

## STAFF SUMMARY FOR FEBRUARY 10-11, 2016

**17. PACIFIC HALIBUT SPORT FISHING****Today's Item**Information Action 

Discuss proposed changes to Pacific halibut sport fishing regulations.

**Summary of Previous/Future Actions**

- Notice hearing Dec 9-10, 2015; San Diego
- **Today's discussion hearing Feb 10-11, 2016; Sacramento**
- Adoption hearing Apr 13-14, 2016; Santa Rosa

**Background**

Proposed changes to Section 28.20 modify the season to include a range from May 1 to Oct 31 which may include periodic closures, and replace existing text regarding the 2015 quota with a reference to the Federal Register specifying the 2016 federal quota amount.

Pacific halibut is internationally managed under the authority of the Northern Pacific Halibut Act of 1982 between the USA and Canada. Pacific halibut along the US West Coast is jointly managed through authorities of the International Pacific Halibut Commission (IPHC), Pacific Fishery Management Council, and National Marine Fisheries Service, in conjunction with the West Coast state agencies. For consistency, FGC routinely adopts regulations to bring State law into conformance with federal and international law for Pacific halibut.

**Significant Public Comments (N/A)****Recommendation (N/A)****Exhibits**

1. [DFW memo, received Oct 19, 2015](#)
2. [ISOR](#)
3. [DFW Report to the IPHC](#)

**Motion/Direction (N/A)**

State of California  
Department of Fish and Wildlife

## Memorandum

Date: October 7, 2015

To: Sonke Mastrup  
Executive Director  
Fish and Wildlife Commission

From: Charlton H. Bonham  
Director



Subject: **Agenda Item for the December 9-10, 2015 Fish and Game Commission Meeting, Request to Publish Notice of the Commission's Intent to Amend Section 28.20, Title 14, California Code of Regulations, Re: Pacific Halibut**

The Department of Fish and Wildlife (Department) requests that the Fish and Game Commission (Commission) authorize publication of notice of its intent to consider amending existing regulations for the recreational Pacific halibut (*Hippoglossus stenolepis*) fishery (Section 28.20, Title 14, CCR).

An Initial Statement of Reasons (ISOR) is attached, which proposes regulatory changes needed to align state regulations with federal regulations. This will allow for discussion and adoption at the February 10, 2016 and April 18, 2016 Commission meetings, respectively.

If you have any questions regarding this item, please contact Dr. Craig Shuman, Regional Manager, Marine Region, at (805) 568-1246. The public notice for this rulemaking should identify Environmental Scientist, Melanie Parker as the Department's point of contact. Ms. Parker can be reached at (831) 649-2814 or [Melanie.Parker@wildlife.ca.gov](mailto:Melanie.Parker@wildlife.ca.gov).

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

Amend Section 28.20  
Title 14, California Code of Regulations  
Re: Pacific Halibut

I. Date of Initial Statement of Reasons: October 13, 2015

II. Dates and Locations of Scheduled Hearings:

- (a) Notice Hearing:                      Date: December 9, 2015  
  Location: San Diego
- (b) Discussion Hearing:                 Date: February 10, 2016  
  Location: Sacramento
- (c) Adoption Hearing:                  Date: April 13, 2016  
  Location: Santa Rosa

III. Description of Regulatory Action:

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

Pacific halibut is internationally managed under the authority of the Northern Pacific Halibut Act of 1982 (the "Act"; Title 16, Chapter 10, Subchapter IV, Sections 773 to 773k, U.S. Code) pursuant to the Convention between the United States of America and Canada for the Preservation of the [Pacific] Halibut Fishery of the Northern Pacific Ocean and Bering Sea (Convention). Provisions of the Convention establish the International Pacific Halibut Commission (IPHC) and outline general administrative and enforcement requirements.

Convention waters as defined include "... the waters off the west coasts of the United States and Canada ... within the respective maritime areas in which either Party exercises exclusive fisheries jurisdiction. For the purposes of this Convention, the "maritime area" in which a Party exercises exclusive fisheries jurisdiction includes without distinction areas within and seaward of the territorial sea or internal waters of the Party" (Article I).

The IPHC was established to conduct research and coordinate management activities in the waters of the parties to the Act. Pacific halibut along the United States west coast is jointly managed through authorities of the IPHC, Pacific Fishery Management Council (PFMC), and the National Marine Fisheries Service (NMFS), in conjunction with west coast state agencies. The IPHC sets the annual Total Allowable Catch (TAC) for each of the Pacific halibut management areas (including the west coast – Area 2A) using stock assessment and research survey results.

