9E-03	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Chromium
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.552393
Maximum detected value (mg/kg, dry weight):	1.840491

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	63
Maximum detected value (mg/kg, dry weight):	63

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.9E-01	mean
Daily exposure (mg/kg-day)	3.1E-01	max

Hazard Quotients

NOAEL HQ:	3.4E-01	mean
LOAEL HQ:	6.8E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	3.6E-01	max
LOAEL HQ:	7.2E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Copper
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	13.58344
Maximum detected value (mg/kg, dry weight):	16.56442

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	270
Maximum detected value (mg/kg, dry weight):	270

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.6E+00	mean
Daily exposure (mg/kg-day)	1.8E+00	max

Hazard Quotients

BTAG Low HQ:	7.1E-01	mean
BTAG High HQ:	3.1E-02	mean
BTAG Low HQ:	7.9E-01	max
BTAG High HQ:	3.5E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Lead
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.781371
Maximum detected value (mg/kg, dry weight):	3.128834

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	100
Maximum detected value (mg/kg, dry weight):	100

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.8E-01	mean
Daily exposure (mg/kg-day)	5.0E-01	max

Hazard Quotients

BTAG Low HQ:	3.4E+01	mean
BTAG High HQ:	5.5E-02	mean
BTAG Low HQ:	3.6E+01	max
BTAG High HQ:	5.7E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Total Mercury
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.112549
Maximum detected value (mg/kg, dry weight):	0.129032

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.98
Maximum detected value (mg/kg, dry weight):	0.98

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.5E-03	mean
Daily exposure (mg/kg-day)	1.0E-02	max

Hazard Quotients

BTAG Low HQ:	2.4E-01	mean
BTAG High HQ:	5.3E-02	mean
BTAG Low HQ:	2.7E-01	max
BTAG High HQ:	5.8E-02	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Nickel
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.496766
Maximum detected value (mg/kg, dry weight):	2.944785

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	17
Maximum detected value (mg/kg, dry weight):	17

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.9E-01	mean
Daily exposure (mg/kg-day)	2.2E-01	max

Hazard Quotients

BTAG Low HQ:	1.4E-01	mean
BTAG High HQ:	3.5E-03	mean
BTAG Low HQ:	1.6E-01	max
BTAG High HQ:	3.9E-03	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Selenium
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.617076
Maximum detected value (mg/kg, dry weight):	2.580645

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.1
Maximum detected value (mg/kg, dry weight):	1.1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.4E-02	mean
Daily exposure (mg/kg-day)	1.5E-01	max

Hazard Quotients

BTAG Low HQ:	4.1E-01	mean
BTAG High HQ:	1.0E-01	mean
BTAG Low HQ:	6.4E-01	max
BTAG High HQ:	1.6E-01	max

Hazard Quotient Calculation

Receptor: Surf Scoter
Chemical: Zinc
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.859
Food ingestion rate (kg/day dry wt):	0.048
Sediment ingestion rate (kg/day dry wt):	0.0028
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	125.4851
Maximum detected value (mg/kg, dry weight):	153.3742

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	310
Maximum detected value (mg/kg, dry weight):	310

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	8.0E+00	mean
Daily exposure (mg/kg-day)	9.6E+00	max

Hazard Quotients

BTAG Low HQ:	4.7E-01	mean
BTAG High HQ:	4.7E-02	mean
BTAG Low HQ:	5.6E-01	max
BTAG High HQ:	5.6E-02	max

Tier I - Summary of Hazard Quotients

Receptor: Sea Lion
Location: SW28

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	--	--	--	--	2.3E-02	--	--	--	--	--	--
LOAEL HQ:	--	--	--	--	1.1E-03	--	--	--	--	--	--
BTAG Low HQ:	1.6E-02	5.2E-02	7.9E-03	**1.4E+00**	#VALUE!	1.8E-01	1.3E-01	1.2E-01	5.0E-01	7.3E-01	3.1E-01
BTAG High HQ:	6.5E-04	1.5E-02	1.3E-04	9.5E-02	#VALUE!	7.7E-04	5.4E-04	1.2E-02	2.1E-03	3.0E-02	7.2E-03
MAXIMUM											
NOAEL HQ:	--	--	--	--	2.5E-02	--	--	--	--	--	--
LOAEL HQ:	--	--	--	--	1.2E-03	--	--	--	--	--	--
BTAG Low HQ:	1.6E-02	5.8E-02	9.6E-03	**1.5E+00**	#VALUE!	2.1E-01	1.4E-01	1.3E-01	5.7E-01	1.2E+00	3.7E-01
BTAG High HQ:	6.4E-04	1.6E-02	1.6E-04	1.0E-01	#VALUE!	8.7E-04	5.7E-04	1.3E-02	2.4E-03	4.8E-02	8.7E-03

