California MLPA Master Plan Science Advisory Team

Round 2 Outputs from Bioeconomic Model Evaluations: Biomass and Self-recruitment

June 25, 2010 DRAFT

Table 2a: Biomass and Self-recruitment. Biomass and self-recruitment for each of the proposed marine protected areas (MPAs) in the round 2 draft MPA proposals for the north coast study region (NCSR) were estimated from the University of California, Santa Barbara (UCSB) bioeconomic model. Values reported in this table were calculated under the maximum sustainable yield (MSY)-type management scenario. Values of biomass are scaled relative to total unfished biomass such that values of 0 indicate no biomass and values of 1 indicate maximum unfished biomass. Self-recruitment is the proportion of settling larvae in an MPA that were produced within that MPA. This metric provides information on the relative isolation of the MPA from other larval sources. Values of self-recruitment are between 0 and 1, where a value of 0 indicates that a population is totally isolated. For round 2 evaluations, seven species were modeled: Black rockfish, brown rockfish, cabezon, redtail surfperch, Dungeness crab, red abalone, and red sea urchin. Due to the unique characteristics of the Dungeness crab fishery, this species is presented separately in Table 2b. For Round 2, modelers assumed that no consumptive uses were permitted in proposed MPAs unless identified by species and gear type.

Round 2 Draft MPA Proposal	MPA Name	Species	Biomass	Self-recruitment
RU1	False Klamath Cove SMCA	Black Rockfish	0.0055	0.0071
RU1	False Klamath Cove SMCA	Brown Rockfish	0.0084	0.0459
RU1	False Klamath Cove SMCA	Cabezon	0.0128	0.0163
RU1	False Klamath Cove SMCA	Red Abalone	0.0112	0.1266
RU1	False Klamath Cove SMCA	Red Sea Urchin	0.0069	0.0103
RU1	False Klamath Cove SMCA	Redtail Surfperch	0.0329	1
RU1	MacKerricher SMCA	Black Rockfish	0.0024	0.0021
RU1	MacKerricher SMCA	Brown Rockfish	0.0019	0.0025
RU1	MacKerricher SMCA	Cabezon	0.003	0.0025
RU1	MacKerricher SMCA	Red Abalone	0.0034	0.0156
RU1	MacKerricher SMCA	Red Sea Urchin	0.0008	0.0006
RU1	MacKerricher SMCA	Redtail Surfperch	0.0018	1
RU1	Mattole Canyon SMR	Black Rockfish	0.0124	0.0104
RU1	Mattole Canyon SMR	Brown Rockfish	0.0118	0.0117
RU1	Mattole Canyon SMR	Cabezon	0.0052	0.0057
RU1	Mattole Canyon SMR	Red Abalone	0.0048	0.0342
RU1	Mattole Canyon SMR	Red Sea Urchin	0.0109	0.0064
RU1	Mattole Canyon SMR	Redtail Surfperch	0.0012	1
RU1	Navarro River Estuary SMCA	Black Rockfish	0.0006	0.0006
RU1	Navarro River Estuary SMCA	Brown Rockfish	0.0002	0.0002
RU1	Navarro River Estuary SMCA	Cabezon	0.0001	0.0001
RU1	Navarro River Estuary SMCA	Red Abalone	0.0001	0.0003
RU1	Navarro River Estuary SMCA	Red Sea Urchin	0	0