The PFMC coordinates west coast management of all recreational and commercial Pacific halibut fisheries in United States waters through the Area 2A Pacific Halibut Catch Sharing Plan (CSP), which constitutes a framework for recommending annual management measures to NMFS. The CSP framework also establishes the sharing formula used for allocating the Area 2A TAC among west coast fisheries, including the California recreational fishery. NMFS is responsible for specifying the final CSP language and management measures in federal regulation (50 CFR Part 300, Subpart E and Federal Register) and reporting season specifications on its halibut telephone hotline.

For species managed under federal fishery management plans or regulations, the Fish and Game Commission (Commission) has usually taken concurrent action to conform State recreational regulations to federal regulations. This is done in recognition of federal jurisdiction and to ensure consistency and ease of use for constituents who are subject to both State and federal laws while fishing for or in possession of sport fish. Pacific halibut federal regulations are applicable in federal waters (three to 200 miles offshore) off Washington, Oregon and California. Each state adjacent to federal waters adopts corresponding fishery regulations for their own waters (zero to three miles off shore).

### **PFMC Action Re: Pacific Halibut Fishing Off California**

At its November 2015 meeting, the PFMC will recommend changes to the 2016 CSP and recreational Pacific halibut fishery in California. Federal regulations are expected to become effective prior to May 1, 2016.

### **Pacific Halibut Quota Management**

The established quota management system for the Pacific halibut recreational fishery ensures catches stay within the allowable quota.

Following the determination of the 2016 Area 2A TAC by the IPHC (in late January 2016), the Department may conduct additional public outreach to

gather input to inform the NMFS decision on a preferred 2016 fishing season expected to keep catches within the allowable quota. After consideration of the input received, the Department will recommend a preferred 2016 season structure to NMFS for approval. The approved season will be included in the final federal regulations and on the NMFS halibut hotline prior to the start of the season.

During the 2016 fishing season, the Department will actively monitor the fishery and coordinate with NMFS and the IPHC weekly on the status of catches relative to the Pacific halibut quota. If catches are projected to meet and/or exceed the California quota, NMFS and the IPHC could take action to close or modify the fishery following consultation with the Department. The NMFS will provide notice of any inseason action to close the season in California via its halibut hotline; this is similar to the process used for recreational fisheries in Oregon and Washington.

The Department shall also inform the Commission and the public via a press release of any inseason changes in regulations triggered by achieving or expecting to exceed the quota. The latest fishing rules will be posted on the Department's website, the Recreational Groundfish Fishing Regulations Hotline, the NMFS Area 2A halibut hotline, and made available by contacting a Department office.

### **Present Regulations**

Current regulations for Pacific halibut authorize recreational fishing in waters off California from May 1 through 15, June 1 through 15, July 1 through 15, August 1 through 15, and September 1 through October 31 or until the quota is reached, whichever comes first. The 2015 quota amount was 25,220 pounds. The State and federal daily bag limit is one fish per angler and there is no minimum size limit.

Present regulations also establish methods of take and include the use of hook and line, harpoons, spears, and bow and arrow gear.

### **Proposed Amendments**

The Department is proposing the following regulatory changes to be consistent with PFMC recommendations and the CSP for Pacific halibut regulations in 2016. This approach will allow the Commission to adopt State recreational Pacific halibut regulations to conform in a timely manner to those taking effect in federal ocean waters on or before May 1, 2016.

The proposed regulatory changes to Section 28.20 would modify the season to include a range from May 1 to October 31 which may include periodic closures, and replace the text regarding the 2015 quota with a reference to the Federal Register specifying the 2016 federal quota

amount. The final regulation will conform to the season, established by federal regulations, which begins in May 2016.

It is the policy of the State to encourage the conservation, maintenance, and utilization of the living resources of the ocean and other waters under the jurisdiction and influence of the State for the benefit of all the citizens of the State. In addition, it is the policy of the State to promote the development of local fisheries and distant-water fisheries based in California in harmony with international law respecting fishing and the conservation of the living resources of the ocean and other waters under the jurisdiction and influence of the State. The objectives of this policy include, but are not limited to, the maintenance of sufficient populations of all species of aquatic organisms to ensure their continued existence and the maintenance of a sufficient resource to support a reasonable sport use, taking into consideration the necessity of regulating individual sport fishery bag limits to the quantity that is sufficient to provide a satisfying sport. Adoption of scientifically-based seasons and other regulations provides for the maintenance of sufficient populations of Pacific halibut to ensure their continued existence.

The benefits of the proposed regulations are consistency with international and federal regulations and the sustainable management of California's Pacific halibut resources.

