

Economic Impact Assessment

Amend Section 149 and Subsection (a) of Section 149.1
Title 14, California Code of Regulations

Re: Commercial Taking of Market Squid

Effects of the regulation on the creation or elimination of jobs within the state

The proposed action will not have significant effects on the creation or elimination of jobs in the state because the proposed amendments only clarify the closing of the market squid season when the seasonal catch limitation of 118,000 short tons (st) is reached and specify the incidental take allowance for squid in accordance with the 2005 Market Squid Fishery management Plan (MSFMP). Potential job impacts resulting from each part of the proposed action are specified below.

Incidental Take Analysis

The Department is providing the Commission with analyses on a range of potential market squid (squid) incidental take options ranging from zero to 30 percent of the haul weight for landings containing market squid where squid were not the principal target species. Depending on which regulatory option the Commission chooses, the potential “per season” incremental change to total State economic output under a zero to 30 percent incidental take allowance, ranges from \$(521,000) to \$(13,000) in 2012 dollars, respectively. Statewide job impact projections for this same zero to 30 percent range are -3.0 to -0.1 jobs per season, respectively. (See attached Calculations Worksheet).

Two Ton Analysis

The proposed regulatory changes will continue to allow currently permitted brail vessels as well as all currently permitted market squid vessels to fish during open fishing seasons. The proposed clarifications will only allow market squid to be landed as incidental catch when vessels are fishing for a different target species after the closure of the fishing season. The limit of market squid allowed for incidental catch will remain at two tons and will also be limited to a maximum of 0 - 30 percent (to be determined by the Commission) of the total volume by weight of all fish landed or possessed on a vessel. This clarification in the regulations (Section 149) will continue to ensure that the market squid stock is not being overfished and remains at a sustainable level for the prolonged health of the stock and fishery.

The proposed amendments will close the existing two-ton loophole in the current market squid regulations. The individuals who have exploited this unintended, small-volume directed fishery will continue to have the opportunity, and are entitled, to fish during the open portion of the market squid season. Any individual who participates in the market squid restricted access fishery must adhere to the terms of the permit, including closure of the fishery upon attainment of the seasonal catch limit.

When compared to average after-season-closure landings over the past three years (2010-2013), the proposed regulatory change to eliminate the two ton directed take of

squid could result in the direct loss of ex-vessel fishing revenue of about \$(726,000), indirect losses in the amount of \$(76,000), and the potential loss of up to eight (8.0) jobs. However, the closure of the fisheries that has occurred in the last three seasons constitutes a small sample with high variability from year to year. The previous season, 2012-13, may be more representative of current conditions as the fishery behavior adjusts to the wholesale market response during seasons when the fishery closes early. When compared to the 2012-2013 season, the estimated losses are \$(191,000) in direct ex-vessel fishing revenue, indirect losses in the amount of \$(20,000), and the potential loss of up to two (2.1) jobs. (See attached calculations worksheet). It is important to note that there are seasons when the squid fishery does not close early; therefore, the unintended directed fishery during the post-closure period would not occur during these seasons nor would associated income be earned.

Effects of the regulation on the creation of new businesses or the elimination of existing businesses within the state

Incidental Take Analysis

For the estimated 36 fishermen that would be affected by the proposed restrictions on incidental take of squid, a direct revenue impact of \$(804,000) to \$(19,000) would on average be about a -4 percent to -0.1 percent change in ex-vessel fishing revenue to the fishermen, respectively, under a zero to 30 percent restriction on incidental take of squid. This is based on historical seasonal ex-vessel revenues averaging about \$13,022,000 for these 36 fishermen combined, shown below.

