

STATE OF CALIFORNIA
FISH AND GAME COMMISSION
INITIAL STATEMENT OF REASONS FOR REGULATORY ACTION
(Pre-publication of Notice Statement)

Amend Section 149 and
Appendix A of Subdivision 1 of Division 1
Title 14, California Code of Regulations
Re: Light Restrictions and Commercial Fishing Logbooks
for Market Squid

I. Date of Initial Statement of Reasons: January 20, 2015

II. Dates and Locations of Scheduled Hearings:

(a) Notice Hearing: Date: April 8, 2015
Location: Santa Rosa

(b) Discussion/Adoption Hearing: Date: August 4, 2015
Location: Fortuna

III. Description of Regulatory Action:

(a) Statement of Specific Purpose of Regulation Change and Factual Basis for Determining that Regulation Change is Reasonably Necessary:

Market squid (*Doryteuthis (Loligo) opalescens*) is managed under the California Market Squid Fishery Management Plan (MSFMP). Section 149, Title 14, California Code of Regulations (CCR), governs commercial market squid fishing activities off California, pursuant to the MSFMP. Market squid are important to California's commercial and recreational fisheries and as forage species for fish, marine mammals, and birds. Market squid is one of the most valuable California commercial fisheries. Although the market squid population fluctuates due to environmental conditions, commercial harvest typically occurs south of San Francisco with the majority taken from southern California waters. In recent years, a combination of good environmental conditions and an increase in processing and fishing capacity has led to the catch limit being reached mid-season.

The proposed regulations will revise and standardize logbooks that are currently in use and update lighting restrictions for fishing activity to accommodate improved technology.

Logbooks

Subsection 149(e), Title 14, CCR, currently requires that any operator of a commercial market squid vessel, or person who possesses a valid Market

Squid Vessel Permit, Market Squid Brail Permit, or Market Squid Light Boat Permit shall complete and submit an accurate record of his/her fishing, lighting, or brailing activities on a form provided by the California Department of Fish and Wildlife (Department), as appropriate to the type of fishing activity. The forms provided by the Department, referred to as logs or logbooks, are used to assist the Department in management of the commercial market squid fishery.

Subsection 149(e) currently specifies the fishing, lighting, or brailing activity records for commercial market squid as “Market Squid Vessel Logbook – DFG 149a (9/01), or Market Squid Light/Brail Boat Logbook – DFG 149b (10/05)”.

Proposed Regulation Changes

Amend Subsection (e) of Section 149, Title 14, CCR to update and reorganize existing logbook forms.

Market Squid Vessel Logbook (DFG 149a) and Market Squid Light/Brail Boat Logbook (DFG 149b) are proposed to be updated to bring these forms into compliance with the standards set by the Department’s Forms Management Coordinator, improve instructions that explain how the logs are to be filled out, and improve the quality of data that are received by the Department.

Updated instructions that explain when and how logs are to be filled out as well as when the logs are to be turned in to the Department will accompany the forms. The instructions for completing the market squid logs tell the licensee or operator how to fill out the forms to ensure that accurate and consistent data are recorded (CCR Title 14 sections 149 and 190, Fish and Game Code sections 8010 and 8026). The forms and instructions will be inserted as part of CCR, Title 14, Appendix A and the old forms (DFG 149a (9/01) and DFG 149b (10/05)) will be removed.

Proposed changes to subsection 149(e) refer to the revised forms entitled with an updated version number “Market Squid Vessel Logbook – DFW 149a (Rev. 01/06/15)”, and “Market Squid Light/Brail Boat Logbook – DFW 149b (Rev. 01/06/15).”

Market Squid Vessel Logbook - DFW 149a (Rev. 01/06/15) differs from DFG 149a (9/01) as follows:

1. Form instructions were updated to include additional instructions for new fields and to improve the clarity of existing instructions.
2. Form contents have been updated to replace all instances of “Department of Fish and Game” with “Department of Fish and Wildlife”.
3. Form header section has been updated to be in compliance with the standards set by the Department’s Forms Management Coordinator.

