

STATE OF CALIFORNIA
FISH AND GAME COMMISSION
FINAL STATEMENT OF REASONS FOR REGULATORY ACTION

Amend Section 163
Title 14, California Code of Regulations
Re: Harvest of Herring

- I. Date of Initial Statement of Reasons: May 22, 2004
- II. Date of Pre-Adoption Statement of Reasons: August 10, 2004
- III. Date of Final Statement of Reasons: September 1, 2004
- IV. Dates and Locations of Scheduled Hearings:
 - (a) Notice Hearing: Date: June 25, 2004
Location: Crescent City, CA
 - (b) Discussion Hearing: Date: August 6, 2004
Location: Bridgeport, CA
 - (c) Adoption Hearing: Date: August 27, 2004
Location: Morro Bay, CA
- V. Update:

No modifications were made to the originally proposed language of the Initial Statement of Reasons.

The Commission adopted the proposed changes at its August 27, 2004 meeting.
- VI. Summary of Primary Considerations Raised in Support of or Opposition to the Proposes Actions and Reasons for Rejecting those considerations:

Responses to public comments received were included in the [Pre-adoption Statement of Reasons](#) (see attached).

 - (1) Zeke Grader, Pacific Coast Federation of Fishermen's Associations (PCFFA), in oral comment at the August 27, 2004 Fish and Game Commission (Commission) meeting commended the Department for their work done on the herring fishery, had no changes to the proposed regulations, but expressed concerns regarding (a) maintaining the hydro-acoustic survey for San Francisco Bay in order to have more than one source of information in case a wide variation

between the two surveys should indicate a warning or signal that something is amiss with the population, (b) consideration of a 12 percent exploitation rate for the San Francisco population for the 2005-06 season, and (c) consideration of adopting a 2 inch minimum mesh size in San Francisco Bay for January 2005 because this mesh size has worked in Tomales Bay, and would take more younger fish without taking as many of the older year classes addressing the concern regarding the declining numbers of older fish. Department Response:

- (a) The Department concurs. The Department will continue to conduct the hydroacoustic survey for the purposes of collecting important biological data, and for monitoring herring schools in San Francisco Bay.
 - (b) Exploitation rates are set by the Department each year, not by a mathematical formula; they are modified based on additional biological and environmental data collected each season, such as oceanic conditions, growth rates of herring, strength of individual year-classes, and predicted size of incoming year-classes (i.e., recruitment). Given the Department's continued concerns regarding the age structure of the population and the need to implement a re-building policy to address these concerns, the Department is recommending a ten percent exploitation rate for the 2004-05 season and will assess the need to continue with conservative, and cautious, management of the fishery following the 2004-05 season assessment of the San Francisco Bay population.
 - (c) Comment noted. Pursuant to Fish and Game Commission actions taken at the August 6, 2004 Commission meeting, the proposal for a minimum mesh size of 2 inches for San Francisco Bay will be reviewed under a new and separate rulemaking process.
- (2) Ernie Koepf, California Herring Fishermen's Association, in oral comment at the August 6 and 27, 2004 Commission meetings (a) endorsed Sam Liberati's proposal for a minimum mesh size of 2 inches in San Francisco Bay, (b) compared the proposal by Sam Liberati for the San Francisco Bay fishery to the Tomales Bay experimental mesh size study, (c) cited a variable mesh study conducted by the Department of Fish and Game (Department) in 1987-88, (d) referred to the "re-aging" of fish in San Francisco Bay for the last three years, (e) enumerated that Tomales Bay has caught their quota each year using a minimum 2-inch mesh size, that there are no 2-year old fish in the catch, that 25 percent of the catch are 3-year old fish and that the Tomales Bay population has built to historic levels, (f) stated that use of 2 inch mesh in San Francisco would allow 90 percent of the population to escape harassment by gill net fishing on each school, (g) stated that a caution should be used in reference

to the use of the Coleraine model, and (h) requested combined methods be used to assess biomass. Department Response:

- (a-f) Comments noted. Pursuant to Fish and Game Commission actions taken at the August 6, 2004 Commission meeting, Mr. Liberati's proposal, and all pertinent comments, will be reviewed under a new and separate rulemaking process.
- (g) The Coleraine model is a stock assessment model that the Department has been refining for use on the San Francisco Bay population over the past few seasons. The Department continues to refine the use of the Coleraine model for the population, and at this time it is used as one of the tools to assess the health of the population. The Coleraine model is not currently used to estimate spawning biomass.
- (h) Following the 2003-04 season, due to several concerns regarding the status of the San Francisco Bay herring population, including a decline in the representative age classes and several seasons of below average biomass, the Department sought an independent scientific peer review. The scientific peer review focused on the application and use of the Coleraine stock assessment model and the survey methodologies used to estimate biomass. Among its findings, the scientific peer review panel noted that the spawn deposition survey tends to underestimate spawning biomass by about 10 percent and the hydroacoustic survey tends to overestimate the spawning biomass by about 20 percent. The errors (coefficients of variation) in the annual spawning biomass indices are about 40 percent for the spawn deposition survey and about 75 percent for the hydro-acoustic survey, indicating that the spawn deposition survey is a better estimate of the spawning biomass. Based on the Department's continued concerns about the status of the San Francisco Bay herring population and the recommendations of the scientific peer review panel, the biomass estimate for the 2003-04 season is based on the spawn deposition survey as a conservative measure.