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

Authority: Sections 200, 202, 205, 219, 220, 240 and 316, Fish and Game Code

Reference: Sections 200, 202, 203.1, 205, 207, 215, 219, 220, and 316, Fish and Game Code, 50 CFR Part 300, Subpart E; and 50 CFR 300.66.

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

None.

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

Convention between the United States of America and Canada for the Preservation of the Halibut Fishery of the Northern Pacific Ocean and Bering Sea.

Northern Pacific Halibut Act of 1982:

<http://www.gpo.gov/fdsys/pkg/USCODE-2010-title16/html/USCODE-2010-title16-chap10-subchapIV.htm>

Environmental Assessment and Regulatory Impact Review for Continuing Implementation of the Catch Sharing Plan for Pacific Halibut in Area 2A, 2014-2016:

<http://www.westcoast.fisheries.noaa.gov/publications/nepa/halibut/ea-halibut-2014.pdf>

- (e) Public Discussions of Proposed Regulations Prior to Notice Publication:
- September 16, 2015 PFMC meeting in Sacramento, CA.
  - November 19, 2015 PFMC meeting in Garden Grove, CA.

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:

Under the No-Change Alternative, status quo management of the Pacific halibut resource would continue for 2016. This would result in misalignment between federal and State regulations when NMFS establishes new regulations for the California fishery for 2016 or if NMFS takes inseason action to modify or close the fishery. Inconsistency in regulations will create confusion among the public and may result in laws that are difficult to enforce.

It is critical to have consistent State and federal regulations establishing season dates, depth constraints and other management measures, and also critical that the State and federal regulations be effective concurrently. Consistency with federal regulations is also necessary to maintain State authority over its recreational Pacific halibut fisheries and avoid federal or international preemption.

- (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 adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states because the regulatory action does not substantially alter existing conditions.

(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 in California.

The Commission does not anticipate any impacts on the creation of new businesses, the elimination of existing businesses, or the expansion of businesses in California because the regulatory action does not substantially alter existing conditions.

The Commission anticipates benefits to the health and welfare of California residents. Providing opportunities to participate in sport fisheries fosters conservation through education and appreciation of fish and wildlife.

The Commission anticipates benefits to the environment by the sustainable management of California's Pacific halibut resources.

The Commission does not anticipate any benefits to worker safety.

Additional benefits of the proposed regulations are consistency with federal regulations and promotion of businesses that rely on recreational Pacific halibut fishing.

(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:

Recreational fisheries are broadly sub-divided between private anglers and commercial passenger fishing vessels. The economic impact of regulatory changes for recreational fisheries may be estimated by tracking the resulting changes in fishing effort, angler trips and length of stay in the

fishery areas. Distance traveled affects gas and other travel expenditures. Daytrips and overnight trips involve different levels of spending for gas, food and accommodations at area businesses as well as different levels of sales tax impacts. Direct expenditures ripple through the economy, as receiving businesses buy intermediate goods from suppliers who then spend that revenue again. Business spending on wages is received by workers who then spend that income, some of which goes to local businesses. Spending associated with recreational fisheries thus multiplies throughout the economy with the indirect and induced effects of the initial direct expenditure.

In the aftermath of a one-month Pacific halibut fishing closure in 2014, surveys<sup>a</sup> of anglers and businesses were conducted to gauge the importance of the Pacific halibut fishery to anglers and local communities. Of 265 angler respondents, about 20 percent of Pacific halibut anglers traveled from outside of coastal northern California, while the majority of survey respondents were from California's north coast. The Department's 2014 surveys similarly found that 70 percent of anglers reported residing within California's three north coast counties (Mendocino, Humboldt, and Del Norte). Of the total reported trips (6,589), the respondent anglers each took on average more than 30 trips in the 2013/2014 seasons, and 34 percent included Pacific halibut as a primary target. Results indicated an even higher number (89 percent) pursued Pacific halibut as one of their primary target species, and 70 percent also pursued other species on trips for Pacific halibut. The average angler traveled 119 miles on land and 23 miles on water on their most recent Pacific halibut trip. Overall, angler expenditures averaged about \$250 per angler trip and both surveys concluded that recreational fishing for Pacific halibut is economically important to charter boat businesses, tackle and marine supply businesses, lodging establishments near fishing access points, and businesses that provide traveler services such as: gas stations, markets, convenience stores, and restaurants.

The adoption of scientifically-based regulations provides for the maintenance of sufficient populations of sport fish to ensure their continued existence and future sport fishing opportunities that in turn support local and regional economies. In a 2012 Fisheries Economics Report by the NMFS, trip-related and equipment expenditures for all

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<sup>a</sup> Hesselgrave, T., N. Enelow, and K. Sheeran, 2014. The Estimated Economic Impact of the Northern California Pacific Halibut Closure of August 2014 (recreational and charter boats), conducted by Ecotrust, funded by Humboldt Area Saltwater Anglers.

