

California Dungeness Crab Fishing Gear Working Group
Risk Assessment and Mitigation Program (RAMP)
Draft Management Measures Toolbox: Draft Management Option Ideas for Fleet Consideration
April 2018

The California Dungeness Crab Fishing Gear Working Group (Working Group) is continuing to develop ideas and options for possible management measures to include in a Management Measures Toolbox (MMT) that would be used as a step in the Risk Assessment and Mitigation Program (RAMP). Informed by established guiding principles ([here](#)), the MMT will be available to an Evaluation Team to consider when addressing circumstances of elevated entanglement risk.

The draft MMT attempts to outline ideas/options that could be feasibly used (currently or in the near-term) and may be updated in the future as new options become available following research to confirm the options' viability. The Working Group welcomes ideas and suggestions on the draft MMT via info@cawhalesgroup.com. Additional materials and products developed by the Working Group are available at <http://www.opc.ca.gov/whale-entanglement-working-group/>.

Draft Management Options (as of April 23-24, 2018)	Level of Risk			April 23-24, 2018 Notes/Considerations			
	Low	Moderate	High				
Request all fishermen to follow Best Practices Guide	Low	Moderate	High				
Request fishermen participation in NOAA trainings							
Trap limit program							
Gear recovery program				Start gear recovery earlier in the season, have individuals declare when they finished fishing			
Avoid depth contour				Informed by whale distribution data, discussions between NOAA and CDFW and fishermen			
Increase "readiness" of law enforcement, data gatherers				Increased communications with research, whale watch, Coast Guard; ready/mobilize LED			
Monetary incentives to reduce fishing in a time/area				Need to confirm funding source prior to requesting gear movement/removal (e.g., \$100/trap late in the season)			
Spring fishing tag				Additional tag (and related fee) to fish in spring months, fee reflective of elevated entanglement risk during the springtime months			
Reduce number of pots in an area				- Designated area based on data showing the overlap/density of fishing gear and high densities of whales, consider other RAF factors (rate of entanglements, forage conditions) - Only enforceable prior to the season, would be very challenging to enforce during the season - Could be combined with another management measure (e.g., gear innovation) to lessen # of pots needing to be moved - Aerial survey, vessel-based survey, solar logger could be used to monitor # of traps decreased			
Temporary area restriction				- Designated area, minimal impact - Focus on depth, lat/long areas, etc. - Easy to enforce, already do this with domoic acid - Keep as tailored as possible and indicate open areas - Aerial survey, vessel-based survey, solar logger could be used to monitor # of traps decreased			
Gear innovations - longer term		- Longer-term option, requires continued research and testing - Need to consider risk to fishermen's safety					
Communications							
Advisory (time/area/gear/reminder BP)	Low	Moderate	High				
Recommend to LED focused area/review to enforce measures (already in place)							
Role of fishermen helping to inform on-the-ground circumstances to help inform ET's process							
Stand-by (warning of possible action in near future)							
Mobilize team and increase "readiness" of data gatherers (research, whale watch, CG)							
Gather additional real-time data to inform situation (aerial/water surveys, conversations with fishermen)							
Permotholders declare no longer fishing and enforcement of 96 hour rule increases in spring							
Include other fisheries in the management measure? Part of the ET's recommendation of the Director?							
Examples of Questions Under Consideration							
What is the process for re-gaining access once a management tool is put into place?							
Understanding the timing for moving gear? Weather related - what if fishermen can't access gear? Complexity of the fleet, based on size of area under consideration							