Round 2 Draft MPA Proposal	MPA Name	Species	Biomass	Self-recruitment
RU1	Petrolia Lighthouse SMR	Black Rockfish	0.0266	0.0236
RU1	Petrolia Lighthouse SMR	Brown Rockfish	0.0377	0.0384
RU1	Petrolia Lighthouse SMR	Cabezon	0.0161	0.0173
RU1	Petrolia Lighthouse SMR	Red Abalone	0.0145	0.1034
RU1	Petrolia Lighthouse SMR	Red Sea Urchin	0.0338	0.0216
RU1	Petrolia Lighthouse SMR	Redtail Surfperch	0.0143	1
RU1	Point Cabrillo SMCA	Black Rockfish	0.0016	0.0014
RU1	Point Cabrillo SMCA	Brown Rockfish	0.0024	0.003
RU1	Point Cabrillo SMCA	Cabezon	0.0054	0.0049
RU1	Point Cabrillo SMCA	Red Abalone	0.0061	0.0203
RU1	Point Cabrillo SMCA	Red Sea Urchin	0.0029	0.0022
RU1	Point Cabrillo SMCA	Redtail Surfperch	0.0008	1
RU1	Point St. George Reef SMCA	Black Rockfish	0.0048	0.0029
RU1	Point St. George Reef SMCA	Brown Rockfish	0.0094	0.0133
RU1	Point St. George Reef SMCA	Red Sea Urchin	0.0072	0.0031
RU1	Pyramid Point SMCA	Black Rockfish	0.0006	0.0005
RU1	Pyramid Point SMCA	Brown Rockfish	0.0005	0.0007
RU1	Pyramid Point SMCA	Cabezon	0.0006	0.0003
RU1	Pyramid Point SMCA	Red Abalone	0.0005	0.0026
RU1	Pyramid Point SMCA	Red Sea Urchin	0.0002	0.0001
RU1	Pyramid Point SMCA	Redtail Surfperch	0.001	1
RU1	Pyramid Point SMR	Black Rockfish	0.0031	0.0022
RU1	Pyramid Point SMR	Brown Rockfish	0.0046	0.0062
RU1	Pyramid Point SMR	Cabezon	0.0072	0.0043
RU1	Pyramid Point SMR	Red Abalone	0.0092	0.0468
RU1	Pyramid Point SMR	Red Sea Urchin	0.0036	0.0022
RU1	Pyramid Point SMR	Redtail Surfperch	0.0568	1
RU1	Reading Rock Nearshore SMCA	Redtail Surfperch	0.0037	1
RU1	Reading Rock Offshore SMCA	Black Rockfish	0.0044	0.012
RU1	Reading Rock Offshore SMCA	Brown Rockfish	0.0062	0.0452
RU1	Reading Rock Offshore SMCA	Cabezon	0.0001	0.0003
RU1	Reading Rock Offshore SMCA	Red Abalone	0.0001	0.0018
RU1	Reading Rock Offshore SMCA	Red Sea Urchin	0.0062	0.0158
RU1	Reading Rock Offshore SMCA	Redtail Surfperch	0.0584	1
RU1	Russian Gulch SMCA	Black Rockfish	0.0006	0.0006
RU1	Russian Gulch SMCA	Brown Rockfish	0.0004	0.0005
RU1	Russian Gulch SMCA	Cabezon	0.0006	0.0006
RU1	Russian Gulch SMCA	Red Abalone	0.0006	0.0019
RU1	Russian Gulch SMCA	Red Sea Urchin	0.0002	0.0002
RU1	Russian Gulch SMCA	Redtail Surfperch	0.0001	1

