

Sections 163 and 164, Title 14, California Code of Regulations (CCR), reflect Department of Fish and Game (Department) recommendations presented to the DHAC and recommendations from the DHAC. The Department prepared a Supplemental Environmental Document, pursuant to the requirements of the California Environmental Quality Act. This Environmental Document will be released for public review in mid-June 2010. Certification of the Environmental Document is scheduled to occur at the September 16, 2010 Commission meeting in the Sacramento area.

BACKGROUND

Pacific herring gill-net fisheries occur in four primary spawning areas of San Francisco Bay, Tomales Bay, Humboldt Bay, and Crescent City Harbor. The Department manages these populations as separate stocks. The commercial herring fisheries on these stocks are closely regulated through a catch quota system to provide for adequate protection and utilization of the herring resource. The Department conducts annual assessments of the size of the spawning populations of herring (spawning biomass) in San Francisco Bay. In addition to the assessment of spawning biomass, the Department examines the age structure of the spawning population, growth and general condition, biological aspects of the catch, and environmental conditions. These data serve as the basis for establishing fishing quotas for the next season.

The herring eggs on kelp fishery (HEOK) is only permitted in San Francisco Bay. Holders of gill-net permits for San Francisco Bay are allowed to convert their permit into a HEOK permit at the start of each season. This fishery is regulated with the gill-net fishery mentioned above and its proportion of the quota is allocated from the total quota set for San Francisco Bay.

A fresh fish Pacific herring fishery is also permitted during the non-spawning season in Tomales Bay and San Francisco Bay. This fishery is regulated through annual assessments conducted by the Department as with the gill-net fishery mentioned above. Annual quotas for these fisheries are set in conjunction with gill-net fisheries for Tomales and San Francisco Bay.

FISHING QUOTAS

Annual fishing quotas are intended to provide for a sustainable fishery and have been limited to a total commercial catch of not to exceed 20 percent (harvest percentage) of the spawning biomass, based upon the results of a peer reviewed model that assumes a stable environmental and biological conditions. Quotas are the principal regulatory tool to establish adequate protection for the herring resource and provide for the long-term yield of the fishery. Each year, the Department recommends a harvest percentage that is

not determined by a fixed mathematical formula; rather, the recommendation is based upon the modeling results and takes into account additional 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). In response to poor recruitment, or indication of population stress, and/or unfavorable oceanographic conditions, harvest percentages in previous years have been set below 15 percent. For example, a near record low spawning biomass was estimated for both the 2006-2007 and 2007-2008 seasons; therefore, a conservative harvest percentage of 10 percent was recommended for those two seasons. The Department recommended a zero ton quota or no fishery option for the 2009-2010 season when the herring spawning biomass in 2008-2009 fell to a new historical low of 4,833 tons. The Commission adopted this recommendation and no commercial fishery was held in San Francisco Bay for the 2009-2010 season. This was done to help safeguard the remaining population and allow for stock rebuilding.

Within the overall quota for San Francisco Bay, separate quotas are established for each gill net platoon (*i.e.*, December “DH”, Odd, and Even fishing groups). The overall quota is divided among the three platoons in proportion to the number of permits assigned to each platoon. Slight annual adjustments in the quota assignments for each fishing group are needed to account for attrition of permittees and the use of herring permits in the herring eggs on kelp fishery. HEOK fishing occurs only in San Francisco Bay and the fishery is regulated under Section 164, Title 14, CCR. Individual HEOK quotas depend on the total herring fishery quota for San Francisco Bay established by the Commission under Section 163, Title 14, CCR. In 1994, the Commission provided HEOK permittees possessing “CH” permits with a HEOK quota equal to approximately 0.79 percent of the overall quota.

San Francisco Bay

The spawning biomass estimate for the 2009-2010 season was 38,409 tons, which fell below the historical average (1978-1979 season to present) of 49,084 tons. This estimate however, was a significant increase over the 2008-2009 season estimate of 4,833 tons. The increase in spawning biomass was due to a strong recruitment of the 2-year old herring to the spawning population, as well as improved physical condition of the fish in the population.