4. The “Market Squid Vessel Summary Page” has been retitled “Market Squid Vessel Profile”.
5. The log page and profile page now ask for “Vessel ID Number” as opposed to “Vessel F&G Number”. The field name was changed to be consistent with language used in landing receipt books and other logbooks.
6. The log page and profile page now ask for “Captain’s Name” and “Captain’s ID Number” as opposed to “Fisherman’s Name” and “Fisherman’s ID Number”. This represents a change in language used and not in data collected. The change was made to make the text consistent with the light/brail boat log.
7. Addition of a field to collect the “Vessel Permit Number”. This new field was added to the profile and log page. The purpose of this field is to better facilitate the link between logbook records and the unique vessel permit numbers in the Department’s Automated License Data System (ALDS).
8. The profile page now asks for “Light Generated” under the heading of “Attracting Lights Used” as opposed to “Wattage”. The captain is instructed to circle the appropriate unit type (“W” for watts or “L” for lumens). The purpose of this change is to conform to the proposed changes to subsection 149(g).
9. Units of measure have been added next to “Boat Length” and “Hold Capacity” in the “Vessel Characteristics” section of the profile page.
10. Units of measure have been added next to all net characteristics on the profile page.
11. “Auxiliary Engine” was changed to “Generator” in the “Horsepower” section of the profile page.
12. The “Please mark whether this is:” section of the profile page has been removed as this information is no longer necessary since the intent is to have this page fully completed with each logbook.
13. An “Other” section was added to the section of the profile page that collects details of types of “Electronics Used”.
14. A section to collect “Brail scoop capacity” was added to the profile page in the event that a vessel permitted boat uses brail instead of seine gear.
15. The “Crew members” section of the profile page now asks for “ID Number” as opposed to “License No.” This does not represent a change in the data collected but a change in the language used to collect the data. The change makes this field consistent with other language used on the form.
16. The “List Captain first” text was removed from the “Crew members” section of the profile page. Listing of captain in this section of the profile page is not necessary since the captain’s information is already recorded in the “Captain’s Name” and “Captain’s ID Number” fields.
17. A field named “Alpha Code” was added to the log page. This field has been automatically populated with values between “A” and “H”. The presence of this field is related to the squid logbook database and does not represent extra work for the captain filling out the log.

18. The “Set Number” field description on the log page was updated to include additional text that instructs captains to record “B” in the “Set Number” field if they are recording fishing activity using brail gear.
19. The “Set Time” field on the log page was updated so that the captain has the option to record set time in 12 hour format and when using this format, the captain will need to circle “AM” or “PM”. These changes were made to eliminate uncertainty related to whether or not set time had been recorded using 24 hour format.
20. Additional text was added to describe the requirements of the “Set Position” field. The text includes a description of the level of accuracy to which location data should be reported (i.e., decimal minutes to hundredths place) along with examples.
21. The “Name of light boat used, if any” field name was edited to “Name of light boat set upon”. This does not represent a change to the data collected.
22. The field that asks whether or not the vessel used its own lights has been removed from the log.
23. The “Catch Estimate” field was updated to specify that “short tons” should be recorded.
24. The word “Primary” was removed from the “Bycatch” field since the intent of this field is to collect all bycatch information.
25. The “Comments” section description was expanded to include additional examples of the type of information that should be recorded.
26. “Certified under penalty of perjury as true and correct” was added under the area for captain’s signature. This step was taken to make the logbooks consistent with landing receipt books.
27. The citation of Fish and Game Code Section 7923 was removed from item (C) of the “Notice to Individuals” section of this form because Section 7923 does not apply to squid logbooks.
28. Text related to a Memorandum of Understanding (MOU) with the National Oceanic and Atmospheric Administration was removed from the “Notice to Individuals” section of this form since this MOU is no longer in place.
29. Other minor clerical changes were made to the “Notice to Individuals” section.

Market Squid Light/Brail Boat Logbook - DFW 149b (Rev. 01/06/2015) differs from DFG 149b (10/05) as follows:

1. Form instructions were updated to include additional instructions for new fields and to improve the clarity of existing instructions.
2. Form contents have been updated to replace all instances of “Department of Fish and Game” with “Department of Fish and Wildlife”.
3. Form header sections have been updated so that they are in compliance with the standards set by the Department’s Forms Management Coordinator.

