

DATA SPECIFICATIONS FOR COMPENSATION FORMULA MODEL RUNS

APPENDIX A

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Exhibit A.1 Location key for estuarine and marine compensation formula cases.

EAST AND GULF COASTS (Location = E_COAST):	
M01	Gulf of Maine - Georges Bank
M02	Mid-Atlantic shelf - offshore
M03	Carolinas to No. Fla. shelf - offshore
M04	So Fla., Caribbean, So. Texas, shelf-offshore
M05	No. Gulf of Mexico shelf
E01	Maine to Mass. Bay coast
E02	NE saltmarsh
E03	Boston Harbor
E04	Buzzards Bay and So. Mass. coast
E05	Narragansett Bay
E06	Long Island Sound
E07	NY Harbor
E08	NY-NJ - Delaware bays
E09	Upper Chesapeake Bay
E10	Lower Chesapeake Bay
E11	Atlantic eelgrass bed
E12	SE saltmarsh
E13	SE Fla. and Caribbean bays
E14	Atlantic and Caribbean coral reef
E15	Subtropical seagrass bed
E16	Mangrove swamp
E17	Tampa Bay and So. G. of Mexico bays
E18	Mobile Bay and No. G. of Mexico bays
E19	Gulf of Mexico wetlands
E20	Galveston Bay and No. Texas Bays
I01	East and Gulf of Mexico coast rocky shore
I05	East coast sand beach
I06	Gulf of Mexico coast sand beach
PACIFIC COAST (Location = W_COAST):	
M06	So. California shelf-offshore
M07	Central California shelf-offshore

Exhibit A.1 (continued)

M08	Oregon-Wash. shelf-offshore
E21	So. California saltmarsh
E22	California kelp bed
E23	San Francisco Bay
E24	Northern California wetland
E25	Columbia River
E26	Pacific NW coastal bay
E27	Pacific NW wetlands
E28	Strait of Juan de Fuca
E29	Puget Sound
I02	West coast rocky shore
I07	West and Alaska coast sand beach
ALASKA (Location = ALASKA):	
M09	Gulf of Alaska
M10	So. Bering Sea
M11	No. Bering Sea to Chuckchi Sea
M12	Beaufort Sea
E30	Gulf of Alaska bays, sounds
E31	Gulf of Alaska mud flats
E32	Alaska eelgrass bed
I03	Alaska rock-gravel shoreline
PACIFIC ISLANDS (Location = PACIF_IS):	
M13	Pacific islands shelf - offshore
E33	Pacific islands bays
E34	Pacific coral reef
I04	Pacific island rocky shore
I08	Pacific island sand beach

Exhibit A.2 Case IDs for each province and habitat combination.

Province # Name		Hard Shore	Sand Beach	Mud Flat	Salt- marsh	Man- grove Swamp	Kelp Bed	Sea- grass Bed	Coral Reef	Estuarine Subtidal open water	Marine Subtidal open water
1	Northern Maine Coast	I01	I05	E01	E02	-	-	E11	-	E01	E01
2	So. Maine and New Hampshire Coast	I01	I05	E01	E02	-	-	E11	-	E01	E01
3	Gulf of Maine	I01	I05	E01	E02	-	-	E11	-	E01	M01
4	Mass. Bay	I01	I05	E01	E02	-	-	E11	-	E01	E01
5	Boston Harbor	I01	I05	E03	E02	-	-	E11	-	E05	-
6	Georges Bank	-	-	-	-	-	-	-	-	-	M01
7	Offshore Mid-Atlantic	-	-	-	-	-	-	-	-	-	M02
8	So. New England Shelf	I01	I05	E04	E02	-	-	E11	-	E04	M02
9	Buzzards Bay	I01	I05	E04	E02	-	-	E11	-	E04	-
10	Narragansett Bay	I01	I05	E05	E02	-	-	E11	-	E05	-
11	Long Island Sound	I01	I05	E06	E02	-	-	E11	-	E06	-
12	New York Harbor	I01	I05	E07	E02	-	-	E11	-	E07	-
13	NY-NJ Shelf	I01	I05	E08	E02	-	-	E11	-	E08	M02
14	Delaware Bay	I01	I05	E08	E02	-	-	E11	-	E08	-
15	Delmarva Shelf	I01	I05	E08	E02	-	-	E11	-	E08	M02
16	Upper Chesapeake	I01	I05	E09	E12	-	-	E11	-	E09	-
17	Lower Chesapeake	I01	I05	E10	E12	-	-	E11	-	E10	-
18	James River	I01	I05	E10	E12	-	-	E11	-	E10	-
19	Pamlico Sound	I01	I05	E10	E12	-	-	E11	-	E10	-
20	Hatteras Shelf	I01	I05	E10	E12	-	-	E11	-	E10	M02
21	Carolina Shelf	I01	I05	E10	E12	-	-	E11	-	E10	M03
22	Georgia Bight	I01	I05	E10	E12	-	-	E11	-	E10	M03
23	Offshore Carolinian	-	-	-	-	-	-	-	-	-	M03
24	SE Florida Shelf	I01	I05	E13	E12	E16	-	E15	-	E13	M04