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Benzo[a]pyrene
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.87969
Maximum detected value (mg/kg, dry weight):	0.858896

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	3.1
Maximum detected value (mg/kg, dry weight):	3.1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.31
BTAG High (mg/kg-day):	32.8

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.1E-02	mean
Daily exposure (mg/kg-day)	2.1E-02	max

Hazard Quotients

BTAG Low HQ:	1.6E-02	mean
BTAG High HQ:	6.5E-04	mean
BTAG Low HQ:	1.6E-02	max
BTAG High HQ:	6.4E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Total PCB Congeners
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.786546
Maximum detected value (mg/kg, dry weight):	0.877419

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.1
Maximum detected value (mg/kg, dry weight):	2.1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.36
BTAG High (mg/kg-day):	1.28

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.9E-02	mean
Daily exposure (mg/kg-day)	2.1E-02	max

Hazard Quotients

BTAG Low HQ:	5.2E-02	mean
BTAG High HQ:	1.5E-02	mean
BTAG Low HQ:	5.8E-02	max
BTAG High HQ:	1.6E-02	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Tributyltin
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.084088
Maximum detected value (mg/kg, dry weight):	0.103226

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.18
Maximum detected value (mg/kg, dry weight):	0.18

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.25
BTAG High (mg/kg-day):	15

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.0E-03	mean
Daily exposure (mg/kg-day)	2.4E-03	max

Hazard Quotients

BTAG Low HQ:	7.9E-03	mean
BTAG High HQ:	1.3E-04	mean
BTAG Low HQ:	9.6E-03	max
BTAG High HQ:	1.6E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Arsenic
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	19.92238
Maximum detected value (mg/kg, dry weight):	21.47239

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	15
Maximum detected value (mg/kg, dry weight):	15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.32
BTAG High (mg/kg-day):	4.7

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.5E-01	mean
Daily exposure (mg/kg-day)	4.8E-01	max

Hazard Quotients

BTAG Low HQ:	1.4E+00	mean
BTAG High HQ:	9.5E-02	mean
BTAG Low HQ:	1.5E+00	max
BTAG High HQ:	1.0E-01	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Cadmium
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.241915
Maximum detected value (mg/kg, dry weight):	0.325153

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.36
Maximum detected value (mg/kg, dry weight):	0.36

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.06
BTAG High (mg/kg-day):	2.64

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.6E-03	mean
Daily exposure (mg/kg-day)	7.4E-03	max

Hazard Quotients

BTAG Low HQ:	9.3E-02	mean
BTAG High HQ:	2.1E-03	mean
BTAG Low HQ:	1.2E-01	max
BTAG High HQ:	2.8E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Chromium
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.552393
Maximum detected value (mg/kg, dry weight):	1.840491

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	63
Maximum detected value (mg/kg, dry weight):	63

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	3.3
LOAEL (mg/kg-day):	69
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	7.7E-02	mean
Daily exposure (mg/kg-day)	8.4E-02	max

Hazard Quotients

NOAEL HQ:	2.3E-02	mean
LOAEL HQ:	1.1E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	2.5E-02	max
LOAEL HQ:	1.2E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Copper
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	13.58344
Maximum detected value (mg/kg, dry weight):	16.56442

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	270
Maximum detected value (mg/kg, dry weight):	270

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.67
BTAG High (mg/kg-day):	632

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.8E-01	mean
Daily exposure (mg/kg-day)	5.5E-01	max

Hazard Quotients

BTAG Low HQ:	1.8E-01	mean
BTAG High HQ:	7.7E-04	mean
BTAG Low HQ:	2.1E-01	max
BTAG High HQ:	8.7E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Lead
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.781371
Maximum detected value (mg/kg, dry weight):	3.128834

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	100
Maximum detected value (mg/kg, dry weight):	100

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1
BTAG High (mg/kg-day):	241

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.3E-01	mean
Daily exposure (mg/kg-day)	1.4E-01	max

Hazard Quotients

BTAG Low HQ:	1.3E-01	mean
BTAG High HQ:	5.4E-04	mean
BTAG Low HQ:	1.4E-01	max
BTAG High HQ:	5.7E-04	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Total Mercury
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.112549
Maximum detected value (mg/kg, dry weight):	0.129032