- (3) Sam Liberati, San Francisco Bay herring permittee, in oral comment at the August 6, 2004 Commission meeting (a) referred to the Department lowering the minimum mesh size from 2 ¼ inch to 2 1/8 inch and that the way the mesh was measured allowed 2 1/16 inch or 2 inch mesh to be fished, (b) and corrected his initial proposal to include the 2004-05 and 2005-06 seasons instead of the 2004-05 and 2006-07 seasons.

Department Response:

- (a-b) Comments noted. Pursuant to Fish and Game Commission actions taken at the August 6, 2004 Commission meeting, Mr. Liberati's proposal, and all pertinent comments, will be reviewed under a new and separate rulemaking process.

- (4) Dan Yoakum, Director's Herring Advisory Committee (DHAC) representative and herring eggs on kelp permittee, in oral comment at the August 27, 2004 Commission meeting (a) endorsed the Department's recommendation for a quota based on ten percent of the spawn deposition survey and that this proposal should continue for a few years because the stock needs to rebuild for a few years.
Department Response:
(a) The Department concurs.

VII. Location and Index of Rulemaking File:

A rulemaking file with attached file index is maintained at:
California Fish and Game Commission
1416 Ninth Street
Sacramento, CA 95814

VIII. Location of Department files:

Department of Fish and Game
1416 Ninth Street
Sacramento, California 95814

IX. Description of Reasonable Alternatives to Regulatory Action:

(a) Alternatives to Regulation Change:

(1) Alternative 1: Use of the Combined Biomass Survey Method to Set the Annual Spawning Biomass Estimate and Quota for San Francisco Bay.

A fishing quota of 4,500 tons for San Francisco Bay, representing approximately 10 percent of the 2003-04 combined spawning biomass estimate of 45,276 tons. A fishing quota based on the combined biomass estimate of the spawn deposition and hydro-acoustic surveys would be consistent with the Department's methodology for estimating biomass from 1990 through 2003. Over time the population trends the two surveys depict have diverged. Following the 2002-03 season, the Department's concerns regarding the population and the survey results led the Department to seek an independent peer review to evaluate the use of a stock assessment model for San Francisco Bay and to evaluate the two survey methodologies. One of the findings of the peer review panel was that the Department's method of combining the two surveys has contributed to overexploitation by overestimating biomass. The peer review panel recommended the

use of the spawn deposition survey as the means of determining the annual spawning biomass estimate used in setting the fishery quota. Both the spawn deposition survey estimate (34,400 tons) and the combined spawning biomass estimate (45,276 tons) are below the 26-year average of 51,521 tons.

The Department does not support this alternative based on the following concerns: (1) the process of combining the two surveys may lead to the overestimation of the spawning biomass; and (2) the Department believes the estimated below average biomass warrants a conservative management strategy. A conservative management approach in setting the annual quota is best achieved through a determination of the spawning biomass by means of the spawn deposition alone.

(2) Alternative 2: Reduction of the San Francisco Bay Gill Net Mesh Size.

Some members of the herring industry have requested that the Department reduce the mesh size in San Francisco Bay from 2-1/8 inch mesh to 2 or 2-1/16 inch mesh. They would like to make this change either permanently or on an experimental basis. One of the Department's principal management goals in order to restore and maintain the herring fishery is to harvest age 4 fish and older from the population. Current information regarding the age composition of the commercial gill net fishery catch in San Francisco Bay indicates that a large percentage of age 3 fish are present in the catch. A mesh size reduction at this time would further increase the take of age 3 and potentially age 2 fish in the commercial catch, and would be inconsistent with the Department's management goals.

The San Francisco Bay herring population is presently near the lowest abundance level observed since the 1970s. Further, the Department's stock assessment for the 2003-04 season may indicate a continued low abundance of older fish, resulting in the below-average population biomass. Since the 1997-98 El Niño event, there has been no marked return of the older age classes (6-, 7-, and 8-year-old fish) to the San Francisco Bay herring population. The smaller numbers of older year class fish present in the population may have resulted, recently, in increasing fishing pressure on the younger year classes available to the fishery (4- and 5-year-old fish). While the Department has seen 2- and 3-year-old fish as recruits in the population each year, those same year classes have not recruited in large numbers as 3- and 4-year-old fish, and subsequently as 4- and 5-year-old fish. Based on the

Department's 2003-04 population assessment and in accordance with the 2003 California Sea-Grant convened peer review panel's recommendation, the Department considers the San Francisco Bay herring population to be in a rebuilding stage. The implementation of a rebuilding policy requires a conservative approach to the management of the fishery. A reduction of the gill net mesh size would increase fishing pressure on the remaining younger year classes left in the population and would be counter to the conservative management approach implemented by the Department for the San Francisco Bay fishery.