Exhibit A.2 (continued)

25	Biscayne Bay	I01	I05	E13	-	E16	-	E15	E14	E13	-
26	Straits of Florida	I01	I05	E13	-	E16	-	E15	E14	E13	M04
27	Caribbean Is.	I01	I06	E13	-	E16	-	E15	E14	E13	M04
28	Florida Bay	I01	I06	E13	-	E16	-	E15	E14	E13	-
29	SW Florida Shelf	I01	I06	E17	-	E16	-	E15	E14	E17	M04
30	Tampa Bay	I01	I06	E17	-	E16	-	E15	-	E17	-
31	Offshore Gulf of Mexico	-	-	-	-	-	-	-	E14	-	M04
32	South Texas Shelf	I01	I06	E17	E19	E16	-	E15	-	E17	M04
33	Florida-Miss. Shelf	I01	I06	E18	E19	-	-	E19	-	E18	M05
34	Mobile Bay	I01	I06	E18	E19	-	-	E19	-	E18	-
35	Mississippi Sound	I01	I06	E18	E19	-	-	E19	-	E18	M05
36	Mississippi River	I01	I06	E18	E19	-	-	E19	-	E18	-
37	Louisiana-No. Texas	I01	I06	E18	E19	-	-	E19	-	E18	M05
38	Port Arthur	I01	I06	E20	E19	-	-	E19	-	E20	-
39	Galveston Bay	I01	I06	E20	E19	-	-	E19	-	E20	-
40	So. Calif. Coast	I02	I07	E21	E21	-	E22	E21	-	E21	M06
41	Los Angeles Coast	I02	I07	E21	E21	-	E22	E21	-	E21	M06
42	So. California Offshore	I02	I07	E21	E21	-	E22	E21	-	E21	M06
43	Santa Barbara Channel	I02	I07	E21	E21	-	E22	E21	-	E21	M06
44	Central Calif. Coast	I02	I07	E24	E24	-	E22	E24	-	E23	M07
45	Central Calif. Offshore	-	-	-	-	-	-	-	-	-	M07
46	San Francisco Bay	I02	I07	E24	E24	-	E22	E24	-	E23	M07
47	No. Calif-Oregon Coast	I02	I07	E27	E27	-	E22	E27	-	E26	M08
48	Columbia River	I02	I07	E27	E27	-	E22	E27	-	E25	-
49	Washington Outer Coast	I02	I07	E27	E27	-	E22	E27	-	E26	M08
50	Oregon-Wash. Offshore	I02	I07	E27	E27	-	E22	E27	-	E26	M08
51	Puget Sound	I02	I07	E27	E27	-	E22	E27	-	E29	E28

Exhibit A.2 (continued)