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.98
Maximum detected value (mg/kg, dry weight):	0.98

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.027
BTAG High (mg/kg-day):	0.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.1E-03	mean
Daily exposure (mg/kg-day)	3.5E-03	max

Hazard Quotients

BTAG Low HQ:	1.2E-01	mean
BTAG High HQ:	1.2E-02	mean
BTAG Low HQ:	1.3E-01	max
BTAG High HQ:	1.3E-02	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Nickel
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.496766
Maximum detected value (mg/kg, dry weight):	2.944785

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	17
Maximum detected value (mg/kg, dry weight):	17

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.133
BTAG High (mg/kg-day):	31.6

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.7E-02	mean
Daily exposure (mg/kg-day)	7.6E-02	max

Hazard Quotients

BTAG Low HQ:	5.0E-01	mean
BTAG High HQ:	2.1E-03	mean
BTAG Low HQ:	5.7E-01	max
BTAG High HQ:	2.4E-03	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Selenium
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.617076
Maximum detected value (mg/kg, dry weight):	2.580645

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.1
Maximum detected value (mg/kg, dry weight):	1.1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.05
BTAG High (mg/kg-day):	1.21

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.6E-02	mean
Daily exposure (mg/kg-day)	5.8E-02	max

Hazard Quotients

BTAG Low HQ:	7.3E-01	mean
BTAG High HQ:	3.0E-02	mean
BTAG Low HQ:	1.2E+00	max
BTAG High HQ:	4.8E-02	max

Hazard Quotient Calculation

Receptor: Sea Lion
Chemical: Zinc
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	45
Food ingestion rate (kg/day dry wt):	0.99
Sediment ingestion rate (kg/day dry wt):	0.0308
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	125.4851
Maximum detected value (mg/kg, dry weight):	153.3742

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	310
Maximum detected value (mg/kg, dry weight):	310

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	9.6
BTAG High (mg/kg-day):	411

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.0E+00	mean
Daily exposure (mg/kg-day)	3.6E+00	max

Hazard Quotients

BTAG Low HQ:	3.1E-01	mean
BTAG High HQ:	7.2E-03	mean
BTAG Low HQ:	3.7E-01	max
BTAG High HQ:	8.7E-03	max

Tier I - Summary of Hazard Quotients

Receptor: CA Least Tern
Location: SW28

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	7.9E-01	--	--	--	3.9E-01	--	--	--	--	--	--
LOAEL HQ:	7.9E-02	--	--	--	7.8E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	**1.1E+00**	1.4E-02	4.3E-01	#VALUE!	9.8E-01	**4.1E+01**	4.0E-01	2.4E-01	8.4E-01	9.0E-01
BTAG High HQ:	#VALUE!	7.7E-02	2.3E-04	1.1E-01	#VALUE!	4.3E-02	6.5E-02	8.7E-02	6.0E-03	2.1E-01	9.0E-02
MAXIMUM											
NOAEL HQ:	7.8E-01	--	--	--	4.3E-01	--	--	--	--	--	--
LOAEL HQ:	7.8E-02	--	--	--	8.6E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	**1.2E+00**	1.7E-02	4.7E-01	#VALUE!	**1.1E+00**	**4.4E+01**	4.5E-01	2.8E-01	**1.3E+00**	**1.1E+00**
BTAG High HQ:	#VALUE!	8.5E-02	2.7E-04	1.2E-01	#VALUE!	5.0E-02	7.0E-02	9.8E-02	6.9E-03	3.3E-01	1.1E-01

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Benzo[a]pyrene
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.045
Food ingestion rate (kg/day dry wt):	0.0053
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.87969
Maximum detected value (mg/kg, dry weight):	0.858896

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	3.1
Maximum detected value (mg/kg, dry weight):	3.1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E-01	mean
Daily exposure (mg/kg-day)	1.1E-01	max

Hazard Quotients

NOAEL HQ:	7.9E-01	mean
LOAEL HQ:	7.9E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	7.8E-01	max
LOAEL HQ:	7.8E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Total PCB Congeners
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.045
Food ingestion rate (kg/day dry wt):	0.0053
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.786546
Maximum detected value (mg/kg, dry weight):	0.877419

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.1
Maximum detected value (mg/kg, dry weight):	2.1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.8E-02	mean
Daily exposure (mg/kg-day)	1.1E-01	max

Hazard Quotients

BTAG Low HQ:	1.1E+00	mean
BTAG High HQ:	7.7E-02	mean
BTAG Low HQ:	1.2E+00	max
BTAG High HQ:	8.5E-02	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Tributyltin
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.045
Food ingestion rate (kg/day dry wt):	0.0053
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.084088
Maximum detected value (mg/kg, dry weight):	0.103226