Round 2 Draft MPA Proposal	MPA Name	Species	Biomass	Self-recruitment
RU1	Samoa SMCA	Redtail Surfperch	0.0328	1
RU1	South Cape Mendocino SMR	Black Rockfish	0.0138	0.0073
RU1	South Cape Mendocino SMR	Brown Rockfish	0.0199	0.018
RU1	South Cape Mendocino SMR	Cabezon	0.0074	0.004
RU1	South Cape Mendocino SMR	Red Abalone	0.0073	0.0505
RU1	South Cape Mendocino SMR	Red Sea Urchin	0.014	0.0044
RU1	South Cape Mendocino SMR	Redtail Surfperch	0.0087	1
RU1	Stone Lagoon SMRMA	Redtail Surfperch	0.0001	1
RU1	Ten Mile Estuary SMCA	Redtail Surfperch	0.0002	1
RU1	Ten Mile SMCA	Black Rockfish	0.0044	0.0039
RU1	Ten Mile SMCA	Brown Rockfish	0.0071	0.0094
RU1	Ten Mile SMCA	Cabezon	0.0127	0.0109
RU1	Ten Mile SMCA	Red Abalone	0.0155	0.0707
RU1	Ten Mile SMCA	Red Sea Urchin	0.0067	0.0048
RU1	Ten Mile SMCA	Redtail Surfperch	0.0111	1
RU1	Ten Mile SMR	Black Rockfish	0.0082	0.0073
RU1	Ten Mile SMR	Brown Rockfish	0.0129	0.017
RU1	Ten Mile SMR	Cabezon	0.0086	0.0074
RU1	Ten Mile SMR	Red Abalone	0.0108	0.0496
RU1	Ten Mile SMR	Red Sea Urchin	0.0125	0.0091
RU1	Ten Mile SMR	Redtail Surfperch	0.0062	1
RU1	Vizcaino SMCA	Black Rockfish	0.0143	0.0167
RU1	Vizcaino SMCA	Brown Rockfish	0.0195	0.0337
RU1	Vizcaino SMCA	Cabezon	0.0249	0.0157
RU1	Vizcaino SMCA	Red Abalone	0.0336	0.1739
RU1	Vizcaino SMCA	Red Sea Urchin	0.0168	0.0112
RU1	Vizcaino SMCA	Redtail Surfperch	0.0249	1
RU2	Mattole Canyon SMR	Black Rockfish	0.0122	0.0104
RU2	Mattole Canyon SMR	Brown Rockfish	0.0116	0.0119
RU2	Mattole Canyon SMR	Cabezon	0.0052	0.0057
RU2	Mattole Canyon SMR	Red Abalone	0.0047	0.0354
RU2	Mattole Canyon SMR	Red Sea Urchin	0.0107	0.0065
RU2	Mattole Canyon SMR	Redtail Surfperch	0.0012	1
RU2	Navarro River Estuary SMCA	Black Rockfish	0.0005	0.0006
RU2	Navarro River Estuary SMCA	Brown Rockfish	0.0002	0.0003
RU2	Navarro River Estuary SMCA	Cabezon	0.0001	0.0001
RU2	Navarro River Estuary SMCA	Red Abalone	0.0001	0.0003
RU2	Navarro River Estuary SMCA	Red Sea Urchin	0	0
RU2	Petrolia Lighthouse SMR	Black Rockfish	0.017	0.0151
RU2	Petrolia Lighthouse SMR	Brown Rockfish	0.0242	0.0256

Round 2 Draft MPA Proposal	MPA Name	Species	Biomass	Self-recruitment
RU2	Petrolia Lighthouse SMR	Cabezon	0.0052	0.0057
RU2	Petrolia Lighthouse SMR	Red Abalone	0.0045	0.034
RU2	Petrolia Lighthouse SMR	Red Sea Urchin	0.0221	0.0145
RU2	Petrolia Lighthouse SMR	Redtail Surfperch	0.0087	1
RU2	Pyramid Point SMCA	Black Rockfish	0.001	0.0008
RU2	Pyramid Point SMCA	Brown Rockfish	0.0009	0.0013
RU2	Pyramid Point SMCA	Cabezon	0.0014	0.0008
RU2	Pyramid Point SMCA	Red Abalone	0.0014	0.0071
RU2	Pyramid Point SMCA	Red Sea Urchin	0.0006	0.0004
RU2	Pyramid Point SMCA	Redtail Surfperch	0.0013	1
RU2	Pyramid Point SMR	Black Rockfish	0.0049	0.0035
RU2	Pyramid Point SMR	Brown Rockfish	0.0085	0.0121
RU2	Pyramid Point SMR	Cabezon	0.0131	0.008
RU2	Pyramid Point SMR	Red Abalone	0.0186	0.0924
RU2	Pyramid Point SMR	Red Sea Urchin	0.0069	0.0042
RU2	Pyramid Point SMR	Redtail Surfperch	0.0626	1
RU2	Reading Rock Nearshore SMCA	Redtail Surfperch	0.0037	1
RU2	Reading Rock Offshore SMCA	Redtail Surfperch	0.0513	1
RU2	South Cape Mendocino SMR	Black Rockfish	0.0138	0.0073
RU2	South Cape Mendocino SMR	Brown Rockfish	0.0196	0.0183
RU2	South Cape Mendocino SMR	Cabezon	0.0073	0.004
RU2	South Cape Mendocino SMR	Red Abalone	0.0072	0.0516
RU2	South Cape Mendocino SMR	Red Sea Urchin	0.0138	0.0044
RU2	South Cape Mendocino SMR	Redtail Surfperch	0.0087	1
RU2	Ten Mile Estuary SMCA	Redtail Surfperch	0.0001	1
RU2	Vizcaino SMCA	Black Rockfish	0.0142	0.0167
RU2	Vizcaino SMCA	Brown Rockfish	0.0193	0.0342
RU2	Vizcaino SMCA	Cabezon	0.0246	0.0158
RU2	Vizcaino SMCA	Red Abalone	0.0324	0.179
RU2	Vizcaino SMCA	Red Sea Urchin	0.0166	0.0113
RU2	Vizcaino SMCA	Redtail Surfperch	0.0249	1
SA1	Big Flat SMCA	Black Rockfish	0.0027	0.0025
SA1	Big Flat SMCA	Brown Rockfish	0.0021	0.002
SA1	Big Flat SMCA	Cabezon	0.0042	0.0045
SA1	Big Flat SMCA	Red Abalone	0.0037	0.0257
SA1	Big Flat SMCA	Red Sea Urchin	0.0019	0.0012
SA1	Big Flat SMCA	Redtail Surfperch	0.018	1
SA1	MacKerricher SMCA	Black Rockfish	0.0044	0.0034
SA1	MacKerricher SMCA	Brown Rockfish	0.0045	0.0056
SA1	MacKerricher SMCA	Cabezon	0.008	0.0068