Takada, M., 2014. Analysis of the Economic Effects of the August Pacific Halibut Closure on California's North Coast Businesses, conducted by Humboldt State University, funded by California Department of Fish and Wildlife.

marine recreational anglers sum to approximately \$1.7 billion in California. Coupled with the indirect and induced effects of this \$1.7 billion direct revenue contribution, the total realized economic benefit to California is estimated at \$2.7 billion in annual total economic output. This corresponds with about \$630 million in total wages to Californians, which affects about 13,000 jobs in the State, annually. The portion of this benefit derived from or related to the Pacific halibut fishery is unknown.

The proposed regulations will modify State recreational Pacific halibut regulations to conform to federal rules. Currently, State regulations for Pacific halibut provide for an annual quota, season length, authorized methods of take, and bag limit.

In adopting these conforming regulations, the State relies on information provided in the federal Draft Environmental Impact Statement which includes analysis of impacts to California. (Environmental Assessment and Regulatory Impact Review for Continuing Implementation of the Catch Sharing Plan for Pacific Halibut in Area 2A, 2014-2016)  
<http://www.westcoast.fisheries.noaa.gov/publications/nepa/halibut/ea-halibut-2014.pdf>.

For public notice purposes to facilitate Commission discussion, the Department is proposing regulatory changes to encompass the range of federal Pacific halibut regulations that are expected to be in effect for 2016. The proposed regulatory changes may modify season length and replace the text regarding the 2015 quota with a reference to the Federal Register specifying the 2016 federal quota amount.

The estimated impacts on angler trips are anticipated to be close to status quo. Economic impacts are not expected to change compared to 2015 because the 2016 fishery season is expected to be similar to the previous year.

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

The cumulative effects of the changes statewide are estimated to be neutral to job elimination and potentially positive to job creation in California. No significant changes in fishing effort and recreational fishing expenditures to businesses are expected as a direct result of the proposed regulation changes.

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

The cumulative effects of the changes statewide are expected to be neutral to business elimination and have potentially positive impacts to the creation of businesses in California. No significant changes in fishing effort and recreational fishing expenditures to businesses are expected as a direct result of the proposed regulation changes.

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

The cumulative effects of the changes statewide are expected to be neutral to positive to the expansion of businesses currently doing business in California. No significant changes in fishing effort and recreational fishing expenditures to businesses are expected as a direct result of the proposed regulation changes.

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

The Commission anticipates benefits to the health and welfare of California residents. Providing opportunities to participate in sport fisheries fosters conservation through education and appreciation of California's wildlife.

- (e) Benefits of the Regulation to Worker Safety:

The proposed regulations are not anticipated to impact worker safety conditions.

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

It is the policy of this State to encourage the conservation, maintenance, and utilization of living marine resources under the jurisdiction and influence of the State for the benefit of all citizens (Section 1700, Fish and Game Code). Benefits of the proposed regulations include continuation of fishing opportunity, along with the continuation of the reasonable and sustainable management of recreational finfish resources. Adoption of scientifically-based seasons provides for the maintenance of sufficient populations of Pacific halibut to ensure their continued existence and recreational use.

- (g) Other Benefits of the Regulation:

Concurrence with Federal Law:

Pacific halibut along the United States west coast is jointly managed through authorities of the IPHC, PFMC, and the NMFS, in conjunction with west coast state agencies. The PFMC annually reviews the status of Pacific halibut regulations. As part of that process, it recommends regulations aimed at meeting biological and fishery allocation goals specified in law or established in the Pacific Halibut CSP. These recommendations coordinate management of recreational Pacific halibut in State (zero to three miles) and federal waters (three to 200 miles offshore) off the coasts of Washington, Oregon, and California. These recommendations are subsequently implemented as ocean fishing regulations by the NMFS.

California's sport fishing regulations need to conform to federal regulations to ensure that biological and fishery allocation goals are not exceeded and to provide uniformity in management and enforcement activities across jurisdictions.