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.18
Maximum detected value (mg/kg, dry weight):	0.18

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.0E-02	mean
Daily exposure (mg/kg-day)	1.3E-02	max

Hazard Quotients

BTAG Low HQ:	1.4E-02	mean
BTAG High HQ:	2.3E-04	mean
BTAG Low HQ:	1.7E-02	max
BTAG High HQ:	2.7E-04	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Arsenic
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.045
Food ingestion rate (kg/day dry wt):	0.0053
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	19.92238
Maximum detected value (mg/kg, dry weight):	21.47239

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	15
Maximum detected value (mg/kg, dry weight):	15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.4E+00	mean
Daily exposure (mg/kg-day)	2.6E+00	max

Hazard Quotients

BTAG Low HQ:	4.3E-01	mean
BTAG High HQ:	1.1E-01	mean
BTAG Low HQ:	4.7E-01	max
BTAG High HQ:	1.2E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Cadmium
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.045
Food ingestion rate (kg/day dry wt):	0.0053
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.241915
Maximum detected value (mg/kg, dry weight):	0.325153

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.36
Maximum detected value (mg/kg, dry weight):	0.36

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.9E-02	mean
Daily exposure (mg/kg-day)	3.9E-02	max

Hazard Quotients

BTAG Low HQ:	3.7E-01	mean
BTAG High HQ:	2.8E-03	mean
BTAG Low HQ:	4.9E-01	max
BTAG High HQ:	3.8E-03	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Chromium
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.045
Food ingestion rate (kg/day dry wt):	0.0053
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.552393
Maximum detected value (mg/kg, dry weight):	1.840491

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	63
Maximum detected value (mg/kg, dry weight):	63

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.4E-01	mean
Daily exposure (mg/kg-day)	3.7E-01	max

Hazard Quotients

NOAEL HQ:	3.9E-01	mean
LOAEL HQ:	7.8E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	4.3E-01	max
LOAEL HQ:	8.6E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Copper
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.045
Food ingestion rate (kg/day dry wt):	0.0053
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	13.58344
Maximum detected value (mg/kg, dry weight):	16.56442

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	270
Maximum detected value (mg/kg, dry weight):	270

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.3E+00	mean
Daily exposure (mg/kg-day)	2.6E+00	max

Hazard Quotients

BTAG Low HQ:	9.8E-01	mean
BTAG High HQ:	4.3E-02	mean
BTAG Low HQ:	1.1E+00	max
BTAG High HQ:	5.0E-02	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Lead
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.045
Food ingestion rate (kg/day dry wt):	0.0053
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.781371
Maximum detected value (mg/kg, dry weight):	3.128834

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	100
Maximum detected value (mg/kg, dry weight):	100

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.7E-01	mean
Daily exposure (mg/kg-day)	6.1E-01	max

Hazard Quotients

BTAG Low HQ:	4.1E+01	mean
BTAG High HQ:	6.5E-02	mean
BTAG Low HQ:	4.4E+01	max
BTAG High HQ:	7.0E-02	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Total Mercury
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.045
Food ingestion rate (kg/day dry wt):	0.0053
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.112549
Maximum detected value (mg/kg, dry weight):	0.129032

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.98
Maximum detected value (mg/kg, dry weight):	0.98

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.6E-02	mean
Daily exposure (mg/kg-day)	1.8E-02	max

Hazard Quotients

BTAG Low HQ:	4.0E-01	mean
BTAG High HQ:	8.7E-02	mean
BTAG Low HQ:	4.5E-01	max
BTAG High HQ:	9.8E-02	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Nickel
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.045
Food ingestion rate (kg/day dry wt):	0.0053
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.496766
Maximum detected value (mg/kg, dry weight):	2.944785

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	17
Maximum detected value (mg/kg, dry weight):	17

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.4E-01	mean
Daily exposure (mg/kg-day)	3.9E-01	max

Hazard Quotients

BTAG Low HQ:	2.4E-01	mean
BTAG High HQ:	6.0E-03	mean
BTAG Low HQ:	2.8E-01	max
BTAG High HQ:	6.9E-03	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Selenium
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.045
Food ingestion rate (kg/day dry wt):	0.0053
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.617076
Maximum detected value (mg/kg, dry weight):	2.580645

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.1
Maximum detected value (mg/kg, dry weight):	1.1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.9E-01	mean
Daily exposure (mg/kg-day)	3.1E-01	max

