

Brown Box Crab Experimental Gear Permit Planning Update



**Dr. Julia Coates, Marine Region, Environmental Scientist
Marine Resource Committee, San Clemente, July 17, 2018**

Issue history

- Landings increases began 2014
- Experimental gear permit requests began June 2017
- MRC discussion November 2017
- CDFW Director designated all non-Cancer crabs an emerging fishery April 2018
- Survey and constituent meeting
April 2018
- Regulation change notice hearing
to limit incidental take June 2018



EGP Overview

- Evaluate potential for a box crab fishery
- Collect king crab info where possible
- Collaborative research partnership
 - CDFW
 - Fishermen
 - Academic & NGO
- Substantial commitment by all parties
- Opportunity to test management tools
 - Data collection systems
 - Whale entanglement & other bycatch minimization
- Minimize permit fee (legal cost recovery requirement)
- No guarantee of a fishery

Constituent meeting

- Discussion topics: participation, research goals, bycatch accounting, data collection methods, permit terms & conditions, future permit structure, incidental limit regulation
- Outcomes
 - Interest in research and sustainable fishery development
 - Rock crab & spot prawn permittees south, Dungeness crab north
 - Concern over gear conflicts & fisherman experience level
 - Need sufficient allowable catch for fisherman cost recovery
 - Revisit biomass estimate and allowable catch
 - Fishermen want transferrable permits



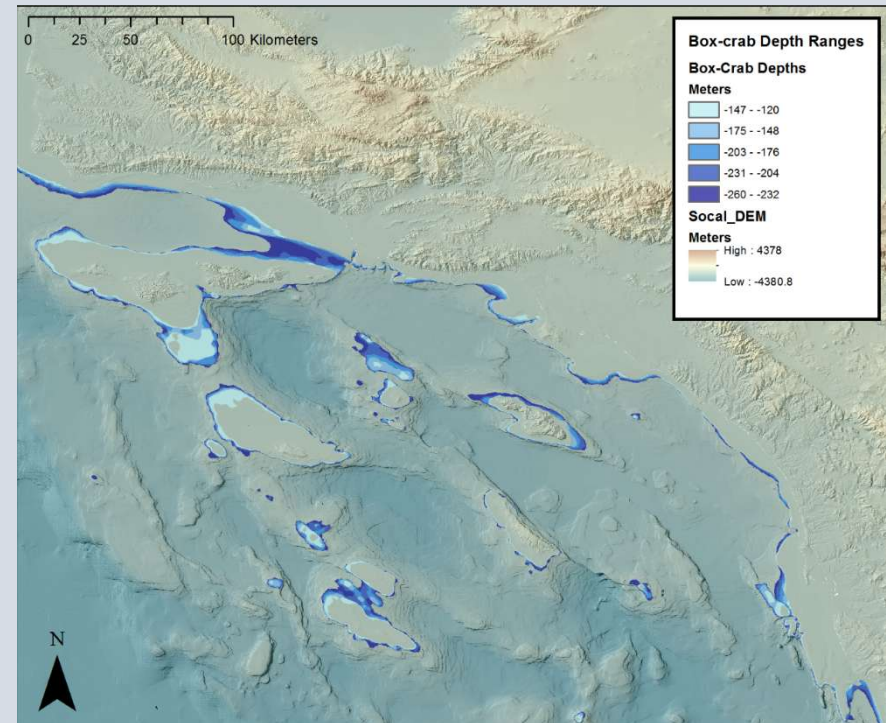
Catch limit

- Precautionary limit based on best available biomass information
- Determines permit number and research scope
- Fisheries-independent NOAA trawl survey
- Low biomass estimate
- Uncertainty: reflects only trawlable habitat, small sample number



Catch limit revision

- Recent CDFW landings data
- Interviewed fishermen on trap number & location
- Published “effective area fished”
- Density x habitat area = biomass
- High biomass estimate
- Uncertainty: CPUE, effective area fished proxy, habitat area
- Approach: 10% of average marketable biomass between trawl and catch data methods



Permit number

- Catch limit sufficient for cost recovery
- 7-8 Permits
 - 5 south of Pt Conception
 - 2-3 north of Pt Conception
- Southern permit distribution
 - 2-3 Santa Barbara channel ports
 - 2-3 San Diego area ports