4. The log page and profile page now ask for “Vessel ID Number” as opposed to “Vessel F&G Number” (log page) and “Vessel FG Number” (profile page). The field name was changed to be consistent with language used in landing receipt books and other logbooks.
5. The profile page now asks for “Captain’s Name” and “Captain’s ID Number” as opposed to “Fisherman’s Name” and “Fisherman’s L#”. This represents a change in language used and not in data collected. The change was made to make the text consistent with the log page.
6. Addition of a field to collect the “Light or Brail Boat Permit Number”. This new field was added to the profile and log pages. The purpose of this field is to better facilitate the link between logbook records and the unique light or brail permit numbers in the Department’s Automated License Data System (ALDS).
7. The profile page now asks for “Light Generated” under the heading of “Attracting Lights Used” as opposed to “Wattage”. The captain is instructed to circle the appropriate unit type (“W” for watts or “L” for lumens). The purpose of this change is to conform to the proposed changes to subsection 149(g).
8. Units of measure have been added next to “Boat Length” and “Hold Capacity” in the “Vessel Characteristics” section of the profile page.
9. The “Mark whether this is:” section of the profile page has been removed as this information is no longer necessary.
10. An “Other” section was added to the section of the profile page that collects details of other types of “Electronics Used”.
11. The “Net Type” section was removed from the profile page since purse seine, drum seine, and lampara are not legal gear types for the fishing activity recorded in this logbook.
12. The “Scoop Capacity” field was expanded to specifically ask for circumference in feet, depth in feet, and average pounds per scoop.
13. A section was added to the profile page to collect information about the vessel’s fish hold’s water system.
14. The crew member section of the profile page now asks for “ID Number” as opposed to “License #”. This does not represent a change in the data collected but a change in the language used to collect the data. The change makes this field consistent with other language used on the form.
15. The “List Captain first” text was removed from the “Crew members” section of the profile page. Listing of captain in this section of the profile page is not necessary since the captain’s information is already recorded in the “Captain’s Name” and “Captain’s ID Number” fields.
16. The “General Location” field was replaced with a “Location” field that asks for the Department block code if operating as a light boat, or latitude and longitude in degrees decimal minutes to the hundredths place if operating as a brail boat. The purpose of this change is to collect higher resolution spatial data for brail fishing

activities and to collect more standardized and easy to interpret location data for light boat activity.

17. Addition of a field to collect start and end time of brail fishing activity (brailing). The purpose is to collect additional data needed for management of the fishery.
18. Addition of a field to collect bottom depth during brail fishing activity. The purpose is to collect additional data needed for management of the fishery.
19. Addition of fields to collect bycatch species and weight associated with brail fishing activity. The purpose is to collect additional data needed for management of the fishery.
20. The "Comments" section description was expanded to include additional examples of the type of information that should be recorded.
21. "Certified under penalty of perjury as true and correct" was added under the area for captain's signature. This step was taken to make the logbooks consistent with the landing receipt books.
22. The citation of Fish and Game Code Section 7923 was removed from item (C) of the "Notice to Individuals" section of this form because Section 7923 does not apply to squid logbooks.
23. Text related to a Memorandum of Understanding (MOU) with the National Oceanic and Atmospheric Administration was removed from the "Notice to Individuals" section of this form since this MOU is no longer in place.
24. Other minor clerical changes were made to the "Notice to Individuals" section.

Lights

During the last four consecutive fishing seasons (2010-11 through 2013-14), the catch limit was projected to be reached mid-season, and consequently, the Department acted to close the fishery prior to the season's end. This increase in fishing efficiency may be produced, in part, by more efficient lights. Light Emitting Diodes (LEDs) are more efficient, durable, versatile, and longer lasting than conventional incandescent lights and are therefore preferred by the fishery.