Round 2 Draft MPA Proposal	MPA Name	Species	Biomass	Self-recruitment
SA1	MacKerricher SMCA	Red Abalone	0.0097	0.0451
SA1	MacKerricher SMCA	Red Sea Urchin	0.0034	0.0024
SA1	MacKerricher SMCA	Redtail Surfperch	0.0037	1
SA1	Mattole Canyon Offshore SMR	Black Rockfish	0.0152	0.0124
SA1	Mattole Canyon Offshore SMR	Brown Rockfish	0.0157	0.0148
SA1	Mattole Canyon Offshore SMR	Cabezon	0.0123	0.0132
SA1	Mattole Canyon Offshore SMR	Red Abalone	0.0115	0.0796
SA1	Mattole Canyon Offshore SMR	Red Sea Urchin	0.0143	0.0084
SA1	Mattole Canyon Offshore SMR	Redtail Surfperch	0.0053	1
SA1	Navarro River Estuary SMCA	Black Rockfish	0.0006	0.0006
SA1	Navarro River Estuary SMCA	Brown Rockfish	0.0002	0.0002
SA1	Navarro River Estuary SMCA	Cabezon	0.0001	0.0001
SA1	Navarro River Estuary SMCA	Red Abalone	0.0001	0.0003
SA1	Navarro River Estuary SMCA	Red Sea Urchin	0	0
SA1	Petrolia Lighthouse SMR	Black Rockfish	0.0269	0.0232
SA1	Petrolia Lighthouse SMR	Brown Rockfish	0.0382	0.0371
SA1	Petrolia Lighthouse SMR	Cabezon	0.0161	0.0172
SA1	Petrolia Lighthouse SMR	Red Abalone	0.0147	0.1018
SA1	Petrolia Lighthouse SMR	Red Sea Urchin	0.034	0.0217
SA1	Petrolia Lighthouse SMR	Redtail Surfperch	0.0143	1
SA1	Point Cabrillo SMCA	Black Rockfish	0.0013	0.001
SA1	Point Cabrillo SMCA	Brown Rockfish	0.0014	0.0016
SA1	Point Cabrillo SMCA	Cabezon	0.0026	0.0023
SA1	Point Cabrillo SMCA	Red Abalone	0.0061	0.0205
SA1	Point Cabrillo SMCA	Red Sea Urchin	0.0007	0.0005
SA1	Point Cabrillo SMCA	Redtail Surfperch	0.0007	1
SA1	Pyramid Point SMCA	Black Rockfish	0.0011	0.0008
SA1	Pyramid Point SMCA	Brown Rockfish	0.001	0.0012
SA1	Pyramid Point SMCA	Cabezon	0.0014	0.0008
SA1	Pyramid Point SMCA	Red Abalone	0.0014	0.0071
SA1	Pyramid Point SMCA	Red Sea Urchin	0.0006	0.0004
SA1	Pyramid Point SMCA	Redtail Surfperch	0.0013	1
SA1	Pyramid Point SMR	Black Rockfish	0.0049	0.0034
SA1	Pyramid Point SMR	Brown Rockfish	0.0088	0.0111
SA1	Pyramid Point SMR	Cabezon	0.0134	0.008
SA1	Pyramid Point SMR	Red Abalone	0.0187	0.0919
SA1	Pyramid Point SMR	Red Sea Urchin	0.007	0.0042
SA1	Pyramid Point SMR	Redtail Surfperch	0.0717	1
SA1	Reading Rock SMCA	Black Rockfish	0.0031	0.009
SA1	Reading Rock SMCA	Brown Rockfish	0.0017	0.0113

