



State of California – Natural Resources Agency  
DEPARTMENT OF FISH AND WILDLIFE  
Director's Office  
P.O. Box 944209  
Sacramento, CA 94244-2090  
[www.wildlife.ca.gov](http://www.wildlife.ca.gov)

EDMUND G. BROWN JR., Governor  
CHARLTON H. BONHAM, Director



September 7, 2018

Randy Fisher  
Executive Director  
Pacific States Marine Fisheries Commission  
205 SE Spokane Street, Suite 100  
Portland, OR 97202

Dear Mr. Fisher:

The State of California has developed a proposed spending plan for the distribution of the disaster funds allocated by Congress for the 2015-2016 fishery disasters for Dungeness and rock crab. In a letter dated July 19, 2018, the Department of Fish and Wildlife (Department) described a general spending plan, which included 10% for mitigation, 89% for direct payment to affected sectors, and 1% for PSMFC overhead. The purpose of this letter is to provide additional details on the goals of mitigation, the proposed allocation of direct payment to affected crab industry sectors and participants (fishermen, processors/buyers, commercial passenger fishing vessels - CPFVs), and a description of why the distribution between mitigation and direct payments is anticipated to be the best mechanism to address the fishery disaster.

The Department hosted webinars on July 18, 2018 and August 29, 2018 to engage with representatives from the Dungeness and rock crab industries and the public at large. During the webinars the Department provided background on the disaster relief process and timing, responded to questions, and received public feedback focused on Department-developed options for allocations between fisheries and within sectors.

Feedback received generally supported the Department's options for proposed distribution of disaster relief funds. Commenters expressed support for options that were relatively easy and simple to expedite the payment process. Support was expressed for the allocation between mitigation and direct payments and for minimum qualification criteria for direct payments, which included permit/license ownership during disaster years (2015-2016) and landings activity prior to the disaster season.

The enclosed document (Spending Plan Rationale) provides details of the Department's proposed plan for allocation of funds for mitigation and direct payment between and within sectors. In determining these allocations, the Department considered public comments received to date, the ability to spend funds within a 24-month timeframe, the application of consistent and systematic criteria based on available data, and how the assistance is aimed at preventing similar failures in the future. The Department recognizes that the funds appropriated were not sufficient to reimburse all losses

Randy Fisher, Executive Director  
Pacific States Marine Fisheries Commission  
September 7, 2018  
Page 2

directly attributed to the Dungeness and rock crab fisheries disaster. In addition, the letter from NOAA announcing the grant opportunity made it clear that reimbursement of losses was not the primary objective of the funding. As a result, this plan is not designed to mitigate for direct losses, but rather to build resiliency within the California Dungeness and rock crab fishing industries to address the fishery disaster.

The Department looks forward to working with you on this process. If you have any questions or comments, please contact Dr. Craig Shuman, Marine Regional Manager, at (916) 445-6459 or by email at [Craig.Shuman@wildlife.ca.gov](mailto:Craig.Shuman@wildlife.ca.gov).

Sincerely,



Charlton H. Bonham  
Director

Enclosure

ec: Craig Shuman, D. Env.  
Manager  
Marine Region (Region 7)  
[Craig.Shuman@wildlife.ca.gov](mailto:Craig.Shuman@wildlife.ca.gov)

Sonke Mastrup, Environmental Program Manager  
Marine Region (Region 7)  
[Sonke.Mastrup@Wildlife.ca.gov](mailto:Sonke.Mastrup@Wildlife.ca.gov)

Joanna Grebel, Senior Environmental Scientist Supervisor  
Marine Region (Region 7)  
[Joanna.Grebel@Wildlife.ca.gov](mailto:Joanna.Grebel@Wildlife.ca.gov)

Christy Juhasz, Environmental Scientist  
Marine Region (Region 7)  
[Christy.Juhasz@Wildlife.ca.gov](mailto:Christy.Juhasz@Wildlife.ca.gov)

## SPENDING PLAN RATIONALE **October 2018 UPDATE**

The following details the Department's proposed spending plan and rationale for the distribution of disaster funds to California Dungeness and rock crab fisheries. The Department is proposing to distribute 10% for mitigation, 89% for direct payment to affected sectors, and 1% for PSMFC overhead (Table 1). ***This updated spending plan reflects the new NOAA allocation that reduced the original amount by \$154,784.***

Table 1. Summary of proposed distribution of disaster funds to California Dungeness and rock crab fisheries.