Since the 2002-2003 season, the Department has expressed concern regarding the health, specifically the age structure, of the San Francisco Bay herring population. Following the 1997-1998 El Niño, the estimated number of age four and older herring, which has historically supported the gill net fishery, declined and these older age classes have yet to recover based upon 2009-2010 preliminary age data. In contrast, the large recruitment of 2-year old fish (2007-2008 year class) into the spawning

population demonstrates the potential for stock recovery. However, this year class may be subjected to an unusually high level of fishing mortality next season due to its strength in numbers in comparison to the numbers of 4-year old and older fish that will be available next season.

San Francisco Bay Quota Options and Recommendation

The Department is providing the Commission a quota option range between zero to 10 percent of the 2009-2010 spawning biomass estimate of 38,409 tons. Annual roe herring fishery quotas are conservative and were historically set to insure that the total catch did not exceed 20 percent of the previous season's spawning biomass estimate. Typically, exploitation rates of no more than 15 percent have been recommended to prevent accidental overages from exceeding the 20 percent maximum harvest rate. This exploitation level was selected, based upon computer model simulations developed by the Pacific Fisheries Management Council to help ensure adequate protection of the herring resource while providing long-term sustainability of the fishery. Quotas are not determined by a fixed percentage; they are modified based on additional biological and fishery data collected each season, such as growth rates, strength and relative importance of individual year-classes, recruitment of incoming year-classes, and oceanographic conditions. Although the San Francisco Bay spawning biomass increased significantly after three seasons of unprecedented low spawning levels, the Department remains concerned over the herring stocks age structure that is significantly skewed towards younger fish, specifically the larger than usual percentage of 2-year old herring in the 2009-2010 spawning population. A prudent fishery management strategy would be to reduce the prospective harvest rate on younger age classes, which is consistent with the Department's herring fishery management objective to avoid the harvest of fish until they are fully recruited to the spawning population at age four.

The Department recommends a quota for the 2010-2011 season of 1,920 tons, which is 5 percent of the 2009-2010 spawning biomass. The Department considers that a five percent harvest rate for 2010-2011 will help reduce fishing mortality on the 2007-2008 year class, which will be critical for continued stock recovery.

Based on preliminary age estimates from the research data, the spawning biomass appears to have increased primarily due to the recruitment of 2-year old herring (2007-2008 year class) to the spawning population. While the increase in biomass is encouraging, the Department remains concerned with the low estimated numbers of age four and older herring in the spawning population. The 2007-2008 year class appears to be the strongest year class in recent seasons; however, this year class will be subjected to increased fishing pressure when it returns as 3-year olds next season due to the low numbers of age four and older herring which

normally support the commercial fishery. With appropriate harvest rates strong year classes can support a fishery for several seasons. For this reason one of the Department's longstanding management objectives has been to reduce the harvest of 2- and 3-year old herring, many of which are first-time spawners.

Though the 2009-2010 season spawning biomass of 38,409 tons remains below the historical average of 49,084 tons, the Department considers that a limited quota will provide a sustainable fishing opportunity while safeguarding sufficient numbers of herring for stock rebuilding. Additionally, fishing effort in the San Francisco herring fishery has decreased substantially during the past several years. During the 1990s the number of herring permits peaked at over 450 with over 120 vessels participating. In contrast, during the 2008-09 season permit renewals fell to 219 and only 31 vessels elected to participate. Given the decline in the number of participants, a 1,920 ton quota will provide for a fishery while preventing overexploitation. The Department is also supporting a DHAC recommendation to integrate the December platoon into odd and even platoons whose seasons do not start until January. This allows herring that enter the bay during December to spawn without disturbance from fishing activity.

The Department continues to be concerned about the status of the herring population. However, the low harvest rate recommendation provides for a sustainable fishery while supporting continued stock rebuilding, thus promoting herring's important role in both ocean and bay ecosystems.

Tomales Bay

The Department is not recommending any change to the regulations for the Tomales Bay fishery quota. Proposed changes to the season dates are outlined under "Season Dates and Fishing Times" below.

