

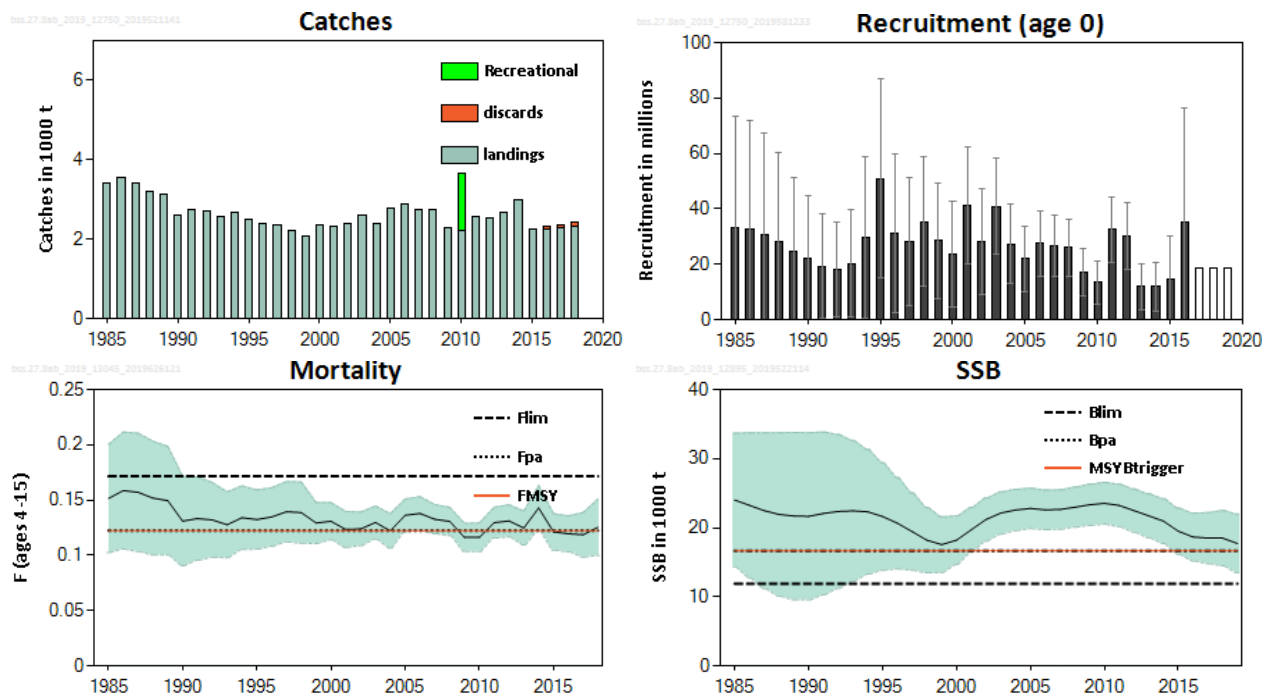
## Seabass (*Dicentrarchus labrax*) in divisions 8.a–b (northern and central Bay of Biscay)

### ICES advice on fishing opportunities

ICES advises that when the EU multiannual plan (MAP) for Western waters and adjacent waters is applied, catches in 2020 that correspond to the F ranges in the MAP are between 2417 tonnes and 3075 tonnes. According to the MAP, catches higher than those corresponding to  $F_{MSY}$  (2533 tonnes) can only be taken under conditions specified in the MAP, while the entire range is considered precautionary when applying the ICES advice rule.

### Stock development over time

The spawning-stock biomass (SSB) has declined since 2010 and is now just above  $MSY B_{trigger}$ . The fishing mortality (F) has fluctuated around  $F_{MSY}$  since 2000 and is now just above  $F_{MSY}$ . The recruitment (R) is variable over time. The lowest values in the time-series have occurred in the recent period.



**Figure 1** Seabass in divisions 8.a–b. Summary of the stock assessment (weights in thousand tonnes). Commercial landings (with discards only included in 2016, 2017 and 2018), and recreational removals (only presented for 2010, where the data are available), including 5% mortality of released fish. Fishing mortality is shown for the combined commercial and recreational fisheries. Assumed recruitment values are not shaded. Recruitment, F and SSB are shown with 95% confidence intervals (i.e.  $\pm 2$  times standard deviations).

### Stock and exploitation status

ICES assesses that fishing pressure on the stock is above  $F_{MSY}$ ; and spawning stock size is just above  $MSY B_{trigger}$ .