Total Disaster Funds	\$25,642,484
Mitigation (10%)	\$2,564,248
Direct Payment (89%)	\$22,821,811
PSMFC overhead (1%)	\$256,425

### **Mitigation**

The Department's proposed plan allocates 10% (\$2.6 million) for mitigation through competitive research grants and directed grants to improve resiliency of the fleet to future Domoic acid events. It is expected that this can be accomplished by focused research and expanding capabilities and capacity for monitoring and testing of Domoic acid. High priority research topics include predictive models, socioeconomic assessments, human dimensions of fleet behavior, and ecological cycling of Domoic acid. Given the uncertainty in the expected number of grant applications and requested funding levels, the Department is proposing to set aside up to 50% of the fund for competitive grants, with the remaining amount (of at least 50%) to be used to increase the State's capabilities to monitor, collect, and process samples more efficiently.

The Department's proposed allocation of 10% is based on preliminary estimates of monitoring and testing needs of the health agencies and the nature of the research that could be conducted within the given timeframe.

### **Allocation of Direct Payment to Affected Crab Sectors**

The Department proposes allocating 89% (\$22.8 million) for direct payments to the primary sectors of the Dungeness and rock crab fisheries. The Dungeness and rock crab industries would split this allocation 97% and 3%, respectively, based on the proportion of total losses estimated from historical landings (Table 2).

The Department is prioritizing direct payments to the core crab sectors because we believe they are in the best position to invest the funds into their business practices to increase their resilience to future disruptions caused by harmful algal blooms. The crab fishery is the top fishery in terms of both landings and participation in northern California ports and providing direct payments to affected sectors will generate immediate direct and indirect economic benefits to local fishing communities.

Table 2. Summary of allocation of directed payments to affected crab sectors

<b>Direct Payment</b>	<b>\$22,821,811</b>
Dungeness crab (97%)	\$22,137,156
Fishermen (64%)	\$14,167,780
Processors (Buyers/Receivers) (33%)	\$7,305,262
CPFVs (3%)	\$664,115
Rock Crab (3%)	\$684,654
Fishermen (67%)	\$458,718
Processors (Buyers/Receivers) (33%)	\$225,936

Dungeness Crab

Under the proposed spending plan, the Dungeness crab fishery would be allocated \$22.1 million which would be shared between commercial fishermen (64%), processors (33%), and commercial passenger fishing vessels, CPFVs (3%) to help build resiliency within local fishing communities (Table 2). These allocations are based on historical proportions of net value of landings as reflected on landing receipts.

*Disbursement Options*

The Department explored disbursing funds within sectors using either equal shares (split among qualifying permit holders or weighted by trap/landings/activity tier) or a proportional distribution based on historical landings/receiving history calculated from landing receipts (fishermen and buyers/receivers) or log books (CPFVs). The Department received varying degrees of support and opposition for all options within sectors.

**Based on the feedback received from the affected sectors and the guidance from NOAA in the memo dated June 21, 2018, the Department proposes distributing funds among all qualifying participants as follows:**

- **Fishermen: equally weighted by trap tier**
- **Processors: proportional to receiving history**
- **CPFVs: equally weighted by tier of trip activity level**

*Rationale*

Direct payments to affected crab sectors was assigned the highest priority for assistance because the Department believes it is the best mechanism to protect against future fishery disasters. The Department's logic behind the proposed spending plan is to build resiliency within local fishing communities to increase the likelihood of survival should future seasons be constrained by Domoic acid events. We believe this can be achieved by maintaining a large, diverse fleet and reinvesting funds back into local fishing communities which will not only benefit the Dungeness crab fishery, but the ports

and broader fishing communities as a whole. This will strengthen infrastructure and support local businesses, which will help build and maintain resiliency. Distributing funds equally among qualifying participants using tiers was chosen for fishermen and CPFVs based on public input to date. Using tiers allows for application of consistent and systematic criteria based on available data (state landing receipts and CPFV daily logbooks) and most closely matches the intent of the guidance provided in the NOAA letter to strengthen long-term economic and environmental sustainability of this fishery. It also provides the greatest benefit across these sectors as opposed to unevenly benefitting a smaller number of individuals.