Round 2 Draft MPA Proposal	MPA Name	Species	Biomass	Self-recruitment
SA1	Reading Rock SMCA	Cabezon	0.0039	0.0194
SA1	Reading Rock SMCA	Red Abalone	0.0032	0.1055
SA1	Reading Rock SMCA	Red Sea Urchin	0.0015	0.0039
SA1	Reading Rock SMCA	Redtail Surfperch	0.0501	1
SA1	Reading Rock SMR	Black Rockfish	0.0164	0.0447
SA1	Reading Rock SMR	Brown Rockfish	0.0238	0.1558
SA1	Reading Rock SMR	Red Sea Urchin	0.0208	0.053
SA1	Reading Rock SMR	Redtail Surfperch	0.0061	1
SA1	South Cape Mendocino SMR	Black Rockfish	0.0176	0.0091
SA1	South Cape Mendocino SMR	Brown Rockfish	0.0262	0.0223
SA1	South Cape Mendocino SMR	Cabezon	0.008	0.0043
SA1	South Cape Mendocino SMR	Red Abalone	0.008	0.0542
SA1	South Cape Mendocino SMR	Red Sea Urchin	0.0179	0.0056
SA1	South Cape Mendocino SMR	Redtail Surfperch	0.0098	1
SA1	Ten Mile Estuary SMCA	Redtail Surfperch	0.0002	1
SA1	Ten Mile SMCA	Black Rockfish	0.003	0.0026
SA1	Ten Mile SMCA	Brown Rockfish	0.0048	0.0062
SA1	Ten Mile SMCA	Cabezon	0.0089	0.0076
SA1	Ten Mile SMCA	Red Abalone	0.0109	0.0506
SA1	Ten Mile SMCA	Red Sea Urchin	0.0048	0.0034
SA1	Ten Mile SMCA	Redtail Surfperch	0.0075	1
SA1	Ten Mile SMR	Black Rockfish	0.0025	0.0022
SA1	Ten Mile SMR	Brown Rockfish	0.0039	0.005
SA1	Ten Mile SMR	Cabezon	0.0032	0.0027
SA1	Ten Mile SMR	Red Abalone	0.0038	0.0176
SA1	Ten Mile SMR	Red Sea Urchin	0.0038	0.0027
SA1	Ten Mile SMR	Redtail Surfperch	0.0041	1
SA1	Vizcaino SMCA	Black Rockfish	0.0154	0.0178
SA1	Vizcaino SMCA	Brown Rockfish	0.022	0.0366
SA1	Vizcaino SMCA	Cabezon	0.0276	0.0172
SA1	Vizcaino SMCA	Red Abalone	0.038	0.1953
SA1	Vizcaino SMCA	Red Sea Urchin	0.0187	0.0124
SA1	Vizcaino SMCA	Redtail Surfperch	0.0256	1
SA1	Wilson Rock SMCA	Black Rockfish	0.0055	0.007
SA1	Wilson Rock SMCA	Brown Rockfish	0.0085	0.0426
SA1	Wilson Rock SMCA	Cabezon	0.0128	0.0163
SA1	Wilson Rock SMCA	Red Abalone	0.0113	0.124
SA1	Wilson Rock SMCA	Red Sea Urchin	0.0069	0.0103
SA1	Wilson Rock SMCA	Redtail Surfperch	0.033	1
SA2	Big Flat SMCA	Black Rockfish	0.0027	0.0025