Research goals: biology

- Biomass estimates & sustainable yield
- Basic biology
 - Distribution & habitat
 - Movement
 - Natural mortality
 - Growth
 - Diet
- Reproduction
 - Size at maturity
 - Fecundity
 - Seasonality



Research goals: management

- Bycatch (including whales)
- Optimize data collection systems
- Overlap with established fisheries / potential gear conflict
- Trap specifications
 - Design
 - Limits

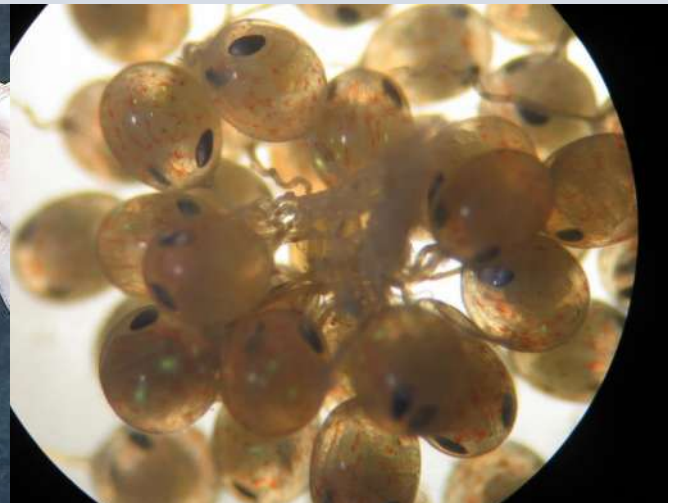


Research activities

- Electronic monitoring
 - Test two EM systems and human observers
 - Provide guidance for potential future state implementation
 - Bycatch
 - Catch (retained & discarded), size, sex
- Fishing/trap surveys
 - Two methods for biomass estimation
 - Effective area fished
 - Removal/depletion experiment
- Tag-recapture: growth, mortality, movement
- Collections & laboratory
 - Reproduction: fecundity, age at maturity, seasonality
 - Molting
 - Diet

Funding & collaborations

- Electronic monitoring – Ocean Protection Council (OPC), Pacific States Marine Fisheries Commission (PSMFC)
- Fishing/trap surveys – Fishermen
- Tag-recapture – Sea Grant, NOAA Saltonstall-Kennedy
- Collections & laboratory – Sea Grant, NOAA Saltonstall-Kennedy
- Permit fee for remaining cost recovery



Terms & conditions

- Observer coverage
 - Electronic monitoring and human observers
 - Must allow CDFW staff to board and observe vessels as requested
 - Current Coast Guard safety decal required
- Permits valid for 1 year with up to 4 years of renewal. May be revoked by CDFW at its sole discretion, upon 48-hour written notice to the permittees.
- Permit fee (TBD by FGC)
- Box crab, rock crab, and Dungeness crab may be landed (with appropriate permits). King crab landings subject to FGC-determined limit. All other species to be returned and not used as bait.

Terms & conditions cont.

- Annual & monthly trip limits
- Participate in all requested research data collection activities
- Retain only crabs above size limit (5 $\frac{3}{4}$ in?)
- Maximum 96 hour service interval?
- Traps meet mutually agreed upon specifications
- Follow best practices for avoiding mammal & turtle entanglement
- Float marking requirements
- No pop-ups
- Maximum traps per permit (50-100?)
- Cooperation with domoic acid testing

Permit distribution

- Qualifying criteria
 - Current trap fishery permit holder in good standing (Commercial fishing license, general trap permit, and other trap fishery permit) with history of landing crab
 - Agree to terms & conditions
- If number interested > 8, develop a lottery
- Possible lottery constraints
 - Home port
 - Verifiable deep water fishery experience
 - Other?

Next steps & timing

- Determination on OPC funding, July 25
- CDFW to finalize permit fee, terms & conditions
- Meeting/conference call with fishermen to identify interest, Sept/Oct
- Discuss EGP distribution and research program at FGC meeting, Oct 17, Fresno
- Official EGP requests at FGC meeting, Dec 12, Oceanside
- Work with permittees to finalize research plans and specific fishing constraints
- Installation of electronic monitoring equipment and begin fishing, early 2019
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