52	SE Alaska	I03	I07	E31	E32	-	-	E32	-	E30	M09
53	Yakutat	I03	I07	E31	E32	-	-	E32	-	E30	M09
54	Copper River Shelf	I03	I07	E31	E32	-	-	E32	-	E30	M09
55	Prince Wm. Sound	I03	I07	E31	E32	-	-	E32	-	E30	E30
56	Kenai Shelf	I03	I07	E31	E32	-	-	E32	-	E30	M09
57	Upper Cook Inlet	I03	I07	E31	E32	-	-	E32	-	E30	M09
58	Lower Cook Inlet	I03	I07	E31	E32	-	-	E32	-	E30	M09
59	Shelikof Strait	I03	I07	E31	E32	-	-	E32	-	E30	M09
60	Kodiak Shelf	I03	I07	E31	E32	-	-	E32	-	E30	M09
61	Chignik Shelf	I03	I07	E31	E32	-	-	E32	-	E30	M09
62	So. AK Peninsula	I03	I07	E31	E32	-	-	E32	-	E30	M09
63	Aleutian	I03	I07	E31	E32	-	-	E32	-	E30	M09
64	Gulf of Alaska	I03	I07	E31	E32	-	-	E32	-	E30	M09
65	So. Bering Sea Shelf	I03	I07	E31	E32	-	-	E32	-	E30	M10
66	Bristol Bay	I03	I07	E31	E32	-	-	E32	-	E30	M10
67	Kuskokwin Bay	I03	I07	E31	E32	-	-	E32	-	E30	M10
68	No. Bering Sea	I03	I07	E31	E32	-	-	E32	-	E30	M11
69	Yukon Delta	I03	I07	E31	E32	-	-	E32	-	E30	-
70	Bering Sea Offshore	I03	I07	E31	E32	-	-	E32	-	E30	M10
71	Norton Sound	I03	I07	E31	E32	-	-	E32	-	E30	M11
72	Kotzebue Sound	I03	I07	E31	E32	-	-	E32	-	E30	M11
73	Chukchi Sea	I03	I07	E31	E32	-	-	E32	-	E30	M11
74	Beaufort Sea	I03	I07	E31	E32	-	-	E32	-	E30	M12
75	Hawaii	I04	I08	E33	-	E16	-	E33	E34	E33	M13
76	Polynesia	I04	I08	E33	-	E16	-	E33	E34	E33	M13
77	Central Pacific	I04	I08	E33	-	E16	-	E33	E34	E33	M13

Exhibit A.3 Spill locations, wind direction (degrees, from), and wind speed (knots, m/sec) for each case used to derive the compensation formula (* = hypothetical scenario assuming the desired habitat is present and extensive at the spill location).

Case ID	Location Description	Latitude (N) (deg, min)	Longitude (W) (deg, min)	Wind Dir (deg) from	Wind Speed kts (m/sec)
E01	Casco Bay, Portland, ME	43 20.866	70 17.330	215	5 (2.5)
E02	Cape Ann, Mass. Bay, saltmarsh*	42 42.866	70 37.350	80	7 (3.6)
E03	Boston Harbor	42 23.800	70 55.583	0	7 (3.6)
E04	Buzzard's Bay Channel	41 30.000	70 54.000	220	6 (2.8)
E05	Narragansett Bay	41 28.233	71 24.860	180	6 (2.8)
E06	Long Island Sound	40 53.0	73 44.0	250	6 (3.2)
E07	New York Harbor	40 41.650	74 2.500	85	4 (2.0)
E08	Delaware Bay	38 52.000	75 3.000	155	5 (2.6)
E09	Upper Chesapeake Bay	38 27.166	76 23.580	180	5 (2.6)
E10	Lower Chesapeake Bay	36 57.0	76 8.900	180	6 (3.1)
E11	Pamlico Sound, eelgrass bed *	35 41.716	75 33.000	45	6 (2.8)
E12	Savannah River	32 2.0	80 50.800	190	4 (2.3)
E13	Biscayne Bay, FL	25 21.333	80 18.130	190	6 (3.0)
E14	Florida Keys - coral reef *	24 36.150	81 9.600	242	8 (3.8)
E15	Florida Bay - seagrass bed	24 53.450	80 42.730	180	8 (3.8)
E16	Florida Everglades, mangroves	25 8.0	80 42.0	110	5 (2.5)
E17	Tampa Bay	27 37.783	82 39.850	220	5 (2.3)
E18	Mobile Bay	30 15.3	88 0.0	180	5 (2.7)