In 2004, the Fish and Game Commission (Commission) adopted the MSFMP and supporting regulations in Title 14, CCR. Subsection 149(g), Title 14, CCR, established the market squid fishery wattage restrictions for use of lights in the fishery with regard to filament bulbs (incandescent). The regulation was intended to protect nesting seabird populations and coastal communities. Since 2004, new lighting technology has been developed; LEDs use less power (watts) per unit of light generated (lumens). The proposed regulation changes will allow for the intended restriction on the amount of light generated to be limited and enforced and apply to both new lighting technology as well as currently used incandescent lights. The luminous flux (Φ_V) in lumens (lm) is equal to the

power (P) in watts (W), times the luminous efficacy (η) in lumens per watt (lm/W):

$$\Phi_{V(lm)} = P_{(W)} \times \eta_{(lm/W)}$$

The average luminous efficacy of an incandescent light bulb is 15 lm/W, whereas the average luminous efficacy of an LED lamp is 60 lm/W. While keeping with the intent of the MSFMP and the current regulations of 30,000 W, the Department recommends the converted lumens from a 30,000 W incandescent light be used:

$$30,000 \text{ W} \times 15 \text{ lm/W} = 450,000 \text{ lm}$$

Additionally, to reduce disturbance of nesting seabird populations and coastal communities, current regulations specify that lights must be shielded or that illumination must be below the water surface. However to minimize ecological impacts which is a goal of the MSFMP, the Department recommends that the method of submerging lights be restricted.

Proposed Regulation Changes

Amend Subsection (f) of Section 149, Title 14, CCR to update lighting restrictions.

Presently, the fishery uses high powered lights, mounted above the surface of the water, to attract squid towards the surface. Current regulations allow for lights to be submerged below the surface of the water in lieu of shielding the bulbs, which protect sensitive bird nest areas and coastal communities. Although submerged lights have been used in supplement with the traditional lights, they are not typically used by the commercial fleet. These additional submerged lights may affect squid egg maturation (Wells and Wells 1977). Long exposure to high intensity light may delay maturation (Yang *et al.*, 1986). A delay in maturation could cause squid to spawn later and could potentially lead to squid being caught before they have had the chance to spawn.

Studies indicate that exposing late stage embryos to long term light sources, even at low intensities, delays hatching (Vidal *et al.*, 2002). When this occurs, squid hatch with their internal yolk reserve almost depleted, resulting in higher mortality rates (Vidal *et al.*, 2002). Submerged lights have the potential to put both adults and newly hatched squid in closer proximity to light than the standard approach of lighting above the surface of the water. Zeidberg *et al.* (2011) found that 91% of hatching occurs during the dark phase of a 12:12 light:dark photoperiod. Lighting over egg beds could delay the natural hatch cycle.

Due to the biological concern for delayed maturation and potential for increased mortality rates of newly hatched squid while lights are submerged at depth, the Department proposes the discontinuation of

submerged lights while fishing for squid.

The proposed regulatory language would require the bulb or lamp to be completely above the surface of the water while using lights to take squid.

Amend Subsection (g) of Section 149, Title 14, CCR to update lighting wattage requirements.

In an effort to adhere to the intent of the MSFMP, this rulemaking proposes amendments to Section 149, Title 14, CCR, to clarify the regulatory text to more broadly encompass different technologies and types of lighting. The proposed regulatory text converts the current lighting restrictions from wattage to lumens to address the amount of light generated from a vessel.

The proposed regulatory text would amend the lighting restrictions such that vessels fishing for squid or lighting for squid shall utilize a total of no more than 450,000 lumens of light to attract squid at any time.

Amend Subsection (h) of Section 149, Title 14, CCR to update shielding requirements.

Due to upgrades in lights that are being used in the fishery, incandescent bulbs are no longer unilaterally used and an update to the regulatory language is proposed to reflect the lack of filaments in some bulb types.

The proposed regulation will retain the requirement that the illumination must be oriented completely downward, will require that the entire bulb or lamp be shielded, and will repeal the provision for submerging lights below the surface of the water.

Other

Additional changes are also proposed to improve the organization, clarity and consistency of the regulations.

Benefits of the Regulations

The updated logbooks and regulation will assist the Department's environmental staff in managing the market squid fishery. Consistent with Fish and Game Code Section 7055, the proposed regulations benefit persons engaged in the market squid fishery because the changes (1) are aligned with sustainable fishing activities as described in the MSFMP and (2) help to protect sensitive bird and coastal communities and spawning grounds of market squid essential for future fishing seasons. The proposed regulatory action will benefit fishermen, processors, the State's economy, and the environment by maintaining a healthy and sustainable market squid fishery.

- (b) Authority and Reference Sections from Fish and Game Code for

Regulation:

Authority: Sections 7078, 7701, 7708, 8026, 8425 and 8429.5, Fish and Game Code.