**Table 1** Seabass in divisions 8.a–b. State of the stock and fishery relative to reference points.

		Fishing pressure			Stock size		
		2016	2017	2018	2017	2018	2019
Maximum sustainable yield	$F_{MSY}$	✓	✓	✗ Above	$MSY B_{trigger}$	✓	✓ Above trigger
Precautionary approach	$F_{pa}, F_{lim}$	✓	✓	⚠ Increased risk	$B_{pa}, B_{lim}$	✓	✓ Full reproductive capacity
Management plan	$F_{MGT}$	✓	✓	✓ Within the range	$B_{MGT}$	✓	✓ Above trigger

**Catch scenarios**

**Table 2** Seabass in divisions 8.a–b. The basis for the catch scenarios.

Variable	Value	Notes
F <sub>ages 4–15</sub> (2019)	0.121	F <sub>sq</sub> ; F <sub>average(2016–2018)</sub> scaled to 2018; commercial fishery F = 0.092; recreational fishery F = 0.029
SSB (2020)	15 937	Tonnes; from the short-term forecast
R <sub>age 0</sub> (2017–2019)	18 827	Thousands; geometric mean (2008–2014)
Total catch (2019)	2723	Tonnes; fishing at F <sub>sq</sub>
Wanted commercial catch (2019)	2065	Tonnes; short-term forecast
Unwanted commercial catch (2019)	Negligible	Tonnes; estimated to be 3.37%
Recreational removals (2019)	658	Tonnes; short-term forecast

**Table 3** Seabass in divisions 8.a–b. Annual catch scenarios. All weights are in tonnes.

Basis	Total catch ^ (2020)	Commercial landings * (2020)	Recreational removals * (2020)	Total F (2020)	F * commercial landings (2020)	F * recreational removals (2020)	SSB (2021)	% SSB change ^^	% Advice change ^^^
<b>ICES advice basis</b>									
EU MAP#: F <sub>MSY</sub> × SSB <sub>2020</sub> /MSY B <sub>trigger</sub>	2533	1914	619	0.117	0.089	0.028	15308	-3.9	1.5
F = MAP (SSB <sub>2020</sub> /MSY B <sub>trigger</sub> ) × F <sub>MSY lower</sub>	2417	1827	590	0.111	0.085	0.026	15397	-3.4	-3.1
F = MAP F (SSB <sub>2020</sub> /MSY B <sub>trigger</sub> ) × F <sub>MSY upper</sub>	3075	2323	752	0.144	0.110	0.034	14891	-6.6	23.2
<b>Other scenarios</b>									
MSY approach = (SSB <sub>2020</sub> /MSY B <sub>trigger</sub> ) × F <sub>MSY</sub>	2533	1914	619	0.117	0.089	0.028	15308	-3.9	1.5
MSY approach = F <sub>MSY</sub>	2645	1999	646	0.123	0.093	0.029	15221	-4.5	6.0
F = 0	0	0	0	0	0	0	17274	8.4	-100
F = F <sub>pa</sub>	2645	1999	646	0.123	0.093	0.029	15221	-4.5	6.0
F = F <sub>lim</sub>	3619	2734	885	0.172	0.131	0.041	14473	-9.2	45.0
SSB <sub>2021</sub> = B <sub>lim</sub>	6994	5279	1715	0.362	0.276	0.086	11920	-25.2	180.3
SSB <sub>2021</sub> = B <sub>pa</sub>	751	567	183	0.033	0.025	0.008	16688	4.7	-69.9
SSB <sub>2021</sub> = MSY B <sub>trigger</sub>	751	567	183	0.033	0.025	0.008	16688	4.7	-69.9
F = F <sub>2018</sub> = F <sub>sq</sub>	2620	1980	640	0.121	0.092	0.029	15241	-4.4	5.0
F <sub>MSY lower</sub>	2525	1908	617	0.117	0.089	0.028	15314	-3.9	1.2
F <sub>MSY upper</sub>	3210	2425	785	0.151	0.115	0.036	14787	-7.2	28.6

^ Includes commercial landings and recreational removals.

^^ SSB 2021 relative to SSB 2020.

^^^ Advice value 2020 relative to advice value 2019.

\* The split of commercial landings and recreational removals, and F, in the short-term forecast is based on the proportion observed in 2018.

# MAP multiannual plan (EU, 2019).

The total catch advised for 2020 shows an increase of 1.5% compared to 2019, in line with a perception of the stock size increase in comparison to last year.