Exhibit A.3 (continued)

E19	Louisiana coastal wetlands	29 16.3	90 2.3	135	6 (3.0)
E20	Galveston Bay	29 23.183	94 48.710	160	5 (2.7)
E21	So. Calif. wetland *	32 43.200	117 12.300	350	6 (2.8)
E22	Monterey Bay kelp bed	36 55.716	121 54.910	350	6 (2.8)
E23	San Francisco Bay	37 47.400	122 19.680	330	8 (4.0)
E24	Sacramento R. Delta	38 3.000	121 55.130	270	8 (4.0)
E25	Columbia River	46 14.616	123 55.610	270	5 (2.6)
E26	Grays Harbor, Wash., open water	46 56.1	124 7.0	260	4 (2.2)
E27	Willapa Bay, Wash., wetlands *	46 42.0	124 2.0	270	4 (2.2)
E28	Strait of Juan de Fuca	48 27.0	124 37.0	295	6 (2.9)
E29	Puget Sound	47 41.233	122 27.910	340	4 (2.2)
E30	Prince William Sound, AK	60 41.64	146 55.0	30	7 (3.3)
E31	Upper Cook Inlet, mudflats	60 59.1	149 43.0	295	7 (3.3)
E32	Port Moller, eelgrass beds *	55 57.550	160 47.510	295	7 (3.3)
E33	Kaneohe Bay, Hawaii	21 32.133	157 49.460	345	8 (4.2)
E34	Pacific coral reef, Hawaii *	21 43.266	158 1.100	45	8 (4.2)
M01	Georges Bank	41 35.0	69 37.0	270	14 (6.9)
M02	New York - NJ Shelf	39 4.000	74 20.0	210	14 (6.9)
M03	Carolinas Shelf	33 12.0	78 30.0	240	14 (6.9)
M04	Florida Shelf	25 30.0	82 0.0	90	14 (6.9)
M05	La. - N. Texas Shelf	28 35.000	93 6.950	150	14 (6.9)

Exhibit A.3 (continued)

M06	Santa Barbara Channel	34 20.516	120 19.750	290	14 (6.9)
M07	Central Calif. Shelf	38 26.283	123 22.860	335	14 (6.9)
M08	Oregon Coast	46 0.0	124 24.300	0	5 (2.6)
M09	Kenai Shelf	58 40.0	151 22.0	225	7 (3.3)
M10	South Bering Sea	58 31.166	166 57.310	0	10 (5.1)
M11	Norton Sound	64 28.0	161 42.0	50	14 (6.9)
M12	Beaufort Sea	70 28.233	148 31.350	270	8 (3.8)
M13	Hawaii, offshore, <200 m	20 58.5	157 16.0	270	8 (4.2)
I01	Maine, rocky shore	43 42.316	70 12.950	200	5 (2.5)
I02	Oregon, rocky shore*	45 9.0	124 0.0	0	5 (2.6)
I03	Kenai Peninsula, gravel shore	59 16.0	150 50.0	225	7 (3.3)
I04	Hawaiian rocky shore	21 43.0	158 0.0	40	8 (4.2)
I05	Cape Hatteras, sand beach	35 25.700	75 26.880	165	6 (3.1)
I06	Texas Coast, sand beach	29 40.000	94 3.0	70	5 (2.7)
I07	California, sand beach	36 1.000	121 31.230	320	8 (4.0)
I08	Hawaiian sand beach	21 37.083	157 53.0	330	8 (4.2)

Exhibit A.4 Habitat editing for creation of hypothetical scenarios in uniform habitats. The default habitat types in the grid(s) noted should be changed to the desired habitat type using the NRDAM/CME (Version 2.4) habitat editor.