Hazard Quotients

BTAG Low HQ:	8.4E-01	mean
BTAG High HQ:	2.1E-01	mean
BTAG Low HQ:	1.3E+00	max
BTAG High HQ:	3.3E-01	max

Hazard Quotient Calculation

Receptor: CA Least Tern
Chemical: Zinc
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.045
Food ingestion rate (kg/day dry wt):	0.0053
Sediment ingestion rate (kg/day dry wt):	0.00011
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	125.4851
Maximum detected value (mg/kg, dry weight):	153.3742

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	310
Maximum detected value (mg/kg, dry weight):	310

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.6E+01	mean
Daily exposure (mg/kg-day)	1.9E+01	max

Hazard Quotients

BTAG Low HQ:	9.0E-01	mean
BTAG High HQ:	9.0E-02	mean
BTAG Low HQ:	1.1E+00	max
BTAG High HQ:	1.1E-01	max

Tier I - Summary of Hazard Quotients

Receptor: Green Turtle
Location: SW28

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	2.5E-02	--	--	--	2.0E-02	--	--	--	--	--	--
LOAEL HQ:	2.5E-03	--	--	--	4.0E-03	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	3.3E-02	4.2E-04	1.2E-02	#VALUE!	4.2E-02	**2.0E+00**	1.4E-02	8.3E-03	2.4E-02	2.7E-02
BTAG High HQ:	#VALUE!	2.3E-03	6.7E-06	3.1E-03	#VALUE!	1.9E-03	3.3E-03	3.1E-03	2.0E-04	5.9E-03	2.7E-03
MAXIMUM											
NOAEL HQ:	2.4E-02	--	--	--	2.1E-02	--	--	--	--	--	--
LOAEL HQ:	2.4E-03	--	--	--	4.3E-03	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	3.6E-02	5.1E-04	1.3E-02	#VALUE!	4.6E-02	**2.1E+00**	1.6E-02	9.4E-03	3.8E-02	3.3E-02
BTAG High HQ:	#VALUE!	2.6E-03	8.1E-06	3.3E-03	#VALUE!	2.0E-03	3.4E-03	3.4E-03	2.3E-04	9.3E-03	3.3E-03

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Benzo[a]pyrene
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.87969
Maximum detected value (mg/kg, dry weight):	0.858896

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	3.1
Maximum detected value (mg/kg, dry weight):	3.1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.5E-03	mean
Daily exposure (mg/kg-day)	3.4E-03	max

Hazard Quotients

NOAEL HQ:	2.5E-02	mean
LOAEL HQ:	2.5E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	2.4E-02	max
LOAEL HQ:	2.4E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Total PCB Congeners
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.786546
Maximum detected value (mg/kg, dry weight):	0.877419

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.1
Maximum detected value (mg/kg, dry weight):	2.1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.0E-03	mean
Daily exposure (mg/kg-day)	3.3E-03	max

Hazard Quotients

BTAG Low HQ:	3.3E-02	mean
BTAG High HQ:	2.3E-03	mean
BTAG Low HQ:	3.6E-02	max
BTAG High HQ:	2.6E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Tributyltin
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.084088
Maximum detected value (mg/kg, dry weight):	0.103226

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.18
Maximum detected value (mg/kg, dry weight):	0.18

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.1E-04	mean
Daily exposure (mg/kg-day)	3.7E-04	max

Hazard Quotients

BTAG Low HQ:	4.2E-04	mean
BTAG High HQ:	6.7E-06	mean
BTAG Low HQ:	5.1E-04	max
BTAG High HQ:	8.1E-06	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Arsenic
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	19.92238
Maximum detected value (mg/kg, dry weight):	21.47239

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	15
Maximum detected value (mg/kg, dry weight):	15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.8E-02	mean
Daily exposure (mg/kg-day)	7.3E-02	max

Hazard Quotients

BTAG Low HQ:	1.2E-02	mean
BTAG High HQ:	3.1E-03	mean
BTAG Low HQ:	1.3E-02	max
BTAG High HQ:	3.3E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Cadmium
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.241915
Maximum detected value (mg/kg, dry weight):	0.325153

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.36
Maximum detected value (mg/kg, dry weight):	0.36

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	8.6E-04	mean
Daily exposure (mg/kg-day)	1.1E-03	max

Hazard Quotients

BTAG Low HQ:	1.1E-02	mean
BTAG High HQ:	8.3E-05	mean
BTAG Low HQ:	1.4E-02	max
BTAG High HQ:	1.1E-04	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Chromium
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.552393
Maximum detected value (mg/kg, dry weight):	1.840491