Humboldt Bay and Crescent City Harbor

The Department is not recommending any change to the regulations for the Humboldt Bay or Crescent City Harbor herring fisheries including quotas and season dates.

SEASON DATES AND FISHING TIMES

San Francisco Bay

The Department is recommending that the Commission adopt the DHAC recommended changes to season dates and fishing times for San Francisco Bay. The consensus of the DHAC, which met on April 21, 2010, was to recommend that the dates of the roe herring fisheries for DH,

Odd and Even platoons in San Francisco Bay be set to open from 5:00 p.m. on Sunday, January 2, 2011, until noon on Friday, March 11, 2011.

Tomales Bay

The Department is recommending that the Commission adopt the DHAC recommended changes to season dates and fishing times for Tomales Bay. The consensus of the Tomales Bay DHAC representatives for setting season dates was to recommend opening at noon on Sunday, December 26, 2010, until noon on Friday, February 25, 2011.

INTEGRATION OF DECEMBER DH PLATOON INTO ODD AND EVEN PLATOONS

The Department recommends that the Commission adopt the DHAC proposal to integrate the December DH platoon into the Odd and Even platoons. DH permittees with odd numbered permits would be assigned to the Odd platoon and permittees with even numbered permits would be assigned to the Even platoon. No fishing would occur in December which would allow herring to spawn uninterrupted by fishing activity. If adopted this regulatory change would also save the Department fishery monitoring and management costs for the month of December.

CHANGES FOR CLARITY AND CONSISTENCY

The Department is recommending a minor change to the regulations to correct the Limited Entry Pacific Herring permit application number in subsection 163(b)(1) and the Herring Eggs on Kelp permit application number in subsection number 164(h)(1) to coincide with the 2010-2011 season applications.

The Department is recommending the addition of regulatory language specifying the number of permits per vessel, use of gill net vessels in “off weeks”, and number of gill nets allowed which will facilitate the operation of the platoon system in San Francisco Bay.

The Department is recommending the removal of regulatory language referencing dates for the ocean waters fishery. At the September 3, 2009 meeting, the Commission voted to prohibit all fishing for herring in ocean waters as off January 1, 2010.

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

Authority: Sections 1050, 5510, 8389, 8550, 8552.1, 8553 and 8555, Fish and Game Code.

References: Sections 713, 1050, 7850, 7850.5, 7852.2, 8043, 8053, 8389, 8550-8557, and 8559, Fish and Game Code.

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

None.

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

- (1) Informational Summary Packet for San Francisco Bay herring fishery
- (2) Meeting Notes, Director's Herring Advisory Committee Meeting, April 21, 2010, San Rafael, California.

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

- (1) Director's Herring Advisory Committee Meeting, April 21, 2010, San Rafael, California.

IV. Description of Reasonable Alternatives to Regulatory Action:

(a) Alternatives to Regulation Change: No alternatives were identified.

(b) No Change Alternative:

A no change alternative would provide a quota for the 2010-2011 fishing season of zero tons.

(c) Consideration of Alternatives:

The following Alternative was considered but rejected by the Department:

ASSIGNING GILL NET PERMITS TO FISHING VESSELS

Current regulations specify that herring permits be assigned to individual permittees or their temporary permittee substitute. The DHAC proposed assigning permits to the fishing vessel rather than to individuals, to make the captain of the permitted fishing vessel solely responsible for any violation of herring regulations. The proposed regulation change attempts to streamline the permitting process and reduce the complexity of enforcing the Department herring regulations.

At this time the Department is not considering this alternate regulatory action. The Department, as well as the DHAC, is very interested in simplifying the Pacific herring regulations. However, given the complexity of this request the Department will require more time to analyze all enforcement, licensing and legal issues. Department staff will continue to work closely with DHAC members and other interested parties during the development of the Fishery Management Plan for Pacific Herring to develop a comprehensive suite of herring regulatory reform proposals to present to the Commission.

V. Mitigation Measures Required by Regulatory Action:

See Draft Supplemental Environmental Document – Pacific Herring Commercial Fishing Regulations.