## Informative Digest/Policy Statement Overview

Pacific halibut is internationally managed under the authority of the Northern Pacific Halibut Act of 1982 between the United States of America and Canada. Pacific halibut along the United States west coast is jointly managed through authorities of the International Pacific Halibut Commission (IPHC), Pacific Fishery Management Council (PFMC), and the National Marine Fisheries Service (NMFS), in conjunction with the west coast state agencies. The PFMC coordinates west coast management of all recreational and commercial Pacific halibut fisheries in United States waters through the Pacific Halibut Catch Sharing Plan (CSP), which constitutes a framework for recommending annual management measures. The NMFS is responsible for specifying the final CSP language and management measures in federal regulations (50 CFR Part 300, Subpart E and the Federal Register) and noticing them on their halibut telephone hotline. Federal regulations for Pacific halibut are applicable in federal waters (three to 200 miles offshore) off Washington, Oregon, and California. Each state adjacent to federal waters adopts corresponding fishery regulations for their own waters (zero to three miles off shore).

For consistency, the California Fish and Game Commission (Commission) routinely adopts regulations to bring State law into conformance with federal and international law for Pacific halibut.

The November PFMC regulatory recommendation and NMFS final rule will be considered by the Commission when it takes its own regulatory action to establish the State's recreational Pacific halibut fishery regulations for 2016.

### **Summary of Proposed Amendments**

The Department is proposing the following regulatory changes to be consistent with PFMC recommendations and the CSP for Pacific halibut regulations in 2016. This approach will allow the Commission to adopt State recreational Pacific halibut regulations to conform in a timely manner to those taking effect in federal ocean waters on or before May 1, 2016.

The proposed regulatory changes modify Pacific halibut regulations to allow for timely conformance to federal fisheries regulations and inseason changes. The proposed regulatory changes would modify the seasons to include a range from May 1 to October 31 which may include periodic closures, and replace the text regarding the 2015 quota with a reference to the Federal Register specifying the 2016 federal quota amount. The final regulation will conform to the season established by federal regulations in May 2016.

The benefits of the proposed regulations are: consistency with federal regulations, the sustainable management of California's Pacific halibut resources, and health and

welfare of California residents.

The proposed regulations are neither inconsistent nor incompatible with commercial fishing regulations (Chapter 6, Title 14 CCR), State Coastal Conservancy regulations for experimental fishing gear loan programs (Section 13862, Title 14, CCR), and State Board of Equalization tax regulations (Section 1602, Title 18, CCR). The Legislature has delegated authority to the Commission to adopt sport fishing regulations (Fish and Game Code, Sections 200, 202, and 205) and Pacific halibut fishing regulations specifically (Fish and Game Code, Section 316). The proposed regulations are consistent with regulations for sport fishing in marine protected areas (Section 632, Title 14, CCR) and with general sport fishing regulations in Chapters 1 and 4 of Subdivision 1 of Division 1, Title 14, CCR. Commission staff has searched the California Code of Regulations and has found no other State regulations related to the recreational take of Pacific halibut.

## Regulatory Language

Section 28.20, Title 14, CCR, is Amended to Read:

### **§28.20. Halibut, Pacific.**

(a) Season:

(1) Pacific halibut may be taken only from [varied dates within the range from May 1 to October 31, and may include periodic closures]~~May 1 through 15, June 1 through 15, July 1 through 15, August 1 through 15, and September 1 through October 31~~, or until the quota is reached, whichever is earlier. Pacific halibut take is regulated by a quota that is closely monitored each year in alignment with federal regulations.

(2) The ~~2015~~ Pacific halibut quota is ~~25,220 pounds~~published in the Federal Register [Volume and Date to be inserted by OAL]. The department shall inform the commission, and the public via a press release, prior to any implementation of restrictions triggered by achieving or expecting to exceed the quota. Anglers and divers are advised to check the current rules before fishing. The latest fishing rules may be found on the department's website at: [wildlife.ca.gov/Fishing/Ocean](http://wildlife.ca.gov/Fishing/Ocean), or by calling the Recreational Groundfish Fishing Regulations Hotline (831) 649-2801 or the National Marine Fisheries Service Area 2A Halibut Hotline (800) 662-9825 for recorded information, or by contacting a department office.

(b) Limit: One.

(c) Minimum size: None.

(d) Methods of Take:

(1) When angling, no more than one line with two hooks attached may be used.

(2) A harpoon, gaff, or net may be used to assist in taking a Pacific halibut that has been legally caught by angling. See Section 28.95 of these regulations for additional restrictions on the use of harpoons.

(3) Take by spearfishing is allowed pursuant to Section 28.90 of these regulations.

Note: Authority cited: Sections 200, 202, 205, 219, 220, 240 and 316, Fish and Game Code. Reference: Sections 200, ~~201, 202, 203.1, 205, 207, 210, 215, 219, 220 and 316~~, Fish and Game Code, 50 CFR Part 300, Subpart E; and 50 CFR 300.66.