Distribution of funds proportional to receiving history was chosen for processors based on input received to date from industry leader representatives. This approach recognizes the processors role within fishing communities and the importance of supporting broader infrastructure needs which is critical to the long-term success and sustainability of this fishery.

The crab fishery has become the mainstay of northern California fishing communities and it is the top fishery in terms of both landings and participation. It has become increasingly important in recent years as more restrictions or lack of opportunities in the salmon and groundfish fisheries prevail along with the loss of other historical industries such as logging. Building resiliency within this fishery will help maintain employment in areas and fishing communities that typically experience high unemployment rates.

The Department believes that sustainability of the Dungeness crab fishery is linked to the varied participation levels that operate within this industry. The broader and more diverse a fishery is, the better equipped it is to adapt to environmental changes. Disbursing funds among all levels of fishing strategies and business plans is important to ensuring the survival of the fishing fleets and encourage competitive business practices. The Department's proposed spending plan will allow these recipients (fishermen/processors) to reinvest back into businesses that operate within the fishing community, thereby bolstering the local economy and infrastructure.

Although the Department's proposed spending plan does not directly reimburse secondary businesses, it will have a positive indirect effect on these businesses. Loss of fishing vessels directly correlates to losses in many small supporting businesses. Once these small supporting businesses (many of which are owned by multi-generational fishing families) cease operation, it becomes challenging for the fleet to secure resources and services necessary to sustain businesses operations.

#### *Qualification criteria and reimbursement calculation*

Eligibility for fund disbursement was determined based on permit/license ownership in 2015 and 2016 and fishery participation in the three seasons prior to the disaster declaration. Qualification was restricted to these years because it is most likely representative of expected fishing activities during 2015 and 2016. This time period also encompasses a major change to the fishery when vessel permits were subject to trap limits, implemented in the 2013-2014 season.

Additional detail on qualification criteria, methodology for tier calculations and summary of reimbursement for Dungeness crab sectors is described in **Appendix A**.

### Rock crab

Under the proposed spending plan, the rock crab fishery would be allocated \$684,654, which would be shared between commercial fishermen (67%) and processors (33%) (Table 2). Similar to the Dungeness crab allocations, these allocations are based on historical proportions of fishing activities or net profit value.

### *Disbursement Options*

The Department considered several options for disbursement of funds between sectors of the rock crab fishery, including equal shares (split equally among all qualifying permits from fishing activities in affected blocks or weighted by landing activity) or proportional to ex-vessel value of landings (based on past average or the difference between past average and disaster year).

The Department received limited feedback on distribution of payments to rock crab permit holders and processors. Of the feedback received, there was general support for using historical landings and the Department did not receive any opposition to weighting disbursements by landing tier.

**The Department proposes to distribute funds equally among all qualifying participants as follows:**

- **Fishermen: weighted by tiers of total pounds landed in affected fishing blocks**
- **Processors: weighted by tiers of total pounds received in affected fishing blocks**

### *Qualification criteria*

Because fishing opportunity was only impacted by closures of specific fishing blocks that were closed for longer than one month (i.e., 102-568, 683-691, 706-714, 1037-1042), fishing and receiving history in these affected blocks was used as part of the qualifying criteria. Fishermen/processors who landed or had buying history of at least a cumulative total of 1,000 lbs between 2012 and 2014 were considered active and eligible for disbursement. Cumulative landings less than 1,000 lbs during this time were considered incidental and did not qualify for disbursement.

Additional detail on qualification criteria, methodology for tier calculations and summary of reimbursement for rock crab sectors is described in **Appendix B**.

**APPENDIX A: Qualification criteria and estimated reimbursement calculation for Dungeness crab sectors**

Dungeness crab fishermen

The Department considered permit ownership and fishery participation when developing qualification criteria for eligibility of fund disbursement. Qualifying participants were those who owned a Dungeness crab permit in 2015 and 2016 and have a recent history of landings activity relative to the disaster season. Permits that made at least one landing in any of the fishing seasons prior to the disaster season (2012-2013, 2013-2014 and 2014-2015) or immediately following the disaster season (2016-2017 or 2017-2018) are eligible. Landings that occurred after the disaster season were used for those permits that had just transferred with the intent to fish during the disaster season and those that were under a 2-year transfer moratorium. In instances when two different owners renewed a permit in 2015 and 2016, funds would be divided equally.