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	63
Maximum detected value (mg/kg, dry weight):	63

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.7E-02	mean
Daily exposure (mg/kg-day)	1.8E-02	max

Hazard Quotients

NOAEL HQ:	2.0E-02	mean
LOAEL HQ:	4.0E-03	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	2.1E-02	max
LOAEL HQ:	4.3E-03	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Copper
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	13.58344
Maximum detected value (mg/kg, dry weight):	16.56442

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	270
Maximum detected value (mg/kg, dry weight):	270

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.7E-02	mean
Daily exposure (mg/kg-day)	1.1E-01	max

Hazard Quotients

BTAG Low HQ:	4.2E-02	mean
BTAG High HQ:	1.9E-03	mean
BTAG Low HQ:	4.6E-02	max
BTAG High HQ:	2.0E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Lead
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.781371
Maximum detected value (mg/kg, dry weight):	3.128834

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	100
Maximum detected value (mg/kg, dry weight):	100

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.9E-02	mean
Daily exposure (mg/kg-day)	3.0E-02	max

Hazard Quotients

BTAG Low HQ:	2.0E+00	mean
BTAG High HQ:	3.3E-03	mean
BTAG Low HQ:	2.1E+00	max
BTAG High HQ:	3.4E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Total Mercury
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.112549
Maximum detected value (mg/kg, dry weight):	0.129032

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.98
Maximum detected value (mg/kg, dry weight):	0.98

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.6E-04	mean
Daily exposure (mg/kg-day)	6.1E-04	max

Hazard Quotients

BTAG Low HQ:	1.4E-02	mean
BTAG High HQ:	3.1E-03	mean
BTAG Low HQ:	1.6E-02	max
BTAG High HQ:	3.4E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Nickel
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.496766
Maximum detected value (mg/kg, dry weight):	2.944785

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	17
Maximum detected value (mg/kg, dry weight):	17

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E-02	mean
Daily exposure (mg/kg-day)	1.3E-02	max

Hazard Quotients

BTAG Low HQ:	8.3E-03	mean
BTAG High HQ:	2.0E-04	mean
BTAG Low HQ:	9.4E-03	max
BTAG High HQ:	2.3E-04	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Selenium
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.617076
Maximum detected value (mg/kg, dry weight):	2.580645

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.1
Maximum detected value (mg/kg, dry weight):	1.1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.5E-03	mean
Daily exposure (mg/kg-day)	8.6E-03	max

Hazard Quotients

BTAG Low HQ:	2.4E-02	mean
BTAG High HQ:	5.9E-03	mean
BTAG Low HQ:	3.8E-02	max
BTAG High HQ:	9.3E-03	max

Hazard Quotient Calculation

Receptor: Green Turtle
Chemical: Zinc
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	95
Food ingestion rate (kg/day dry wt):	0.31
Sediment ingestion rate (kg/day dry wt):	0.0186
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	125.4851
Maximum detected value (mg/kg, dry weight):	153.3742

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	310
Maximum detected value (mg/kg, dry weight):	310

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	4.7E-01	mean
Daily exposure (mg/kg-day)	5.6E-01	max

Hazard Quotients

BTAG Low HQ:	2.7E-02	mean
BTAG High HQ:	2.7E-03	mean
BTAG Low HQ:	3.3E-02	max
BTAG High HQ:	3.3E-03	max

Hazard Quotient Calculation

Receptor: Brown Pelican
Chemical: Zinc
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	2.845
Food ingestion rate (kg/day dry wt):	0.23
Sediment ingestion rate (kg/day dry wt):	0.005
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	125.4851
Maximum detected value (mg/kg, dry weight):	153.3742

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	310
Maximum detected value (mg/kg, dry weight):	310

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.1E+01	mean
Daily exposure (mg/kg-day)	1.3E+01	max

Hazard Quotients

BTAG Low HQ:	6.2E-01	mean
BTAG High HQ:	6.2E-02	mean
BTAG Low HQ:	7.5E-01	max
BTAG High HQ:	7.5E-02	max

Zinc	Total Solids				
18	15.7	100	0.157		
15	14.3	100	0.143		
22	15.5	100	0.155		
25	16.3	100	0.163		
17	15.5	100	0.155		
19.4			**0.1546**	**125.4851**	
153.3742					