**California Department of Fish and Wildlife  
Report to the International Pacific Halibut Commission**



**California Department of Fish and Wildlife  
Marine Region  
January 2016**

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## Executive Summary

The California Department of Fish and Wildlife (CDFW) is providing this informational report on the Pacific halibut fishery in California during 2015. The California coastline plays a unique part in Pacific halibut management as it is located at the southern extent of the population range and has historically been a minor, and irregular, contributor to harvest removals compared to other management areas.

More recently, a robust recreational fishery in northern California has developed and has prompted science, management and policy discussions about the stock off California. CDFW is encouraged by these various discussions, and is optimistic that Pacific halibut can continue to be a viable and sustainable resource for the local and regional economies of the north coast.

Prior to 2014, California's recreational Pacific halibut fishery was managed within the Area 2A Catch Sharing Plan (CSP) as part of the South of Humboldt Mountain Management Subarea with southern Oregon. Beginning in 2014, modifications to the CSP provided for California to have a separate subarea and allocation<sup>1</sup>.

Beginning in 2015, California received an increased allocation percentage within the Area 2A CSP and in turn, committed to inseason monitoring and tracking of catch against the corresponding 2015 California quota (25,220 net pounds, which was four percent of the Area 2A non-tribal share). Additionally, the National Marine Fisheries Service (NMFS), CDFW and the International Pacific Halibut Commission (IPHC) implemented a new management process in California, similar to other areas along the west coast, which allows for closure of the fishery inseason upon projected attainment of the quota.

This report provides a detailed summary of the performance of the 2015 Pacific halibut sport fishery off of California after implementing the new monitoring and management scheme and considering data available to date. The inseason tracking and projection methodology proved to be successful in monitoring the fishery progression on a weekly basis. The season was scheduled to begin on May 1 and end on October 31, with only the first half of each month open in May, June, July and August, and full months scheduled to be open in September and October. However, following discussions with the International Pacific Halibut Commission and National Marine Fisheries Service, an inseason fishery closure was implemented on August 13, based on projected early attainment of the 2015 California quota.

**Final 2015 catch estimates totaled 24,906 net pounds—or 99 percent of the quota.** The average net weight per kept fish in 2015 was approximately 25 pounds, slightly higher than the average weight of fish taken in California's 2014 fishery and similar to the average weight of fish taken in California's 2013 fishery.

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<sup>1</sup> For a detailed summary of the fishery and management measures prior to 2015, please see the CDFW report submitted for the 2015 IPHC Annual Meeting:  
[http://iphc.int/meetings/2015am/bb/1104\\_3\\_CASportReport.pdf](http://iphc.int/meetings/2015am/bb/1104_3_CASportReport.pdf)

## **California 2015 Recreational Allocation and Regulations**

At the November 2014 Pacific Fishery Management Council (Council) meeting, changes were made to the Pacific halibut Area 2A CSP for the season affecting the 2015 California sport fishery. Those changes included an increase to the California allocation of the non-tribal Area 2A Total Allowable Catch (TAC) from one to four percent; modifying the season structure to keep to that allocation; and implementing an inseason tracking and monitoring program with a provision for inseason action to close the fishery if and when the California quota was projected to be attained. The International Pacific Halibut Commission (IPHC) set the Area 2A TAC at 970,000 net pounds, which resulted in a 2015 California recreational Pacific halibut quota of 25,220 net pounds.

Regulations for California's fishery in 2015 provided for a season that would be open from May 1-15; June 1-15; July 1-15; August 1-15; and September 1- October 31; or until the quota was projected to be attained, whichever was earlier. The season was designed to provide some opportunity earlier in the year (May and June) with the bulk of the catch expected in July and August, then some residual late opportunity in September and October when salmon fishing was over. However, partially due to excellent weather during the open days in July, the fishery closed early through an inseason action effective August 13 for the remainder of the year. The fishery was actually open during 2015 on May 1-15, June 1-15, July 1-15, and August 1-12 (57 days). The daily bag and possession limit was one fish and there was no size limit.

## **Catch Estimates, Projections and Inseason Tracking and Monitoring in 2015**

Beginning in 2015, CDFW shifted to an active quota management system for Pacific halibut and implemented a weekly inseason monitoring process as part of its commitment to actively track and monitor the fishery to ensure that catches remained within the allowable quota. This tracking/monitoring process used sample data from the CDFW's California Recreational Fishery Survey (CRFS) sampling program, prior years' catch estimates from the sampling program, and the relationship between field observations (sample data) and resulting monthly estimates<sup>2</sup>. The relationship CDFW derived between sample data and estimates was one sampled fish represented 103.4 pounds of estimated catch.