Estimated reimbursement for each qualifying permit was calculated by determining the number of traps these permits represent. Each permit is grouped into one of seven trap tiers, with a corresponding trap limit ranging from 175 to 500 traps. The total number of traps was determined by multiplying the total number of permits in each tier by their respective trap limit and then summing total traps in each tier. The trap reimbursement was calculated by dividing the total direct payment by the total number of traps to derive a per-trap value. This value was then multiplied by each of the tier trap limits to determine the reimbursement per permit for each tier.

The estimated number of qualified permits and corresponding estimated reimbursement by tier is summarized in Table A-1.

Table A-1. Summary of estimated reimbursement to qualified Dungeness crab fishermen weighted by permit tier.

Direct Payment Total		\$14,167,780
Dungeness Crab Vessel Permit Tier	Number of Qualifying Permits (n=523)	Estimated Reimbursement Per Permit
1	59	\$42,771
2	54	\$38,494
3	53	\$34,217
4	52	\$29,939
5	54	\$25,662
6	164	\$21,385
7	87	\$14,970

Dungeness crab processors/receivers/buyers

The Department considered fish business license ownership in 2015 and 2016 and Dungeness crab receiving history between the seasons of 2012-2013, 2013-2014 and 2014-2015 to determine eligibility for fund disbursement, consistent with the qualification criteria for other sectors. Owners of fish business licenses who received at least a cumulative total of 1,000 lbs between these seasons were considered active processors and eligible for disbursement. Because of the multipurpose nature of this license, a minimum activity level was included to substantiate that participation was more than occasional or incidental.

Estimated reimbursement for each qualifying licensed business was based on the cumulative pounds of Dungeness crab received between these three seasons. The proportion of disbursement to each qualifying fish business license owner was determined by dividing their cumulative pounds by the total sum of all pounds received by all qualified fish business licenses between these three seasons. This proportion was then multiplied by the total direct payments to the industry sector, resulting in the reimbursement total for each fish business license owner.

The range of proportions and corresponding estimated reimbursement for the minimum and maximum qualified businesses is summarized in Table A-2.

Table A-2. Summary of estimated reimbursement to the minimum and maximum qualified Dungeness crab processors proportional to their receiving history.

Direct Payment Total		\$7,305,262
Number of Qualifying Businesses (n=126)	Proportion of Total Pounds Received	Estimated Reimbursement Per Business
Maximum	10.7%	\$785,288
Minimum	0.002%	\$135

Dungeness crab CPFVs

Possession of a license with at least ten CPFV daily logbook entries containing Dungeness crab during the 2012-2013, 2013-2014 and 2014-2015 fishing seasons was used to establish qualification criteria. The Department only considered activity in the three seasons prior to disaster season to reduce complexity of analyses and to limit the period to recent fishing activity. Because of the multipurpose nature of a CPFV license, a minimum activity level was included to substantiate that participation was more than occasional or incidental.

Estimated reimbursement for each qualifying CPFV license owner was calculated by first determining the number of cumulative trips their respective CPFV vessel took between these three fishing seasons. Tiers were determined by partitioning the number of cumulative trips into three activity levels -  $\geq 100$ , 99-50, and 49-10. The total number

of trips for each tier was calculated by summing every CPFV vessels cumulative trips in that tier and the percent contribution for each tier was then calculated by dividing the tier trip total from the summed total of all trips from all three tiers. This percentage was multiplied by the total direct payment to determine the allocation for each tier. The tier allocation was divided by the number of qualified CPFV licenses in each tier to determine the reimbursement per license for each tier.

The range of cumulative trips by tier and corresponding estimated reimbursement for each qualified business in that tier is summarized in Table A-3.

Table A-3. Summary of estimated reimbursement to qualified Dungeness crab Commercial Fishing Vessel (CPFV) owners weighted by tiers of activity level history.