Total Aggregate Ex-Vessel Landings with Market Squid Caught Incidentally						
Season		2010/11	2011/12	2012/13	Total	Seasonal Average
Aggregate Ex-Vessel Revenue (all species)		\$ 13,068,000	\$ 13,737,000	\$ 12,261,000	\$ 39,066,000	\$ 13,022,000
Statewide Economic Impact Projections						
Total Economic Output Impact	Direct	\$ 13,068,000	\$ 13,737,000	\$ 12,261,000	\$ 39,066,000	\$ 13,022,000
	Indirect	\$ 1,367,000	\$ 1,437,000	\$ 1,283,000	\$ 4,088,000	\$ 1,363,000
	Induced	\$ 10,967,000	\$ 11,528,000	\$ 10,290,000	\$ 32,784,000	\$ 10,928,000
	Total	\$ 25,402,000	\$ 26,703,000	\$ 23,833,000	\$ 75,938,000	\$ 25,313,000
Total Employee Earnings Impact	Direct	\$ 1,061,000	\$ 1,116,000	\$ 996,000	\$ 3,173,000	\$ 1,058,000
	Indirect	\$ 385,000	\$ 405,000	\$ 361,000	\$ 1,151,000	\$ 384,000
	Induced	\$ 3,075,000	\$ 3,232,000	\$ 2,885,000	\$ 9,193,000	\$ 3,064,000
	Total	\$ 4,521,000	\$ 4,753,000	\$ 4,242,000	\$ 13,516,000	\$ 4,505,000
Total Employment Impacts	Direct	55	58	52	165	55
	Indirect	9	9	8	27	9
	Induced	81	85	76	241	80
	Total	145	152	136	432	144

*All dollar amounts are adjusted to year 2012\$ prices.

Given this relatively low potential impact to fishermen that harvest squid incidentally in their landings, it is not anticipated that the proposed regulations would result in the elimination of existing businesses in the State, nor spur the creation of new businesses.

Two Ton Analysis

Overall, the ex-vessel revenue of squid landings after the early season closure averaged only 1.10% of total squid landing ex-vessel fishing revenue for the season from 2010-2013. When viewed as a percentage of landings using brail gear only, landings after the closure constituted a larger proportion of total landings for this gear type, averaging 31.82% over the last three years. The overall economic effects are likely to be ameliorated by other revenue sources such as lighting during the open season and targeting other species. (See attached calculations worksheet). Additionally, in seasons when the fishery does not close early, the unintended directed fishery and corresponding income would not be realized in the absence of a post-closure period.

Effects of the regulation on the expansion of businesses currently doing business within the state

Incidental Take Analysis

Given the low potential impact to fishermen that harvest squid incidentally, as shown above, it is not anticipated that the proposed regulations would affect the expansion of businesses currently doing business within the State.

Two Ton Analysis

Given the low potential impact to fishermen that harvest squid after the seasonal catch limit has been taken as shown above, it is not anticipated that the proposed regulations would affect the expansion of businesses currently doing business within the State.

Benefits of the regulation to the health and welfare of California residents

The proposed regulations are to ensure the sustained availability of squid resources, consistent with the goals set forth in the Market Squid Fishery Management Plan, adopted by the Commission in August 2004.

The proposed regulations benefit persons engaged in the market squid fishery by supporting the goals and benefits in Fish and Game Code (FGC) Section 8420: "increased demand for, and fishing effort on, market squid could result in overfishing of the resource, damaging the resource, and financially harming those persons engaged in the taking, landing, processing, and sale of market squid."

The Commission recognizes that some individuals, vessels, and processing plants engaged in the market squid fishery have no other viable alternative fisheries available to them and that a long-term decline or a loss of the market squid resource would cause economic losses to businesses engaged in the market squid fishery. However, the continued management of this marine resource through the implementation of these regulations will serve to preserve the long-term viability of market squid fisheries and associated business activities.

The Commission anticipates generalized benefits to the health and welfare of California residents through the protection of the market squid population and the fish and wildlife resources that depend upon them.

Benefits of the regulation to worker safety

The proposed regulations represent a neutral effect, offering neither benefits nor detriment to worker safety in the State.

Benefits of the regulation to the state's environment

The proposed regulations are consistent with the goals set forth in the Market Squid Fishery Management Plan; “to manage the market squid resource to ensure long-term resource conservation and sustainability, and to develop a framework for management that [is] responsive to environmental and socioeconomic changes.” Unrestricted indirect take of a high value commodity like market squid, could pose a risk to the squid resource and the ecosystems that rely on it.