Reference: Sections 7701, 7708, 8026, 8425, 8429.5, 8429.7, 12159 and 12160, Fish and Game Code.

(c) Specific Technology or Equipment Required by Regulatory Change:

None

(d) Identification of Reports or Documents Supporting Regulation Change:

CDFG 2005. Final Market Squid Fishery Management Plan (dated March 25, 2005). California Department of Fish and Game, Sacramento, California. <http://www.dfg.ca.gov/marine/msfmp/>

Vidal, E.A.G., F.P. DiMarco, J.H. Wormuth, and P.G. Lee. 2002. Optimizing rearing conditions of hatchling loliginid squid. *Mars. Bio.* 140:117-127.

Wells, M.J., and J. Wells. 1977. Cephalopoda: Octopoda. Chapter 6 of A. C. Giese and J. S. Pearse (editors), *Reproduction of marine invertebrates*, Vol. 4, p. 291-336. Acad. Press, Lond.

Yang, W.T., R.F. Hixon, P.E. Turk, M.E. Krejci, W.H. Hulet, and R.T. Hanlon. 1986. Growth, behavior, and sexual maturation of the market squid, *Loligo opalescens*, cultured through the life cycle. *Fish. Bull.* 84:771-798.

Zeidberg, L.D., Isaac, G., Widmer, C.L., Neumeister, H., and Gilly, W.F. 2011. Egg capsule hatch rate and incubation duration of the California market squid, *Doryteuthis* (= *Loligo*) *opalescens*: insights from laboratory manipulations. *Marine Ecology* 32: 468–479.

(e) Public Discussions of Proposed Regulations Prior to Notice Publication:

No public meetings are being held prior to the notice publication. The 45-day comment period provides adequate time for review of the proposed amendments.

IV. Description of Reasonable Alternatives to Regulatory Action:

(a) Alternatives to Regulation Change:

No alternatives were identified by or brought to the attention of Commission staff that would have the same desired regulatory effect.

(b) No Change Alternative:

Logbooks

The no change alternative was considered and rejected because the current form does not meet the Department's Forms Management standards and collects data that is less efficient in assisting the Department in management of the commercial market squid fishery.

Lights

The no change alternative was considered and rejected because the current language does not address the new types of lighting and their efficiency in use of power (wattage). This could result in a much larger effect than intended by the MSFMP to the market squid population and potentially other marine species and habitats. The no change alternative would also cause a biological concern, endangering the squid population by potentially delaying maturation and increased mortality of newly hatched eggs.

(c) Consideration of Alternatives:

In view of information currently possessed, no reasonable alternative considered would be more effective in carrying out the purpose for which the regulation is proposed, would be as effective and less burdensome to affected private persons than the proposed regulation, or would be more cost effective to affected private persons and equally effective in implementing the statutory policy or other provision of law.

V. Mitigation Measures Required by Regulatory Action:

The proposed regulatory action will have no negative impact on the environment; therefore, no mitigation measures are needed.

VI. Impact of Regulatory Action:

The potential for significant statewide adverse economic impacts that might result from the proposed regulatory action has been assessed, and the following initial determinations relative to the required statutory categories have been made.

(a) Significant Statewide Adverse Economic Impact Directly Affecting Businesses, Including the Ability of California Businesses to Compete with Businesses in Other States:

The proposed action will not have a significant statewide adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states. The proposed regulations continue to allow all actively permitted market squid vessels (vessel, light, and brail) to participate in a directed fishery for market squid during the commercial market squid season until the season

closes. The proposed regulations update the logbooks currently in use by commercial squid fishermen and revise the unit of measure for squid attracting lights from wattage to lumens. These changes are not expected to increase the time spent to complete the log. In addition, the proposed regulations will require shielding of the entire bulb or lamp instead of shielding of the entire filament and will discontinue the provision for the submerging of squid attracting lights. These changes are not expected to cause significant changes to current market squid fishing practices and therefore are not expected to cause any significant economic impacts.

- (b) Impact on the Creation or Elimination of Jobs Within the State, the Creation of New Businesses or the Elimination of Existing Businesses, or the Expansion of Businesses in California; Benefits of the Regulation to the Health and Welfare of California Residents, Worker Safety, and the State's Environment:

The Commission does not anticipate any impacts on the creation or elimination of jobs, the creation of new businesses or the elimination of existing businesses, or the expansion of businesses in California.