Case ID	Uniform Habitat Assumed	Version 2.4 Grid(s) to Edit	Version 2.4 Default Habitat	Edited Habitat Type
E2	Saltmarsh	0402	Sand Beach	Fringing wetland
			Fringing mudflat	Fringing wetland
			Subtidal silt-mud	Extensive wetland
E11	Eelgrass bed	1902, 1901	Subtidal silt-mud	Seagrass bed (subtidal)
E14	Coral reef	2803	Subtidal silt-mud	Subtidal coral reef
E21	Wetland	4001	Sand beach	Fringing wetland
			Subtidal silt-mud	Extensive wetland
E27	Wetland	4901	Sand Beach	Fringing wetland
			Subtidal silt-mud	Extensive wetland
			Seagrass bed (subtidal)	Extensive wetland
E32	Eelgrass bed	6502	Subtidal silt-mud	Seagrass bed (subtidal)
E34	Coral Reef	7504	Subtidal silt-mud	Subtidal coral reef
I02	Rocky shore	4704	Sand Beach	Rocky shore
			Seagrass bed (subtidal)	Subtidal silt-mud
			Fringing wetland	Rocky Shore

Exhibit A.5 Tidal currents used for model runs for those cases where tidal currents were assumed on-zero. (The direction is that of the major axis and the flood tide.)

Case ID	Flood Direction (degrees toward)	Speed kts (m/sec)	# of Tides per day	Tide Range (m)
E02	270	0.5 (.25)	2	4.0
E12	10	0.5 (.25)	2	1.5
E16	0	0.25 (.13)	1	0.8
E19	0	0.1 (.05)	1	0.3
E21	135	0.5 (.25)	2	1.2
E24	90	0.5 (.25)	2	1.2
E27	90	0.5 (.25)	2	2.1
E31	140	1.0 (.50)	2	5.0
I01	315	0.1 (.05)	2	4.0
I02	90	0.1 (.05)	2	2.1
I03	315	0.1 (.05)	2	3.0
I04	135	0.1 (.05)	2	0.1
I05	270	0.1 (.05)	2	1.5
I06	315	0.1 (.05)	1	0.3
I07	90	0.1 (.05)	2	1.2
I08	225	0.1 (.05)	2	0.1

Exhibit A.6 Closest oil type in compensation formula to various oils that may be spilled.

CHRIS CODE	SPILLED OIL TYPE	CLOSEST OIL
CHx	CRUDE HYDROCARBON FEEDSTOCK	Light crude
DFF	DISTILLATES - FLASH FEEDSTOCK	Gasoline
Gxx	GASOLINES	Gasoline
JPx	JET FUELS	Diesel
KRS	KEROSENE	Diesel
MNS	MINERAL SPIRITS	Gasoline
Nxx	NAPHTHAS	Gasoline
OCF	OIL, CLARIFIED	Light crude
ODS	DIESEL	Diesel
OFR	NO. 4 FUEL OIL	No. 2 fuel oil
OFV	NO. 5 FUEL OIL	No. 2 fuel oil
OIL	CRUDE OIL	Heavy or light crude
OLB	LUBRICATING OIL	Heavy crude
OMx	MINERAL/MOTOR OIL	Heavy crude
OOx	NO. 1 FUEL OIL	Diesel
OPT	PENETRATING OIL	No. 2 fuel oil
ORD	ROAD OIL	Heavy crude
ORG	RANGE OIL	No. 2 fuel oil
OSD	SPINDLE OIL	No. 2 fuel oil
OSX	NO. 6 FUEL OIL	Heavy crude
OSY	SPRAY OIL	No. 2 fuel oil
OTB	TURBINE OIL	Light crude
OTD	NO.2-D FUEL OIL	No. 2 fuel oil
OTW	NO.2 FUEL OIL	No. 2 fuel oil
PTN	PETROLEUM NAPHTHA	Gasoline
WTO	WASTE OILS	Heavy crude