(b) No Change Alternative:

A no change alternative would provide a quota for the 2004-05 fishing season of 2,200 tons.

(c) Consideration of Alternatives:

In view of information currently possessed, no reasonable alternative considered would be more effective in carrying out the purposes for which the regulation is proposed or would be as effective as and less burdensome to the affected private persons in the long run than the proposed regulation.

X. 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:

No adverse economic impacts. The proposed action for the 2004-05 season will have no adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states.

The proposed regulations could benefit approximately 430 commercial herring fishermen and two processing plants in California, all of which are small businesses as defined under Government Code Section 11342.610. The direct impacts arising from the 2004-05 proposed interim management measures would result in an increase in the San Francisco Bay herring fishery

quota, and a herring quota in excess of 2003-04 landings in Tomales Bay. (The San Francisco fishery quota was reduced to 2200 tons in 2003-04 due to concerns regarding the age structure of the population.) By increasing the San Francisco quota to 3440 tons, we would project potential 2004-05 ex-vessel revenue increases of as much as \$4,960,000 in the San Francisco fishery alone, for the 389 San Francisco herring fishermen. This is based on historical price data for years when herring roe commanded prices as high as \$2.00 a pound (1240 tons x 2000 lbs/ton x \$2/lb = \$4,960,000). Additionally, a 400 ton quota is proposed for the Tomales Bay herring fishery for 2004-05. This Tomales Bay quota is down from the 500 ton quota allowed for the 2003-04 season, though fishermen only harvested 300 tons of the available 500 ton quota in 2003-04. Thus the Tomales Bay herring fishery quota for 2004-05 represents a potential revenue increase of as much as \$400,000 for the 34 fishermen in that fishery (100 tons x 2000 lbs/ton x \$2/lb = \$400,000). The 2004-05 Humboldt Bay and Crescent City Harbor herring fishery quotas remain the same as for the 2003-04; Humboldt 60 tons and Crescent City 30 tons, for 4 and 3 fishermen respectively. On average, the proposed regulations represent potential individual revenue increases of approximately \$9,674 for each herring fishermen Statewide. Total ex-vessel revenue projections Statewide for the 2004-05 herring season could be as high as \$15,720,000 (3930 tons x 2000 lbs/ton x \$2/lb = \$15,720,000).

- (a) 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:

None.

- (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. There are no new fees or reporting requirements stipulated under the proposed regulations.

- (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:

None.

- (h) Effect on Housing Costs:

None.

UPDATED INFORMATIVE DIGEST\POLICY STATEMENT OVERVIEW

Under existing law, herring may be taken for commercial purposes only under a revocable permit, subject to such regulations as the Fish and Game Commission shall prescribe. Current regulations specify: permittee qualifications; permit application procedures and requirements; permit limitations; permit areas; vessel identification requirements; fishing quotas; seasons; gear restrictions; quotas; and landing and monitoring requirements.

The proposed regulatory changes will establish fishing quotas by area for the 2004-05 herring fishing season, based on the most recent assessments of the spawning populations of herring in San Francisco and Tomales bays. The Department of Fish and Game (Department) is proposing a fishing quota of 3,440 tons (10 percent of the 2003-04 estimated spawning biomass) for San Francisco Bay. An initial 400-ton fishing quota (3.3 percent of the 2003-04 estimated spawning biomass of 12,124 tons) is proposed for Tomales Bay with provisions to increase the quota in-season if escapement goals are achieved by February 15, 2004. This season, the recommendation for an in-season increase is as follows:

- If the spawning escapement in Tomales Bay is more than 4,000 tons, increase the quota to 500 tons.

The proposed amendment specifies that the length of the meshes of any gill net used or possessed in the roe fishery in Tomales Bay, for the 2004-05 season only, shall be no less than 2 inches or greater than 2 ½ inches. The proposed one-year continuation of the regulation, originally approved for the 2000-01, 2001-02 and 2002-03, 2003-04 seasons only, will allow the Department to continue to evaluate the effect of reduced mesh length on the size and age composition of herring caught in 2 inch mesh gill nets.

Other changes relating to the herring season dates and corrections to referenced subsections are recommended to coincide with changes in the annual calendar and for accuracy.

The following is a summary of those proposed changes in Section 163, Title 14, CCR:

- Set the dates of the roe herring fisheries in San Francisco Bay from 5 p.m. on Sunday, December 5, 2004 to noon on Thursday, December 23, 2004 ("DH" gill net platoon only), and from 5:00 p.m. on Sunday, January 2, 2005 to noon on Friday, March 11, 2005.
- Set the dates of the roe herring fisheries in Tomales Bay from 5:00 p.m. on Sunday, December 26, 2004 until noon on Friday, December 31, 2004, and from 5:00 p.m. on Sunday, January 2, 2005 to noon on Friday, February 25, 2005.

- A correction to references to subsection (g)(4)(B) in subsection (h) is proposed for accuracy. The correct reference is subsection (g)(4)(A).

Following the receipt of public comment and discussion of the regulations, the Commission voted to adopt these regulations on August 27, 2004.