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:

No adverse incremental economic impact to businesses.

Japan remains the major market for California herring roe (Kazunoko), which is processed for consumption in Japan as a traditional salted roe product or flavored roe product. Recent gains in the Japanese Yen, against the US dollar, could foretell increase demand for California herring roe. However, the Russian federation is emerging as a strong market competitor to the US, with their herring exports to Japan growing at an enormous rate. This growth is reinforced as herring roe continues to hold top market position year to year, with 18 of 25 Japanese seafood firms noting that it was their best-selling commodity.

The California commercial herring fishery takes place in four areas; San Francisco Bay, Tomales Bay, Humboldt Bay, and Crescent City Harbor. However, the greatest economic activity is derived from herring roe ventures in San Francisco Bay, which typically generate about 90 percent of the total average annual value for this California fishery. In real 2009 dollars, San Francisco Bay herring landings have averaged about \$375,000 in ex-vessel revenue to the fishermen since 2004. All of these herring fishermen and herring processing plants are small businesses as defined under California Government Code Section 11342.610.

The Department recommended a zero ton quota or no fishery option for the 2009-2010 season when the herring spawning biomass in 2008-2009 fell to a new historical low of 4,833 tons. The spawning biomass estimate for the 2009-2010 season was 38,409 tons, which fell below the historical average (1978-1979 season to present) of 49,084 tons. Depending on which harvest option the Commission chooses for 2010-2011, the harvestable quota may be between zero and 3,841 tons (or zero to 10 percent of the 2009-2010 spawning estimate of 38,409 tons). Relative to last year's closed season, this potential harvest range represents a positive incremental impact of \$1.8 million to \$3.6 million in ex-vessel revenue, or direct revenue to the fishermen; assuming the final decision will be between five percent and ten percent of the biomass, respectively. The resulting total output contribution to the State's economy from this direct revenue is \$3.2 million to \$6.5 million. This is based on an economic output multiplier of 1.774 for calculating total direct, indirect, and induced impacts to California's economy from the herring fishery.

- (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:

Given a potential range of \$1.8 million to \$3.6 million in positive direct revenue to the fishermen, the employment impacts are estimated to be about 397 to 793 jobs supported. This is based on an employment multiplier of 218.3 jobs per million dollars produced in direct fishing revenue from the California herring fishery.

- (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.

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 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 regulations would establish the fishing quota, season dates and times for fishing operations for the 2010-2011 season in San Francisco Bay based on the most recent biomass assessments of spawning populations of herring as well as season dates and times for fishing operations for the 2010-2011 season in Tomales Bay. There are no quota changes proposed for Crescent City Harbor, Humboldt or Tomales bays for the 2010-2011 herring season. Changes concerning number of permits per vessel, use of gillnet vessels in “off weeks”, number of nets allowed, and herring permits for use in ocean waters are also included.

The following is a summary of the proposed changes in Sections 163, and 164, Title 14, CCR:

- Set the San Francisco Bay quota between zero (0) and 10 percent (0 and 3,841 tons) of the 2009-2010 spawning biomass. The Department is recommending that the San Francisco Bay quota be set at 1,920 tons, which is five percent of the 2009-2010 spawning biomass. If the Commission were to adopt this option, a 1,920 ton quota would result in a 3.4 ton individual quota for a “CH” gillnet permittee and a 4.1 ton individual quota for a non-“CH” gillnet permittee participating in the HEOK fishery.
- Set the dates of the roe herring fishery in Tomales Bay from noon on Sunday, December 26, 2010, until noon on Friday, February 25, 2011.
- Integrate the December DH platoon into the Odd and Even platoons. DH permittees with odd numbered permits would be assigned to the Odd platoon and permittees with even numbered permits would be assigned to the Even platoon.

The following are minor editorial changes proposed to improve clarity and consistency of the regulations:

- The proposed regulations would correct the Limited Entry Pacific Herring permit application number in subsection 163(b)(1) and the

Herring Eggs on Kelp permit application number in subsection 164(h)(1) to coincide with the 2010-2011 season applications.