The Commission anticipates benefits to the environment in the sustainable management of the squid resource and benefits to species dependent upon a healthy squid resource. The proposed changes to the regulations support the Marine Life Management Act (MLMA) [MLMA, Statutes 1999 Chapter 483], which declares that “conservation and management programs prevent overfishing, rebuild depressed stocks, ensure conservation, facilitate long term protection and, where feasible, restore marine fishery habitats” [FGC, subsection 7055(b); see also Section 7056(b), (c)].

The Legislature declared that to prevent excessive fishing effort in the market squid fishery and to develop a plan for the sustainable harvest of market squid, it was necessary to adopt and implement a fishery management plan (FMP) for the California market squid fishery that sustains both the squid population and the marine life that depends on it. The proposed regulation change clarifies the intent of the market squid FMP.

Calculations Worksheet

Incidental Take Analysis

Statewide Economic Impact Projections		Proposed Percentages for Commercial Fish Landings with Market Squid Caught Incidentally						
		0.00%	5.00%	10.00%	15.00%	20.00%	25.00%	30.00%
Aggregated Three-Season Economic Impacts: 2010, 2011, and 2012								
Projected Ex-Vessel Revenue Impact for Landings with Squid Caught Incidentally	\$	(804,000)	(125,000)	(100,000)	(87,000)	(45,000)	(28,000)	(19,000)
Total Economic Output Impact	\$	(1,562,000)	(244,000)	(195,000)	(170,000)	(88,000)	(54,000)	(38,000)
Total Employee Earnings Impact	\$	(278,000)	(43,000)	(35,000)	(30,000)	(16,000)	(10,000)	(7,000)
Total Employment Impact		(8.9)	(1.4)	(1.1)	(1.0)	(0.5)	(0.3)	(0.2)
Seasonal Average Statewide Economic Impacts								
Total Economic Output Impact	\$	(521,000)	(81,000)	(65,000)	(57,000)	(29,000)	(18,000)	(13,000)
Total Employee Earnings Impact	\$	(93,000)	(14,000)	(12,000)	(10,000)	(5,000)	(3,000)	(2,000)
Total Employment Impact		(3.0)	(0.5)	(0.4)	(0.3)	(0.2)	(0.1)	(0.1)

* All dollar amount are adjusted to year 2012\$ prices, and (-) denotes a loss or reduction in economic indicators.

2010/2011 Season	0% to 5%	5% to 10%	10% to 15%	15% to 20%	20% to 25%	25% to 30%	30% to 35%	35% to 40%	40% to 45%	45% or More
Initial Ex-Vessel Fishing Revenue Impact	\$ 45,280	\$ 4,218	\$ 2,701	\$ 2,866	\$ 869	\$ 2,052	\$ 255	\$ -	\$ 840	\$ 4,103
Economic Output Statewide										
Direct	\$ 45,280	\$ 4,218	\$ 2,701	\$ 2,866	\$ 869	\$ 2,052	\$ 255	\$ -	\$ 840	\$ 4,103
Indirect	\$ 4,738	\$ 441	\$ 283	\$ 300	\$ 91	\$ 215	\$ 27	\$ -	\$ 88	\$ 429
Induced	\$ 38,000	\$ 3,540	\$ 2,267	\$ 2,405	\$ 729	\$ 1,722	\$ 214	\$ -	\$ 705	\$ 3,443
Total Impact	\$ 88,018	\$ 8,200	\$ 5,251	\$ 5,570	\$ 1,689	\$ 3,989	\$ 495	\$ -	\$ 1,634	\$ 7,975
Employee Earnings										
Direct	\$ 3,677	\$ 343	\$ 219	\$ 233	\$ 71	\$ 167	\$ 21	\$ -	\$ 68	\$ 333
Indirect	\$ 1,334	\$ 124	\$ 80	\$ 84	\$ 26	\$ 60	\$ 8	\$ -	\$ 25	\$ 121
Induced	\$ 10,655	\$ 993	\$ 636	\$ 674	\$ 204	\$ 483	\$ 60	\$ -	\$ 198	\$ 965
Total Impact	\$ 15,666	\$ 1,459	\$ 935	\$ 991	\$ 301	\$ 710	\$ 88	\$ -	\$ 291	\$ 1,419
Employment (# of jobs)										
Direct	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Indirect	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Induced	0.3	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Total Impact	0.5	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0