The Commission does not anticipate any benefits to the health and welfare of California residents or worker safety.

The Commission anticipates benefits to the environment in the sustainable management of a healthy squid resource.

- (c) Cost Impacts on a Representative Private Person or Business:

The agency is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

- (d) Costs or Savings to State Agencies or Costs/Savings in Federal Funding to the State:

None.

- (e) Nondiscretionary Costs/Savings to Local Agencies:

None.

- (f) Programs Mandated on Local Agencies or School Districts:

None.

- (g) Costs Imposed on Any Local Agency or School District that is Required to be Reimbursed Under Part 7 (commencing with Section 17500) of Division 4, Government Code:

None.

(h) Effect on Housing Costs:

None.

VII. Economic Impact Assessment

The proposed regulations will revise logbooks that are currently in use and will update the unit of measure referenced to implement existing lighting restrictions for fishing activity and will discontinue the use of submerged lights.

(a) Effects of the Regulation on the Creation or Elimination of Jobs Within the State

The proposed action will not affect the creation or elimination of jobs in the State because the proposed amendments regarding the measure of light intensity from watts to lumens will not change the volume of economic activity. This change is administrative in nature and will not require new gear, impose compliance costs or impact the volume of fishing activity. The proposed repeal of the provision for submerging lights below the surface of the water to a requirement that lights must not be submerged is not anticipated to change the volume of economic activity. This is because an estimate of two vessels have been using submerged lighting and these vessels are already equipped with the permitted lighting equipment such the proposed prohibition of submerged lighting will not impose compliance costs nor reduce the take capacity of these particular estimated two vessels or any other vessel in the squid fishery.

(b) Effects of the Regulation on the Creation of New Businesses or the Elimination of Existing Businesses Within the State

The proposed regulations are not anticipated to result in the elimination of existing businesses in the State, nor spur the creation of new businesses because the proposed amendments regarding the measure of light intensity from watts to lumens will not change the volume of economic activity. This change is administrative in nature and will not require new gear, impose compliance costs or impact the volume of fishing activity. The proposed repeal of the provision for submerging lights below the surface of the water to a requirement that lights must not be submerged is not anticipated to change the volume of economic activity. This is because an estimate of two vessels have been using submerged lighting and these vessels are already equipped with the permitted lighting equipment such the proposed prohibition of submerged lighting will not impose compliance costs nor reduce the take capacity of these particular estimated two vessels or any other vessel in the squid fishery.

(c) Effects of the Regulation on the Expansion of Businesses Currently Doing Business Within the State

The proposed regulations are not anticipated to result in the expansion of businesses currently doing business in the State because the proposed amendments regarding the measure of light intensity from watts to lumens will not change the volume of economic activity. This change is administrative in nature and will not require new gear, impose compliance costs or impact the volume of fishing activity. The proposed repeal of the provision for submerging lights below the surface of the water to a requirement that lights must not be submerged is not anticipated to change the volume of economic activity. This is because an estimate of two vessels have been using submerged lighting and these vessels are already equipped with the permitted lighting equipment such the proposed prohibition of submerged lighting will not impose compliance costs nor reduce the take capacity of these particular estimated two vessels or any other vessel in the squid fishery.

(d) Benefits of the Regulation to the Health and Welfare of California Residents

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

The proposed regulations are intended to add administrative clarity that should help to fulfill the goals set forth in the MSFMP, adopted by the Commission in August 2004. Adherence to the MSFMP is anticipated to benefit persons engaged in the market squid fishery by supporting the long-term viability of market squid fisheries and associated business activities. Discontinuing the use of submerged lights is intended to address concerns related to delayed maturation and potential mortality rates of newly hatched squid.

(e) 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.

(f) Benefits of the Regulation to the State's Environment

The proposed regulations are consistent with the goals set forth in the MSFMP; "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 implementation of the market squid FMP.

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Informative Digest/Policy Statement Overview

The Market Squid Fishery Management Plan (MSFMP) was developed under the provisions set forth by the Marine Life Management Act (MLMA) and sets goals and objectives to govern the conservation, sustainable use, and restoration of the market squid resource. Section 149, Title 14, California Code of Regulations (CCR), governs commercial market squid fishing activities off California, pursuant to the MSFMP.