Round 2 Draft MPA Proposal	MPA Name	Species	Biomass	Self-recruitment
SA2	Big Flat SMCA	Brown Rockfish	0.0021	0.002
SA2	Big Flat SMCA	Cabezon	0.0042	0.0045
SA2	Big Flat SMCA	Red Abalone	0.0037	0.0264
SA2	Big Flat SMCA	Red Sea Urchin	0.0019	0.0012
SA2	Big Flat SMCA	Redtail Surfperch	0.018	1
SA2	Mattole Canyon Offshore SMR	Black Rockfish	0.0152	0.0125
SA2	Mattole Canyon Offshore SMR	Brown Rockfish	0.0156	0.0148
SA2	Mattole Canyon Offshore SMR	Cabezon	0.0123	0.0132
SA2	Mattole Canyon Offshore SMR	Red Abalone	0.0111	0.08
SA2	Mattole Canyon Offshore SMR	Red Sea Urchin	0.0142	0.0084
SA2	Mattole Canyon Offshore SMR	Redtail Surfperch	0.0053	1
SA2	Petrolia Lighthouse SMCA	Black Rockfish	0.0268	0.0233
SA2	Petrolia Lighthouse SMCA	Brown Rockfish	0.038	0.0372
SA2	Petrolia Lighthouse SMCA	Cabezon	0.0161	0.0173
SA2	Petrolia Lighthouse SMCA	Red Abalone	0.0143	0.1031
SA2	Petrolia Lighthouse SMCA	Red Sea Urchin	0.0337	0.0217
SA2	Petrolia Lighthouse SMCA	Redtail Surfperch	0.0143	1
SA2	Point Cabrillo SMCA	Black Rockfish	0.0013	0.001
SA2	Point Cabrillo SMCA	Brown Rockfish	0.0014	0.0016
SA2	Point Cabrillo SMCA	Cabezon	0.0026	0.0024
SA2	Point Cabrillo SMCA	Red Abalone	0.006	0.0207
SA2	Point Cabrillo SMCA	Red Sea Urchin	0.0007	0.0005
SA2	Point Cabrillo SMCA	Redtail Surfperch	0.0007	1
SA2	Pyramid Point SMCA	Black Rockfish	0.006	0.0042
SA2	Pyramid Point SMCA	Brown Rockfish	0.0097	0.0123
SA2	Pyramid Point SMCA	Cabezon	0.0147	0.0088
SA2	Pyramid Point SMCA	Red Abalone	0.0201	0.0989
SA2	Pyramid Point SMCA	Red Sea Urchin	0.0076	0.0046
SA2	Pyramid Point SMCA	Redtail Surfperch	0.0706	1
SA2	Reading Rock SMCA	Black Rockfish	0.0194	0.0537
SA2	Reading Rock SMCA	Brown Rockfish	0.0255	0.1679
SA2	Reading Rock SMCA	Cabezon	0.0039	0.0194
SA2	Reading Rock SMCA	Red Abalone	0.0032	0.1056
SA2	Reading Rock SMCA	Red Sea Urchin	0.0223	0.0573
SA2	Reading Rock SMCA	Redtail Surfperch	0.0506	1
SA2	South Cape Mendocino SMR	Black Rockfish	0.0176	0.0092
SA2	South Cape Mendocino SMR	Brown Rockfish	0.0261	0.0224
SA2	South Cape Mendocino SMR	Cabezon	0.008	0.0043
SA2	South Cape Mendocino SMR	Red Abalone	0.0079	0.0548
SA2	South Cape Mendocino SMR	Red Sea Urchin	0.0178	0.0056

Round 2 Draft MPA Proposal	MPA Name	Species	Biomass	Self-recruitment
SA2	South Cape Mendocino SMR	Redtail Surfperch	0.0098	1
SA2	Ten Mile Estuary SMCA	Redtail Surfperch	0.0002	1
SA2	Ten Mile SMCA	Black Rockfish	0.003	0.0026
SA2	Ten Mile SMCA	Brown Rockfish	0.0048	0.0062
SA2	Ten Mile SMCA	Cabezon	0.0088	0.0076
SA2	Ten Mile SMCA	Red Abalone	0.0107	0.0524
SA2	Ten Mile SMCA	Red Sea Urchin	0.0047	0.0034
SA2	Ten Mile SMCA	Redtail Surfperch	0.0075	1
SA2	Ten Mile SMR	Black Rockfish	0.0025	0.0022
SA2	Ten Mile SMR	Brown Rockfish	0.0038	0.005
SA2	Ten Mile SMR	Cabezon	0.0032	0.0027
SA2	Ten Mile SMR	Red Abalone	0.0037	0.0182
SA2	Ten Mile SMR	Red Sea Urchin	0.0037	0.0027
SA2	Ten Mile SMR	Redtail Surfperch	0.0041	1
SA2	Vizcaino SMCA	Black Rockfish	0.007	0.0081
SA2	Vizcaino SMCA	Brown Rockfish	0.0089	0.0149
SA2	Vizcaino SMCA	Cabezon	0.013	0.0082
SA2	Vizcaino SMCA	Red Abalone	0.0168	0.0929
SA2	Vizcaino SMCA	Red Sea Urchin	0.0076	0.0051
SA2	Vizcaino SMCA	Redtail Surfperch	0.0177	1
SA2	Wilson Rock SMCA	Black Rockfish	0.0055	0.007
SA2	Wilson Rock SMCA	Brown Rockfish	0.0085	0.0428
SA2	Wilson Rock SMCA	Cabezon	0.0127	0.0163
SA2	Wilson Rock SMCA	Red Abalone	0.0113	0.124
SA2	Wilson Rock SMCA	Red Sea Urchin	0.0069	0.0104
SA2	Wilson Rock SMCA	Redtail Surfperch	0.033	1