2011/2012 Season	0% to 5%	5% to 10%	10% to 15%	15% to 20%	20% to 25%	25% to 30%	30% to 35%	35% to 40%	40% to 45%	45% or More
Initial Ex-Vessel Fishing Revenue Impact	\$ 472,163	\$ 4,928	\$ 3,169	\$ 945	\$ 4,616	\$ 2,230	\$ 1,502	\$ 7,879	\$ 1,858	\$ -
Economic Output Statewide										
Direct	\$ 472,163	\$ 4,928	\$ 3,169	\$ 945	\$ 4,616	\$ 2,230	\$ 1,502	\$ 7,879	\$ 1,858	\$ -
Indirect	\$ 49,405	\$ 516	\$ 332	\$ 99	\$ 483	\$ 233	\$ 157	\$ 824	\$ 194	\$ -
Induced	\$ 396,243	\$ 4,135	\$ 2,655	\$ 793	\$ 3,874	\$ 1,872	\$ 1,261	\$ 6,612	\$ 1,559	\$ -
Total Impact	\$ 917,810	\$ 9,579	\$ 6,160	\$ 1,837	\$ 8,973	\$ 4,336	\$ 2,520	\$ 15,315	\$ 3,612	\$ -
Employee Earnings										
Direct	\$ 38,346	\$ 400	\$ 257	\$ 77	\$ 375	\$ 181	\$ 122	\$ 640	\$ 151	\$ -
Indirect	\$ 13,909	\$ 145	\$ 93	\$ 28	\$ 136	\$ 66	\$ 44	\$ 232	\$ 55	\$ -
Induced	\$ 111,105	\$ 1,160	\$ 746	\$ 222	\$ 1,086	\$ 525	\$ 353	\$ 1,854	\$ 437	\$ -
Total Impact	\$ 163,360	\$ 1,705	\$ 1,096	\$ 327	\$ 1,597	\$ 772	\$ 520	\$ 2,726	\$ 643	\$ -
Employment (# of jobs)										
Direct	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
Indirect	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
Induced	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
Total Impact	5.2	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	-

2012/2013 Season	0% to 5%	5% to 10%	10% to 15%	15% to 20%	20% to 25%	25% to 30%	30% to 35%	35% to 40%	40% to 45%	45% or More
Initial Ex-Vessel Fishing Revenue Impact	\$ 160,710	\$ 16,132	\$ 6,844	\$ 38,322	\$ 11,832	\$ 4,411	\$ -	\$ -	\$ 2,878	\$ -
Economic Output Statewide										
Direct	\$ 160,710	\$ 16,132	\$ 6,844	\$ 38,322	\$ 11,832	\$ 4,411	\$ -	\$ -	\$ 2,878	\$ -
Indirect	\$ 16,816	\$ 1,688	\$ 716	\$ 4,010	\$ 1,238	\$ 462	\$ -	\$ -	\$ 301	\$ -
Induced	\$ 134,869	\$ 13,538	\$ 5,744	\$ 32,160	\$ 9,929	\$ 3,702	\$ -	\$ -	\$ 2,416	\$ -
Total Impact	\$ 312,395	\$ 31,357	\$ 13,304	\$ 74,493	\$ 22,999	\$ 8,574	\$ -	\$ -	\$ 5,595	\$ -
Employee Earnings										
Direct	\$ 13,052	\$ 1,310	\$ 556	\$ 3,112	\$ 961	\$ 358	\$ -	\$ -	\$ 234	\$ -
Indirect	\$ 4,734	\$ 475	\$ 202	\$ 1,129	\$ 349	\$ 130	\$ -	\$ -	\$ 85	\$ -
Induced	\$ 37,817	\$ 3,796	\$ 1,610	\$ 9,018	\$ 2,784	\$ 1,038	\$ -	\$ -	\$ 677	\$ -
Total Impact	\$ 55,603	\$ 5,581	\$ 2,368	\$ 13,259	\$ 4,094	\$ 1,526	\$ -	\$ -	\$ 996	\$ -
Employment (# of jobs)										
Direct	0.7	0.1	0.0	0.2	0.0	0.0	-	-	0.0	-
Indirect	0.1	0.0	0.0	0.0	0.0	0.0	-	-	0.0	-
Induced	1.0	0.1	0.0	0.2	0.1	0.0	-	-	0.0	-
Total Impact	1.8	0.2	0.1	0.4	0.1	0.0	-	-	0.0	-