**Basis of the advice**

**Table 4** Seabass in divisions 8.a–b. The basis of the advice.

Advice basis	Management plan approach
Management plan	The EU multiannual plan (MAP) for stocks in the Western Waters and adjacent waters applies to this stock. The plan specifies conditions for setting fishing opportunities depending on stock status and making use of the $F_{MSY}$ range for the stock.
	In accordance with the MAP, catches higher than those corresponding to $F_{MSY}$ can only be taken providing SSB is greater than $MSY B_{trigger}$ , and one of the following conditions is met: a) if it is necessary for the achievement of objectives of mixed fisheries; b) if it is necessary to avoid serious harm to a stock caused by intra- or inter-species stock dynamics; c) in order to limit variations in fishing opportunities between consecutive years to not more than 20%.
	ICES considers that the $F_{MSY}$ range for this stock used in the MAP is precautionary.  Full details of the plan are described in EU (2019).

**Quality of the assessment**

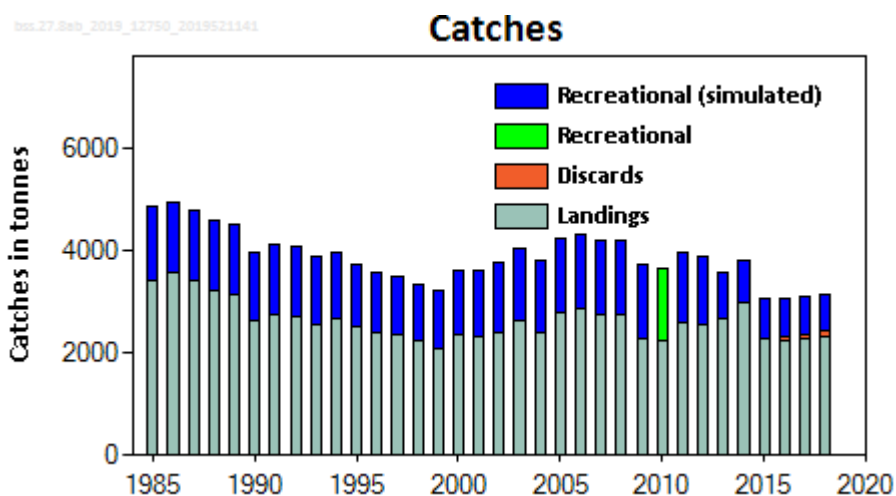
Data after 2000 on commercial catch were used to rescale historical commercial catch and they are now considered to be representative of the time-series.

For recreational removals the fishing pressure estimate (Figure 2) is based on French data from 2010. This was rescaled in 2012 and 2017 following changes in management rules. Improved information on recreational removals would improve the quality of the assessment and advice.

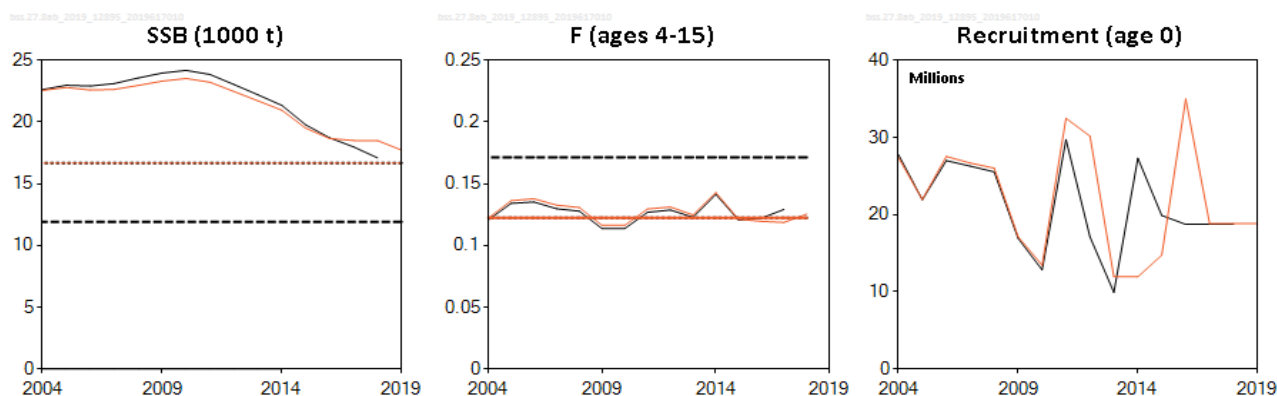
There are no scientific surveys available to provide recruitment information from the Bay of Biscay. Recruitment estimates from the model are, therefore, uncertain; indices are needed to address this data gap. A pilot survey, conducted by France in the Bay of Biscay in 2016, 2017, and 2018, is also expected for 2019. ICES recommends that this survey be continued in order to develop a time-series.