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<sup>2</sup> For a detailed description of the inseason catch tracking and projection methodology, see the CDFW report submitted to the PFMC in November 2014: [http://www.pcouncil.org/wp-content/uploads/G1b\\_Sup\\_CDFW\\_Rpt2\\_NOV2014BB.pdf](http://www.pcouncil.org/wp-content/uploads/G1b_Sup_CDFW_Rpt2_NOV2014BB.pdf)

The inseason monitoring approach described below was effective in ensuring catches were actively tracked during the 2015 season in order to allow for timely and responsive management when needed (i.e., closure of the fishery when attainment of the California quota was projected).

The CDFW's California Recreational Fisheries Survey (CRFS) sampling program is designed to provide 20 percent coverage for primary sample sites and modes [party-charter boaters (PC), or private-rental boaters (PR)] and 10 percent coverage for secondary sample sites. CRFS samplers are assigned a day, site, and mode to sample, and collect catch and effort data for the full day for that site and mode for whichever species anglers are targeting. The CRFS program generates monthly estimates of catch for all species, incorporating catch and effort information from all modes, using methods described above. However, CRFS generated catch estimates are not available until approximately six weeks after a month ends. Therefore, each week, CDFW staff tallied CRFS observations of Pacific halibut including sampler examined fish (A) and angler reported kept fish (B1) received on Tuesday or Wednesday from the prior week. This total was multiplied by 103.4 pounds to generate a preliminary projected weekly estimate of total catch. Because production of final monthly catch estimates involved a six-week lag time, these weekly projections were used to estimate catch for any weeks for which monthly CRFS estimates were not yet available. This approach allowed for very timely estimation of cumulative catch during the season (i.e., with one week lag time rather than six weeks). The preliminary catch projection, in conjunction with the cumulative total, was used by CDFW staff to monitor the progress of the fishery.

Once a Pacific halibut monthly catch estimate was available, this value replaced the combined weekly preliminary projections for that month. For example, CRFS sampled three fish during field sampling activities in the open fishing period from May 1-15. The preliminary projected total catch for that time period was estimated to be 310 pounds (3 fish \* 103.4 pounds per fish). Then, in mid-July when the monthly Pacific halibut catch estimate for May became available from CRFS, that value replaced the inseason projection calculated above that represented May (Table 1). Any significant differences between monthly catch estimates and weekly projections were also investigated and reported.

Table 1. Preliminary 2015 Pacific halibut catch estimates in California by month. CDFW projection values for May through August are provided in strikeout to illustrate the process of replacing the projections with CRFS estimates when those estimates became available.

Month	Net Pounds Accrued	
	CDFW Projection	CRFS Estimate
May	<del>310</del>	378
June	<del>1,554</del>	1,783
July	<del>11,684</del>	13,768
August	<del>8,892</del>	8,977
<b>Total</b>	<b>24,906</b>	

Inseason action to close the fishery was considered based on the cumulative weekly projections combined with available monthly CRFS estimates. This method of catch tracking and estimation involved use of the best available information as it became available during the season. This near real-time information allowed CDFW, NMFS, and IPHC to coordinate during the season on projecting and determining a closure date.

During the 57 days that the Pacific halibut fishery was open, there were 196 sample assignments for the areas and fishing modes where Pacific halibut could be encountered (Table 2). Samplers were located at an average of more than three northern California locations every day the fishery was open during 2015. Approximately 54 percent of sample assignments were for primary private/rental (PR1) mode locations and 36 percent were for the PC mode.

### Location of Sampled Pacific Halibut

A total of 217 Pacific halibut were examined by CRFS samplers throughout the season. Similar to other years, the greatest number of Pacific halibut observed by samplers (99 fish), were encountered in Trinidad followed by Eureka and Fields Landing (Figure 1). The majority of catch occurred in July and August. Consistent with previous years' sample data, the majority of sampler-examined fish were from launch ramps, and the remainder was from the PC mode (Table 3).

Table 2. Number of days that a CRFS sampler was stationed in each of the north coast locations during the open season.

Location	May 1-15	June 1-15	July 1-15	August 1-12	Total
Crescent City ( <i>Crescent City Harbor, Inner Boat Basin PR, Inner Boat Basin PC</i> )	10	11	13	10	44
Trinidad ( <i>Trinidad Harbor, Trinidad Pier PR, Trinidad Pier PC</i> )	11	13	11	9	44
Eureka ( <i>Eureka Marina, Woodley Island Marina, Samoa Bridge "T" Street Ramp</i> )	6	6	8	9	29
Fields Landing	3	4	4	2	13
Shelter Cove ( <i>Shelter Cove PR, Shelter Cove PC</i> )	8	8	8	6	30
Fort Bragg ( <i>Noyo River, North Noyo Harbor, Fort Bragg, Van Damme, Pt. Arena</i> )	6	10	12	8	36
All Ports	44	52	56	44	196