Two Ton Analysis

Elimination of 2-ton Directed Fishery After Closure (All values in 2012\$)			
Compared to 2010-11 Season		Compared to 2011-12 Season	
2010/2011 Season		2011/2012 Season	
Initial Ex-vessel Fishing Revenue Impact	\$ (451,000)	Initial Ex-vessel Fishing Revenue Impact	\$ (1,536,000)
Economic Output Statewide		Economic Output Statewide	
Direct	\$ (451,000)	Direct	\$ (1,536,000)
Indirect	\$ (47,000)	Indirect	\$ (161,000)
Induced	\$ (379,000)	Induced	\$ (1,289,000)
Total Impact	\$ (877,000)	Total Impact	\$ (2,986,000)
Employee Earnings		Employee Earnings	
Direct	\$ (37,000)	Direct	\$ (125,000)
Indirect	\$ (13,000)	Indirect	\$ (45,000)
Induced	\$ (106,000)	Induced	\$ (361,000)
Total Impact	\$ (156,000)	Total Impact	\$ (531,000)
Employment (# of jobs)		Employment (# of jobs)	
Direct	(1.9)	Direct	(6.5)
Indirect	(0.3)	Indirect	(1.0)
Induced	(2.8)	Induced	(9.5)
Total Impact	(5.0)	Total Impact	(17.0)
Compared to 2012-13 Season		Compared to 2010-13 Average	
2012/2013 Season		2010 - 2013 Average	
Initial Ex-vessel Fishing Revenue Impact	\$ (191,000)	Initial Ex-vessel Fishing Revenue Impact	\$ (726,000)
Economic Output Statewide		Economic Output Statewide	
Direct	\$ (191,000)	Direct	\$ (726,000)
Indirect	\$ (20,000)	Indirect	\$ (76,000)
Induced	\$ (160,000)	Induced	\$ (609,000)
Total Impact	\$ (370,000)	Total Impact	\$ (1,411,000)
Employee Earnings		Employee Earnings	
Direct	\$ (15,000)	Direct	\$ (59,000)
Indirect	\$ (6,000)	Indirect	\$ (21,000)
Induced	\$ (45,000)	Induced	\$ (171,000)
Total Impact	\$ (66,000)	Total Impact	\$ (251,000)
Employment (# of jobs)		Employment (# of jobs)	
Direct	(0.8)	Direct	(3.1)
Indirect	(0.1)	Indirect	(0.5)
Induced	(1.2)	Induced	(4.5)
Total Impact	(2.1)	Total Impact	(8.0)

Ex-vessel Fishing Revenues (All values in 2012\$)					
Season	Total Ex-vessel Fishing Revenue Landed Prior to Closure (all gear types)	Brail Ex-Vessel Fishing Revenue Landed Prior to Closure	Brail Ex-Vessel Fishing Revenue Landed After Closure	Percentage of Total Ex-Vessel Fishing Revenue (all gear types) Landed by Brail After Closure	Percentage of Total Brail Ex-Vessel Fishing Revenue Landed After Closure
2010 - 11	\$ 68,867,000	\$ 1,208,000	\$ 451,000	0.66%	27.19%
2011 - 12	\$ 67,064,000	\$ 1,260,000	\$ 1,536,000	2.29%	54.94%
2012 - 13	\$ 61,910,000	\$ 2,198,000	\$ 191,000	0.31%	7.98%
<i>Average</i>	<i>\$65,947,000</i>	<i>\$1,555,000</i>	<i>\$726,000</i>	<i>1.10%</i>	<i>31.82%</i>