Tier I - Summary of Hazard Quotients

Receptor: Western Grebe
Location: SW28

	BAP	PCBs	TBT	Arsenic	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
MEAN											
NOAEL HQ:	4.4E-01	--	--	--	3.8E-01	--	--	--	--	--	--
LOAEL HQ:	4.4E-02	--	--	--	7.7E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	5.9E-01	7.5E-03	2.2E-01	#VALUE!	7.9E-01	**3.9E+01**	2.6E-01	1.5E-01	4.2E-01	4.8E-01
BTAG High HQ:	#VALUE!	4.2E-02	1.2E-04	5.4E-02	#VALUE!	3.5E-02	6.2E-02	5.6E-02	3.7E-03	1.0E-01	4.8E-02
MAXIMUM											
NOAEL HQ:	4.3E-01	--	--	--	4.0E-01	--	--	--	--	--	--
LOAEL HQ:	4.3E-02	--	--	--	8.1E-02	--	--	--	--	--	--
BTAG Low HQ:	#VALUE!	6.4E-01	9.0E-03	2.3E-01	#VALUE!	8.6E-01	**4.0E+01**	2.8E-01	1.7E-01	6.6E-01	5.8E-01
BTAG High HQ:	#VALUE!	4.6E-02	1.4E-04	5.8E-02	#VALUE!	3.8E-02	6.4E-02	6.2E-02	4.1E-03	1.6E-01	5.8E-02

NOTE:

HQ values bold faced and shaded are greater than an HQ threshold value of 1.

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Benzo[a]pyrene
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.87969
Maximum detected value (mg/kg, dry weight):	0.858896

Sediment Chemical Concentrations (from Table B1-5 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	3.1
Maximum detected value (mg/kg, dry weight):	3.1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.14
LOAEL (mg/kg-day):	1.4
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	6.2E-02	mean
Daily exposure (mg/kg-day)	6.1E-02	max

Hazard Quotients

NOAEL HQ:	4.4E-01	mean
LOAEL HQ:	4.4E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	4.3E-01	max
LOAEL HQ:	4.3E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Total PCB Congeners
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.786546
Maximum detected value (mg/kg, dry weight):	0.877419

Sediment Chemical Concentrations (from Table B1-7 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	2.1
Maximum detected value (mg/kg, dry weight):	2.1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.09
BTAG High (mg/kg-day):	1.27

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.3E-02	mean
Daily exposure (mg/kg-day)	5.8E-02	max

Hazard Quotients

BTAG Low HQ:	5.9E-01	mean
BTAG High HQ:	4.2E-02	mean
BTAG Low HQ:	6.4E-01	max
BTAG High HQ:	4.6E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Tributyltin
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.084088
Maximum detected value (mg/kg, dry weight):	0.103226

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.18
Maximum detected value (mg/kg, dry weight):	0.18

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.73
BTAG High (mg/kg-day):	45.9

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.5E-03	mean
Daily exposure (mg/kg-day)	6.6E-03	max

Hazard Quotients

BTAG Low HQ:	7.5E-03	mean
BTAG High HQ:	1.2E-04	mean
BTAG Low HQ:	9.0E-03	max
BTAG High HQ:	1.4E-04	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Arsenic
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	19.92238
Maximum detected value (mg/kg, dry weight):	21.47239

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	15
Maximum detected value (mg/kg, dry weight):	15

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	5.5
BTAG High (mg/kg-day):	22

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.2E+00	mean
Daily exposure (mg/kg-day)	1.3E+00	max

Hazard Quotients

BTAG Low HQ:	2.2E-01	mean
BTAG High HQ:	5.4E-02	mean
BTAG Low HQ:	2.3E-01	max
BTAG High HQ:	5.8E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Cadmium
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.241915
Maximum detected value (mg/kg, dry weight):	0.325153

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.36
Maximum detected value (mg/kg, dry weight):	0.36

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.08
BTAG High (mg/kg-day):	10.4

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.5E-02	mean
Daily exposure (mg/kg-day)	2.0E-02	max

Hazard Quotients

BTAG Low HQ:	1.9E-01	mean
BTAG High HQ:	1.5E-03	mean
BTAG Low HQ:	2.5E-01	max
BTAG High HQ:	1.9E-03	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Chromium
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.552393
Maximum detected value (mg/kg, dry weight):	1.840491

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	63
Maximum detected value (mg/kg, dry weight):	63

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

NOAEL (mg/kg-day):	0.86
LOAEL (mg/kg-day):	4.3
BTAG Low (mg/kg-day):	Not Available
BTAG High (mg/kg-day):	Not Available

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	3.3E-01	mean
Daily exposure (mg/kg-day)	3.5E-01	max