Stock identity remains poorly understood, and tagging and genetics studies are ongoing.

This is the second year that the advice is based on a category 1 assessment (ICES, 2018a,2018b).



**Figure 2** Seabass in divisions 8.a–b. Make-up of the catch over time. Commercial landings; discards in 2016, 2017, and 2018; observed recreational removals (only presented for 2010, where the data are available), including 5% mortality of released fish; and ICES estimated recreational removals (1985–2009, 2011–2018).



**Figure 3** Seabass in divisions 8.a–b. Historical assessment results. For each line in the recruitment plot, the last three values are assumed to be the geometric mean (2008–2014).

### Issues relevant for the advice

The stock was benchmarked during the Benchmark Workshop on Sea Bass (WKBASS; ICES, 2018a) and the Inter-benchmark Protocol on Sea Bass (IBPBass; ICES, 2018d). Uncertainties around recruitment remain high throughout the time series.

### Reference points

**Table 5** Seabass in divisions 8.a–b. Reference points. All weights are in tonnes.

Framework	Reference point	Value	Technical basis	Source
MSY approach	MSY $B_{trigger}$	16 688	$B_{pa}$	ICES (2018d)
	$F_{MSY}$	0.123	The F that maximizes median long-term yield in stochastic simulations under constant F exploitation; constrained by the requirement that $F_{MSY} \leq F_{pa}$	ICES (2018d)
Precautionary approach	$B_{lim}$	11 920	$B_{pa} / \exp(CV \times 1.645)$	ICES (2018d)
	$B_{pa}$	16 888	Lowest observed SSB	ICES (2018d)
	$F_{lim}$	0.172	The F that in equilibrium gives a 50% probability of $SSB > B_{lim}$	ICES (2018d)
	$F_{pa}$	0.123	$F_{pa} = F_{lim} / \exp(CV \times 1.645)$	ICES (2018d)
Management plan	MAP MSY $B_{trigger}$	16 688	MSY $B_{trigger}$	EU (2019)
	MAP $B_{lim}$	11 920	$B_{lim}$	EU (2019)
	MAP $F_{MSY}$	0.123	$F_{MSY}$	EU (2019)
	MAP range $F_{lower}$	0.117	Consistent with ranges provided by ICES (2018a), resulting in no more than 5% reduction in long-term yield compared with MSY.	ICES (2018a) and EU (2019)
	MAP range $F_{upper}$	0.151	Consistent with ranges provided by ICES (2018a), resulting in no more than 5% reduction in long-term yield compared with MSY.	ICES (2018a) and EU (2019)

## Basis of the assessment

**Table 6** Seabass in divisions 8.a–b. The basis of the assessment.

ICES stock data category	1 ( <a href="#">ICES, 2018c</a> ).
Assessment type	Age- and length-based analytical assessment (Stock Synthesis 3, NOAA toolbox) that uses landings and recreational removals (ICES, 2018a, 2019) in the assessment and forecast.
Input data	Commercial landings (1985–2018), age-at-length and length frequencies from catch sampling; growth and maturity data from sampling of commercial catches and surveys; natural mortality (0.24; inferred from life history parameters and maximum observed ages); recreational removals and length composition for 2010 estimated from a recreational fishery survey; French commercial LPUE series inferred from logbook data.
Discards and bycatch	Commercial discards estimated at 3.37% of the total catch (commercial catch + recreational removals). Discards are considered negligible and are not included in the stock assessment.
Indicators	None.
Other information	Last benchmarks in 2018 (ICES, 2018a; ICES, 2018d).
Working group report	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion ( <a href="#">WGBIE</a> ).

## Information from stakeholders

Since 2017, all French commercial fishing activities in the Bay of Biscay (ICES divisions 8.a, b, and d) have been subject to national management measures. These are aimed at limiting both fishing effort and capacity of the commercial fishery, at levels compatible with the ICES recommendations. These concern annual and periodic limitations of fishing opportunities, at the level of both the fishery and individual vessels (CNPMEM, 2019).