Table 2b: Biomass of Dungeness Crab. Biomass for Dungeness crab for each of the proposed marine protected areas (MPAs) in the round 2 draft MPA proposals for the north coast study region (NCSR) was estimated from the University of California, Santa Barbara (UCSB) bioeconomic model. Values reported in this table were calculated under the maximum sustainable yield (MSY)-type management scenario. Values of biomass are scaled relative to total unfished biomass such that values of 0 indicate no biomass and values of 1 indicate maximum unfished biomass. For Round 2, modelers assumed that no consumptive uses were permitted in proposed MPAs unless identified by species and gear type.

Round 2 Draft MPA Proposal	MPA Name	Biomass
RU1	False Klamath Cove SMCA	0.0065
RU1	MacKerricher SMCA	0.0006
RU1	Mattole Canyon SMR	0.0163
RU1	Petrolia Lighthouse SMR	0.0287
RU1	Point Cabrillo SMCA	0.0005
RU1	Point St. George Reef SMCA	0.0071
RU1	Pyramid Point SMCA	0.0006
RU1	Pyramid Point SMR	0.018
RU1	Reading Rock Nearshore SMCA	0.0006
RU1	Reading Rock Offshore SMCA	0.0153
RU1	Russian Gulch SMCA	0.0001
RU1	Samoa SMCA	0.0075
RU1	South Cape Mendocino SMR	0.0148
RU1	Stone Lagoon SMRMA	0.0001
RU1	Ten Mile Estuary SMCA	0.0002
RU1	Ten Mile SMCA	0.0068
RU1	Ten Mile SMR	0.0253
RU1	Vizcaino SMCA	0.0122
RU2	Mattole Canyon SMR	0.0163
RU2	Petrolia Lighthouse SMR	0.0157
RU2	Pyramid Point SMCA	0.0009
RU2	Pyramid Point SMR	0.0223
RU2	Reading Rock Nearshore SMCA	0.0006
RU2	Reading Rock Offshore SMCA	0.0124
RU2	South Cape Mendocino SMR	0.0148
RU2	Ten Mile Estuary SMCA	0.0001
RU2	Vizcaino SMCA	0.0122
SA1	Big Flat SMCA	0.008
SA1	MacKerricher SMCA	0.0012
SA1	Mattole Canyon Offshore SMR	0.02
SA1	Petrolia Lighthouse SMR	0.0288

Round 2 Draft MPA Proposal	MPA Name	Biomass
SA1	Point Cabrillo SMCA	0.0005
SA1	Pyramid Point SMCA	0.0009
SA1	Pyramid Point SMR	0.0256
SA1	Reading Rock SMCA	0.0085
SA1	Reading Rock SMR	0.0381
SA1	South Cape Mendocino SMR	0.0181
SA1	Ten Mile Estuary SMCA	0.0001
SA1	Ten Mile SMCA	0.0025
SA1	Ten Mile SMR	0.016
SA1	Vizcaino SMCA	0.0122
SA1	Wilson Rock SMCA	0.0077
SA2	Big Flat SMCA	0.0081
SA2	Mattole Canyon Offshore SMR	0.02
SA2	Petrolia Lighthouse SMCA	0.0288
SA2	Point Cabrillo SMCA	0.0005
SA2	Pyramid Point SMCA	0.0256
SA2	Reading Rock SMCA	0.016
SA2	South Cape Mendocino SMR	0.0181
SA2	Ten Mile Estuary SMCA	0.0001
SA2	Ten Mile SMCA	0.0025
SA2	Ten Mile SMR	0.0161
SA2	Vizcaino SMCA	0.0079
SA2	Wilson Rock SMCA	0.0077