Logbooks

Current regulations prescribe the use of logbooks for the collection of fishing data. Market Squid Vessel Logbook (DFG 149a) and Market Squid Light/Brail Boat Logbook (DFG 149b) are proposed to be updated to bring these forms into compliance with the standards set by the Department of Fish and Wildlife's (Department) Forms Management Coordinator, improve instructions that explain how the logs are to be filled out, and improve the quality of data that are received by the Department. Updated instructions will accompany the forms. The forms and instructions will be inserted as part of CCR, Title 14, Appendix A, and the old forms (DFG 149a (9/01) and DFG 149b (10/05)) will be deleted.

Subsection 149(e) is proposed to be amended to refer to the revised forms entitled with an updated version number "Market Squid Vessel Logbook – DFW 149a (Rev. 01/06/2015)", and "Market Squid Light/Brail Boat Logbook – DFW 149b (Rev. 01/06/2015)."

Lights

Due to the biological concern for delayed maturation and potential for increased mortality rates of newly hatched squid, the Department proposes adding language to subsection 149(f) to disallow the use of submerged lights while fishing for squid.

Current regulations in subsection 149(g) limit the wattage of squid attracting lights to 30,000 watts to protect nesting seabird populations and coastal communities. The wattage limitations were adopted based on incandescent bulbs. Light Emitting Diode (LED) lamps now use much less power (wattage) to produce the same amount of light (lumens). The proposed regulations will convert the maximum amount of light permitted from 30,000 watts to 450,000 lumens.

In addition, due to upgrades in lights that are being used in the fishery, incandescent bulbs are no longer unilaterally used and an update to the regulatory language in subsection 149(h) is proposed to reflect the lack of filaments in some bulb types by requiring shielding of the entire bulb or lamp instead of shielding of the entire filament. Furthermore, the Department is proposing to remove the language for submerged lights due to the changes proposed in subsection 149(f).

Other

Additional changes are also proposed to improve the organization, clarity and consistency of the regulations.

Benefits of the Regulations

The proposed regulatory action will benefit fishermen, processors, the State's economy, and the environment by maintaining a healthy and sustainable market squid fishery.

Consistency with State Regulations

The proposed regulations are neither inconsistent nor incompatible with existing State regulations. Commission staff has searched the California Code of Regulations and statutes and has found no other State regulations related to the take of market squid and no other State agency with authority to promulgate commercial squid fishing regulations.

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Regulatory Language

Amend Section 149, Title 14, CCR, as follows:

§ 149. Commercial Taking of Market Squid.

Requirements of this Section apply both to vessels taking squid and to vessels attracting squid with lights for the purpose of commercial take. Incidental commercial take of market squid that meets the criteria specified in subsection (l) below, and commercial take of market squid for live bait as described in subsection (m) below are not subject to the requirements of this Section, unless expressly specified.

(a) Permit Required. No person shall take, land, or attract squid by light for commercial purposes, except as provided in subsections (l) and (m) below, unless the owner of that vessel has a valid market squid permit issued pursuant to Section 149.1 or Section 149.3 of these regulations for use on that vessel that has not been suspended or revoked.

(b) Seasonal Catch Limitation.

(1) For the period from April 1 through March 31 of the following year, a total of not more than 118,000 short tons of market squid may be taken statewide for commercial purposes.

(2) Closure Process

(A) The department shall estimate, from the current trend in landings, when the Seasonal Catch Limit will be reached, and will publicly announce the effective date of closure of the directed commercial fishery on VHF/channel 16 between the hours of 10:00 p.m. and 12:00 a.m. (midnight).

(B) It shall be the responsibility of all operators of permitted market squid vessels to monitor VHF/channel 16 to determine when the Seasonal Catch Limit is expected to be reached and the fishery closed. Any announcement issued or made by the department on VHF/channel 16 shall constitute official notice.

(c) Time Closures. North of a westerly extension of the United States - Republic of Mexico boundary line:

(1) Fishing Days: Market squid may not be taken for commercial purposes between 1200 hours (noon) on Friday and 1200 hours (noon) on Sunday of each week.