## History of the advice, catch, and management

**Table 7** Seabass in divisions 8.a–b. History of ICES advice, the agreed TAC, and ICES estimates of commercial landings, commercial discards and recreational removals. All weights are in tonnes.

Year	ICES advice *	Catch corresponding to advice *	Agreed TAC	Official commercial landings **	ICES commercial landings	ICES commercial discards	ICES recreational removals <sup>^^^</sup>
2000	-	-	none	2147	2362		
2001	-	-	none	2091	2306		
2002	No increase in effort or F	-	none	2113	2392		
2003	No increase in effort or F	-	none	2931	2616		
2004	No increase in effort or F	-	none	2657	2380		
2005	-	-	none	3258	2796		
2006	-	-	none	3487	2875		
2007	-	-	none	3060	2751		
2008	-	-	none	1653	2745		
2009	-	-	none	2534	2278		
2010	-	-	none	2489	2229		1430
2011	-	-	none	2848	2575		
2012	No increase in catch	-	none	2535	2549		
2013	20% reduction in catches (last 3-year average)	< 6000*	none	2660	2685		
2014	20% reduction in catches (last 3-year average)	< 1890 <sup>^</sup>	none	3015	2991		
2015	Same advice as last year	< 1890 <sup>^</sup>	none	2287	2264		
2016	Precautionary approach	< 2634 <sup>^</sup>	none	2206	2252	62	
2017	Precautionary approach	< 2634 <sup>^</sup>	none	2218	2295	74	
2018	Precautionary approach	≤ 2440 <sup>^</sup>	none	2288 <sup>^^</sup>	2316 <sup>^^</sup>	106	
2019	MSY approach (commercial+recreational)	≤ 2495	none				
2020	Management plan	2533 (range 2417–3075) #	none				

\* ICES advice prior to 2014 was for European seabass in the Northeast Atlantic. Since 2014, the advice is for seabass in divisions 8.a–b.

\*\* Official landings were extracted from the ICES official statistics webpage for BSS and divisions 8.a and 8.b. The difference between official and ICES landings values are mainly due to the French landing data that come from a separate analysis of logbooks, auctions, and VMS data from 2000 onwards. From 2011 onwards, data from this method are reported as official landings.

\*\*\* EU multiannual plan (MAP) for the Western Waters (EU, 2019).

<sup>^</sup> Catch advice for commercial catch only.

<sup>^^</sup> Preliminary.

<sup>^^^</sup> Recreational removals were only observed in 2010. Estimates derived from the 2010 data for the time-series are found in Table 10.

# Catches corresponding to  $F_{MSY}$ , EU MAP range in brackets.

## History of the catch and landings

**Table 8** Seabass in divisions 8.a–b. Catch distribution by fleet, landings, discards, and recreational removals in 2018 as estimated by ICES.

Total catch *	Commercial landings							Commercial discards	Recreational removals *
	36% Nets	28% Lines	23% Bottom trawl	8.0% Pelagic trawl	0.51% Others	3.7% Danish seine	1.28% Purse seine		
3142 tonnes	2316 tonnes							106 tonnes	720 tonnes

\*Estimated.

**Table 9** Seabass in divisions 8.a–b. History of the official commercial landings presented for each country participating in the fishery. History of the total ICES estimated commercial landings. All weights are in tonnes.

Year	Belgium	France	Netherlands	Spain	UK (England, Wales, N. Ireland, & Scotland)	Total official landings	Total ICES estimated landings
1985	0	2477	0	0	0	2477	3420
1986	0	2606	0	0	0	2606	3549
1987	0	2474	0	0	5	2479	3417
1988	0	2274	0	0	15	2289	3217
1989	0	2201	0	0	0	2201	3144
1990	0	1678	0	0	0	1678	2621
1991	0	1774	0	17	0	1791	2734
1992	0	1752	0	14	0	1766	2709
1993	0	1595	0	14	0	1609	2552
1994	0	1708	0	17	0	1725	2668
1995	0	1549	0	0	0	1549	2492
1996	0	1459	0	0	0	1459	2402
1997	0	1415	0	0	0	1415	2358
1998	0	1261	0	27	0	1288	2231
1999	0	0	0	11	0	11	2091
2000	0	2080	0	67	0	2147	2362
2001	0	2020	3	68	0	2091	2306
2002	0	1937	0	176	0	2113	2392
2003	0	2812	0	119	0	2931	2616
2004	0	2561	0	96	0	2657	2380
2005	0	3184	0	74	0	3258	2796
2006	0	3318	0	167	2	3487	2875
2007	1	2984	0	74	1	3060	2751
2008	0	1508	0	145	0	1653	2745
2009	1	2339	0	194	0	2534	2278
2010	0	2322	0	165	2	2489	2229
2011	1	2536	0	311	0	2848	2575
2012	1	2325	NA	204	5	2535	2549
2013	0	2504	0	156	0	2660	2685
2014	0	2926	0	89	0	3015	2991
2015	0	2216	0	71	0	2287	2264
2016	0	2121	0	85	0	2206	2252
2017	0	2146	0	72	0	2218	2295
2018 *	0	2204	0	84	0	2288	2316