Direct Payment Total			\$664,115
Weighed Tier Groups	Cumulative Total Trips	Number of Qualifying CPFVs (n=46)	Estimated Reimbursement Per CPFV
1	≥100	11	\$35,191
2	50-99	10	\$15,535
3	10-49	25	\$4,867

## **APPENDIX B: Qualification criteria and estimated reimbursement calculation for rock crab sectors**

### Rock crab fishermen

Only those individuals who owned a rock crab trap permit in 2015 and 2016 and made landings during the 2012, 2013 and 2014 years in the affected blocks (102-568, 683-691, 706-714 and 1037-1042) with a minimum cumulative total of 1,000 lbs over these three years will be considered for disbursement of funds. Because fishing opportunity was only impacted by closures of specific blocks for more than one month, history of activity prior to disaster years in affected blocks was used as part of the qualifying criteria. Fishermen who landed at least a cumulative total of 1,000 lbs in these affected blocks between 2012 and 2014 were considered active and eligible for disbursement. Cumulative landings less than 1,000 lbs during this time were considered incidental and did not qualify for disbursement.

Estimated reimbursement for each qualifying individual that held either a northern or southern rock crab trap permit was determined by taking the cumulative pounds of landings in the affected blocks over these three fishing seasons. Tiers were determined by partitioning the number of cumulative landings (in lbs) into 6 groups -  $\geq 500,000$ , 499,999 - 400,000, 399,999 - 300,000, 299,999 - 100,000, 99,999 - 30,000 and 29,999 - 1,000. The total number of pounds for each tier was calculated by summing all licensee's cumulative pounds in that tier. The percent contribution for each tier was calculated by dividing the tier's total pounds by the summed total of all pounds from all six tiers. This percentage was multiplied by the total direct payment to determine the allocation for each tier. The tier allocation was divided by the number of qualified licensees in each tier to determine the reimbursement per license for each tier.

The range of cumulative total pounds landed by tier and corresponding estimated reimbursement for each qualified permittee in that tier is summarized in Table B-1.

Table B-1. Summary of estimated reimbursement to qualified rock crab permitted fishermen weighted by tiers of total pounds landed in affected fishing blocks.

Direct Payment Total			\$458,718
Weighed Tier Groups	Cumulative Total Landed (lbs)	Number of Qualifying Permits (n=55)	Estimated Reimbursement Per Permit
1	≥500,000	1	\$89,014
2	400,000 - 499,999	2	\$66,392
3	300,000 - 399,999	2	\$52,521
4	100,000 - 299,999	1	\$17,153
5	30,000 - 99,999	8	\$8,063
6	1,000 – 29,999	41	\$1,225

Rock crab processors/receivers/buyers

The Department considered fish business license ownership in 2015 and 2016 and rock crab receiving history in the affected blocks between the years of 2012 and 2014 to determine eligibility for fund disbursement, consistent with the qualification criteria for other sectors. Because fishing activity was impacted by closures of specific blocks, history of landings activity from affected blocks was used as part of the qualifying criteria. Processors who received at least a cumulative total of 1,000 lbs between 2012 and 2014 were considered active and eligible for disbursement. Receiving history of less than 1,000 lb cumulative pounds was considered incidental and did not qualify for disbursement.

Estimated reimbursement for each qualifying licensed business was based on the cumulative pounds received in the affected blocks over the three years prior to the disaster year. Tiers were determined by partitioning cumulative landings (in lbs) into 6 groups - ≥350,000, 349,999 - 200,000, 199,999 - 150,000, 149,999 - 100,000, 99,999 - 50,000 and 49,999 - 1,000. The total number of pounds for each tier was calculated by summing all business' cumulative pounds in that tier. The percent contribution for each tier was then calculated by dividing the tier's total pounds by the summed total of all pounds from all six tiers. This percentage was multiplied by the total direct payment to determine the allocation for each tier. The tier allocation was divided by the number of qualified licensees in each tier to determine the reimbursement total for each fish business license owner.

The range of cumulative total pounds received by tier and corresponding estimated reimbursement for each qualified business in that tier is summarized in Table B-2.

Table B-2. Summary of estimated reimbursement to qualified Rock crab processors weighted by tiers of receiving history.

Direct Payment Total			\$225,936
Weighed Tier Groups	Cumulative Total Received (lbs)	Number of Qualifying Businesses (n=61)	Estimated Reimbursement Per Business
1	≥350,000	2	\$27,417
2	200,000 - 349,999	3	\$19,064
3	150,000 - 199,999	1	\$14,214
4	100,000 - 149,999	3	\$9,445
5	50,000 - 99,999	6	\$6,021
6	1,000 – 49,999	46	\$766