

Supplementary Table 3

Estimated age-composition sample sizes needed for a target coefficient of variation of 15% under simple random sampling across the 4 sampling goals (SG1–4) both without aging error (AE0) and with aging error (AE1) determined with data from the NOAA Alaska Fisheries Science Center bottom trawl surveys for the Gulf of Alaska (GOA, 1984–2011), Aleutian Islands (AI, 1980–2010), and Bering Sea (BS, 1982–2011). Species acronyms are explained in Table 1.

Species	Region	AE0				AE1			
		SG1	SG2	SG3	SG4	SG1	SG2	SG3	SG4
Flatfish									
AP	BS	286	317	679	687	112	124	171	180
FS	BS	278	324	494	640	427	439	1518	1533
NRS	BS	192	208	570	444	191	240	427	410
YS	BS	232	236	503	662	416	416	6319	2001
AF	GOA	240	269	389	458	989	999	1850	2523
DS	GOA	460	482	1686	1144	300	331	499	716
FS	GOA	268	268	476	616	318	352	573	604
NRS	GOA	210	220	548	579	208	220	727	434
RS	GOA	217	217	413	888	117	145	180	254
SRS	GOA	310	318	516	510	109	230	348	510
Rockfish									
NR	AI	360	392	1048	1433	249	260	606	676
POP	AI	319	330	1734	2000	254	290	424	615
RB	AI	678	713	2492	2522	560	596	1515	1206
LDR	GOA	258	286	562	1030	290	338	500	1172
NR	GOA	406	502	856	1423	297	300	432	594
POP	GOA	346	374	1500	1670	226	231	564	554
RB	GOA	477	512	868	2684	464	540	896	1456
Roundfish									
AM	AI	110	114	154	174	143	152	242	205
WP	AI	170	235	499	390	125	222	359	286
PC	BS	109	160	188	262	370	441	5015	1529
WP	BS	108	214	399	490	655	779	1453	2751
PC	GOA	138	140	294	207	257	274	564	852
WP	GOA	118	218	383	280	342	346	496	504

Supplementary Table 4

Estimated age-composition sample sizes needed for a target coefficient of variation of 15% under proportional allocation sampling across the 4 sampling goals (SG1–4) both without aging error (AE0) and with aging error (AE1) determined with data from the NOAA Alaska Fisheries Science Center bottom trawl surveys for the Gulf of Alaska (GOA, 1984–2011), Aleutian Islands (AI, 1980–2010), and Bering Sea (BS, 1982–2011). Species acronyms are provided in Table 1.

Species	Region	AE0				AE1			
		SG1	SG2	SG3	SG4	SG1	SG2	SG3	SG4
Flatfish									
AP	BS	224	224	602	666	259	274	676	668
FS	BS	197	235	410	565	236	294	511	574
NRS	BS	136	166	314	380	152	191	332	406
YS	BS	150	188	470	614	178	208	554	630
AF	GOA	151	178	286	410	190	208	366	548
DS	GOA	377	409	1614	1085	492	508	1785	1190
FS	GOA	222	231	394	556	258	262	369	570
NRS	GOA	174	188	496	526	188	200	530	518
RS	GOA	187	187	386	801	224	232	543	843
SRS	GOA	236	274	462	462	265	288	498	475
Rockfish									
NR	AI	335	335	1068	1400	402	402	1516	1516
POP	AI	261	277	2702	1960	366	370	6218	1955
RB	AI	661	661	2822	2645	980	980	1824	2662
LDR	GOA	210	242	622	1044	206	282	1023	1146
NR	GOA	342	365	755	1371	421	437	1165	1433
POP	GOA	231	309	1472	1718	249	319	5300	1644
RB	GOA	396	464	874	2781	642	642	1429	2740
Roundfish									
AM	AI	72	92	104	150	75	100	154	155
WP	AI	110	171	446	326	135	162	370	374
PC	BS	20	87	77	137	40	108	124	188
WP	BS	50	136	254	404	8	174	282	412
PC	GOA	69	81	109	133	105	114	128	157
WP	GOA	6	150	260	230	8	148	250	222

Supplementary Table 5

Estimated age-composition sample sizes needed for a target coefficient of variation of 15% under fixed allocation sampling across the 4 sampling goals (SG1–4) both without aging error (AE0) and with aging error (AE1) **determined with** data from the NOAA Alaska Fisheries Science Center bottom trawl surveys for the Gulf of Alaska (GOA, 1984–2011), Aleutian Islands (AI, 1980–2010), and Bering Sea (BS, 1982–2011). Species acronyms are provided in Table 1.

Species	Region	AE0				AE1			
		SG1	SG2	SG3	SG4	SG1	SG2	SG3	SG4
Flatfish									
AP	BS	530	556	1330	1304	616	671	1046	1298
FS	BS	356	555	819	1079	389	630	996	1066
NRS	BS	370	452	681	882	446	503	708	890
YS	BS	314	456	695	1358	338	476	1081	1365
AF	GOA	369	381	596	836	445	486	774	941
DS	GOA	646	766	3058	2082	820	1068	3124	2416
FS	GOA	600	657	968	1416	718	747	878	1432
NRS	GOA	400	425	896	1028	430	462	1000	1025
RS	GOA	478	492	764	1699	576	597	1011	1700
SRS	GOA	410	568	853	848	447	660	852	898
Rockfish									
NR	AI	566	946	2247	3082	1024	1123	3169	3386
POP	AI	650	858	4517	4882	782	1081	12,224	4357
RB	AI	1928	2242	5326	8584	2871	3080	4151	7710
LDR	GOA	524	769	1325	2726	516	900	1562	3040
NR	GOA	660	1334	2010	4139	860	1476	2620	3918
POP	GOA	473	907	1615	3886	338	1089	9380	3814
RB	GOA	837	1050	1474	6333	1116	1369	2360	5801
Roundfish									
AM	AI	155	272	332	342	178	324	361	379
WP	AI	238	371	849	700	334	525	876	855
PC	BS	134	251	177	299	187	268	264	389
WP	BS	92	431	636	827	105	478	756	942
PC	GOA	269	283	191	323	318	360	329	427
WP	GOA	70	334	384	413	75	402	425	440