\*Preliminary.

NA = not available.

## Summary of the assessment

**Table 10** Seabass in divisions 8.a–b. Assessment summary. All weights are in tonnes and recruitment in thousands.

Year	Recruitment Age 0	High	Low	SSB	High	Low	Commercial landings	Recreational removals *	F Ages 4–15	High	Low
1985	32984	73465	0	24019	33676	14362	3420	1455	0.152	0.20	0.103
1986	32477	71715	0	23248	33737	12759	3549	1408	0.159	0.21	0.106
1987	30912	67216	0	22474	33731	11216	3417	1374	0.157	0.21	0.104
1988	28400	60459	0	21936	33751	10120	3217	1355	0.152	0.20	0.100
1989	24755	51258	0	21703	33806	9599	3144	1347	0.150	0.199	0.100
1990	22083	44638	0	21656	33748	9564	2621	1355	0.131	0.172	0.091
1991	19312	38102	523	22073	33855	10291	2734	1366	0.133	0.171	0.096
1992	18178	35369	988	22351	33477	11226	2709	1362	0.132	0.166	0.098
1993	20317	39689	945	22441	32610	12271	2552	1341	0.128	0.158	0.098
1994	29655	58832	479	22301	31318	13284	2668	1301	0.134	0.163	0.105
1995	50986	86812	15161	21625	29408	13842	2492	1239	0.132	0.159	0.106
1996	31227	59963	2491	20659	27267	14051	2402	1171	0.135	0.161	0.108
1997	28113	51329	4898	19444	25025	13863	2358	1113	0.140	0.167	0.112
1998	35297	58585	12008	18205	22929	13481	2231	1099	0.139	0.166	0.111
1999	28427	49014	7841	17557	21578	13537	2091	1142	0.129	0.148	0.111
2000	23690	42926	4454	18203	21722	14684	2362	1233	0.131	0.148	0.114
2001	41150	62334	19965	19711	22948	16474	2306	1313	0.124	0.140	0.107
2002	28083	47070	9096	21196	24307	18085	2392	1372	0.124	0.139	0.109
2003	40826	58219	23433	22137	25180	19094	2616	1404	0.130	0.145	0.115
2004	27397	41639	13156	22569	25555	19584	2380	1419	0.122	0.138	0.107
2005	21962	33920	10005	22802	25726	19878	2796	1422	0.136	0.151	0.122
2006	27548	39416	15680	22599	25461	19737	2875	1425	0.138	0.153	0.123
2007	26690	37857	15524	22645	25489	19801	2751	1440	0.133	0.146	0.120
2008	26029	36282	15775	22974	25868	20079	2745	1451	0.131	0.144	0.118
2009	17141	25550	8732	23319	26287	20351	2278	1449	0.116	0.129	0.104
2010	13432	21111	5752	23535	26561	20508	2229	1430	0.116	0.129	0.103
2011	32501	44221	20780	23232	26303	20162	2575	1394	0.130	0.144	0.116
2012	30177	42288	18067	22478	25593	19364	2549	1345	0.131	0.146	0.117
2013	11949	20132	3765	21727	24895	18558	2685	879	0.125	0.140	0.109
2014	11940	20639	3241	20963	24206	17720	2991	825	0.143	0.163	0.123
2015	14746	29940	0	19505	22827	16182	2264	783	0.121	0.138	0.105
2016	35004	76160	0	18666	22107	15225	2252	757	0.120	0.136	0.103
2017	18827 **			18513	22194	14832	2295	713	0.119	0.139	0.099
2018	18827 **			18498	22492	14504	2316	720	0.126	0.151	0.100
2019	18827 **			17730	21967	13493					

\* Recreational removals are estimates derived from the 2010 observed data.

\*\* Geometric mean 2008–2014.

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