(2) Seasonal Closure: When the Seasonal Catch Limit defined in subsection (b) has been reached and the commercial fishery is closed, squid may be taken for commercial purposes only incidentally to the take of other target species and subject to the limitations defined in subsection 149(l) or for live bait as defined in subsection 149(m) through March 31.

(d) Closed Areas for Seabirds. Market squid may not be taken for commercial purposes utilizing attracting lights in all waters of the Gulf of the Farallones National Marine Sanctuary. Boundaries of the Sanctuary are defined as those in effect on August 27, 2004, pursuant to Title 15, Code of Federal Regulations (CFR), Part 922, Subpart H. This regulation also applies to vessels pursuing squid for live bait purposes.

(e) Records. Pursuant to Section 190 of these regulations, any operator of a commercial market squid vessel, or person who possesses a valid Market Squid Vessel Permit, Market Squid Brail Permit, or Market Squid Light Boat Permit shall complete and submit an accurate record of his/her squid fishing, lighting, or brailing activities on a form

(Market Squid Vessel Logbook - ~~DFG 149a (9/01)~~DFW 149a (Rev. 01/06/15), or Market Squid Light/Brail Boat Logbook - ~~DFG 149b (10/05)~~DFW 149b (Rev. 01/06/15), which are located in Appendix A of Subdivision 1 of Division 1 of Title 14, CCR) provided by the department, as appropriate to the type of fishing activity. Logbook records shall be transmitted to the department on or before the 10th day of each month following the month that fishing activity occurred.

(f) Use of Lights to Aggregate Squid.

(1) It is unlawful to attract squid by light except as authorized under permits described in subsection 149.1(b) or Section 149.3 of these regulations. This subsection 149(f)(1) regulation does not apply to seine skiffs of a permitted vessel, or to vessels pursuing squid for live bait purposes only.

(2) Lights shall only be used to take squid if the bulb or lamp is completely above the surface of the water. This subsection 149(f)(2) also applies to vessels pursuing squid for live bait purposes.

(g) ~~Maximum Wattage~~Lumens. Each vessel fishing for squid or lighting for squid shall utilize a total of no more than ~~30,000 watts~~450,000 lumens of lights to attract squid at any time.

(h) Light Shields. Each vessel fishing for squid or lighting for squid ~~will~~shall reduce the light scatter of its fishing operations by shielding the entire ~~filament of each light~~bulb or lamp used to attract squid and orienting the illumination directly downward, ~~or providing for the illumination to be completely below the surface of the water.~~ The lower edges of the shields shall be parallel to the deck of the vessel.

(i) Forfeiture. Squid landed or possessed in violation of this Section or any other provision of the Fish and Game Code or ~~Commission~~these regulations shall be forfeited to the department. The squid shall be sold or disposed of in a manner to be determined by the department. The proceeds from all sales shall be paid into the Fish and Game Preservation Fund.

(j) Citations for violations of this Section may be issued to the vessel operator, crewmembers, and/or the holder of a market squid permit issued pursuant to Section 149.1 or 149.3, ~~Title 14, CCR of these regulations.~~

(k) Exemption from Tidal Invertebrate Permit. Operators and crewmembers of a commercial market squid vessel or light boat operating under the provisions of a commercial market squid permit are not required to possess a Tidal Invertebrate Permit, but are subject to the provisions of Section ~~123~~of these regulations.

(l) Incidental Take Allowance. Pursuant to this subsection, market squid may be taken for commercial purposes incidentally when engaged in fishing activities for other target species. Other requirements of this Section do not apply to incidental take. Incidentally-taken squid shall meet all of the following criteria:

(1) The volume of squid landed or possessed on a vessel shall not exceed 2 tons per trip.

(2) Market squid taken incidentally to other fisheries shall not exceed 10 percent of the total volume by weight of all fish landed or possessed on a vessel.

(m) Exemption for Live Bait. Squid taken for live bait purposes shall only be possessed for use as live bait or sold as live bait. Other requirements of this Section do not apply to take of live squid for bait, unless expressly specified.

Note: Authority cited: Sections 7078, 7701, 7708, ~~7923~~, 8026, 8425 and 8429.5, Fish and Game Code. Reference: Sections 7701, 7708, ~~7923~~, 8026, 8425, 8429.5, 8429.7, 12159 and 12160, Fish and Game Code.

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