Hazard Quotients

NOAEL HQ:	3.8E-01	mean
LOAEL HQ:	7.7E-02	mean
BTAG Low HQ:	#VALUE!	mean
BTAG High HQ:	#VALUE!	mean
NOAEL HQ:	4.0E-01	max
LOAEL HQ:	8.1E-02	max
BTAG Low HQ:	#VALUE!	max
BTAG High HQ:	#VALUE!	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Copper
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	13.58344
Maximum detected value (mg/kg, dry weight):	16.56442

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	270
Maximum detected value (mg/kg, dry weight):	270

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	2.3
BTAG High (mg/kg-day):	52.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.8E+00	mean
Daily exposure (mg/kg-day)	2.0E+00	max

Hazard Quotients

BTAG Low HQ:	7.9E-01	mean
BTAG High HQ:	3.5E-02	mean
BTAG Low HQ:	8.6E-01	max
BTAG High HQ:	3.8E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Lead
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.781371
Maximum detected value (mg/kg, dry weight):	3.128834

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	100
Maximum detected value (mg/kg, dry weight):	100

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.014
BTAG High (mg/kg-day):	8.75

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	5.4E-01	mean
Daily exposure (mg/kg-day)	5.6E-01	max

Hazard Quotients

BTAG Low HQ:	3.9E+01	mean
BTAG High HQ:	6.2E-02	mean
BTAG Low HQ:	4.0E+01	max
BTAG High HQ:	6.4E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Total Mercury
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	0.112549
Maximum detected value (mg/kg, dry weight):	0.129032

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	0.98
Maximum detected value (mg/kg, dry weight):	0.98

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.039
BTAG High (mg/kg-day):	0.18

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	1.0E-02	mean
Daily exposure (mg/kg-day)	1.1E-02	max

Hazard Quotients

BTAG Low HQ:	2.6E-01	mean
BTAG High HQ:	5.6E-02	mean
BTAG Low HQ:	2.8E-01	max
BTAG High HQ:	6.2E-02	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Nickel
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	2.496766
Maximum detected value (mg/kg, dry weight):	2.944785

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	17
Maximum detected value (mg/kg, dry weight):	17

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	1.38
BTAG High (mg/kg-day):	56.3

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	2.1E-01	mean
Daily exposure (mg/kg-day)	2.3E-01	max

Hazard Quotients

BTAG Low HQ:	1.5E-01	mean
BTAG High HQ:	3.7E-03	mean
BTAG Low HQ:	1.7E-01	max
BTAG High HQ:	4.1E-03	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Selenium
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	1.617076
Maximum detected value (mg/kg, dry weight):	2.580645

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	1.1
Maximum detected value (mg/kg, dry weight):	1.1

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	0.23
BTAG High (mg/kg-day):	0.93

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	9.6E-02	mean
Daily exposure (mg/kg-day)	1.5E-01	max

Hazard Quotients

BTAG Low HQ:	4.2E-01	mean
BTAG High HQ:	1.0E-01	mean
BTAG Low HQ:	6.6E-01	max
BTAG High HQ:	1.6E-01	max

Hazard Quotient Calculation

Receptor: Western Grebe
Chemical: Zinc
Location: SW28

Exposure Parameters (from Table 10-6 of NASSCO/SWM DSI Volume 1)

Body weight (kg):	0.808
Food ingestion rate (kg/day dry wt):	0.046
Sediment ingestion rate (kg/day dry wt):	0.0031
Area Use Factor (unitless):	1
Time Use Factor (unitless):	1

Prey Chemical Concentrations (Macoma)

Mean detected value (mg/kg, dry weight):	125.4851
Maximum detected value (mg/kg, dry weight):	153.3742

Sediment Chemical Concentrations (from Table B1-3 of NASSCO/SWM DSI Volume II)

Mean detected value (mg/kg, dry weight):	310
Maximum detected value (mg/kg, dry weight):	310

Toxicity Reference Values (from Table 10-8 of NASSCO/SWM DSI Volume 1)

BTAG Low (mg/kg-day):	17.2
BTAG High (mg/kg-day):	172

Daily Exposure Rate using average chemical concentrations and area-use-factors

Daily exposure (mg/kg-day)	8.3E+00	mean
Daily exposure (mg/kg-day)	9.9E+00	max

Hazard Quotients

BTAG Low HQ:	4.8E-01	mean
BTAG High HQ:	4.8E-02	mean
BTAG Low HQ:	5.8E-01	max
BTAG High HQ:	5.8E-02	max