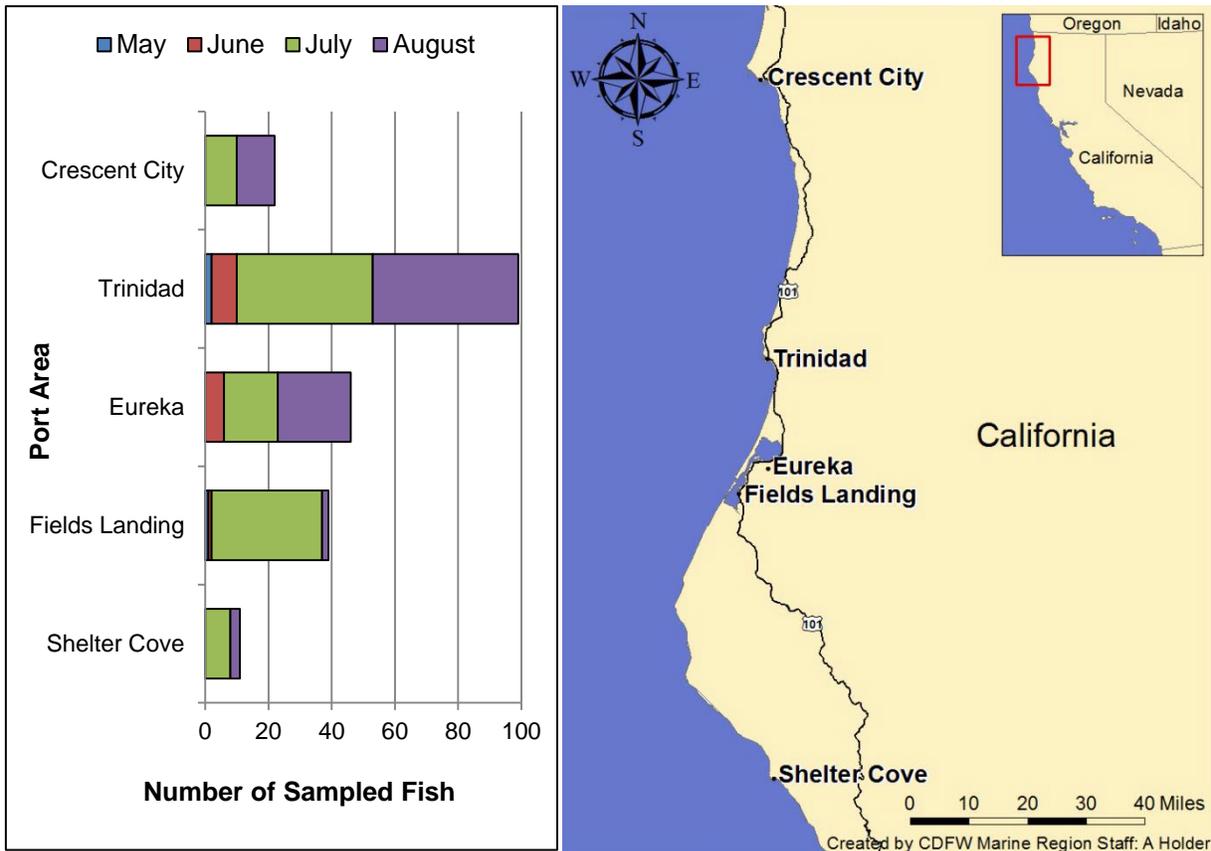


Figure 1. Northern California port areas where Pacific halibut are most often encountered and number of sampler examined Pacific halibut by month and port area during 2015. Sample data are from CRFS.

Table 3. Proportion of sampler examined Pacific halibut by mode (primary and secondary private/rental or party/charter) during 2015. Data are from CRFS.

<b>Fishing Mode</b>	<b>Proportion of Sampled Fish</b>
Private/Rental	91%
Party/Charter	9%

### **Weekly Totals of Sampled Pacific Halibut**

During July 2015, a record number of 113 Pacific halibut were sampled over only 15 days, and 96 of those were encountered between July 6 and July 12. Between 2008 and 2015, the sample week (Monday through Sunday) with the highest number of sampler examined Pacific halibut in each year occurred during August four times. The highest weekly number of sampler examined fish in 2014 and 2015 occurred during July due to changes in the season dates which closed during August 2014, and closed during the second half of May through August during 2015.

Table 4. Sample examined Pacific halibut by year and highest number of fish sampled by sample week (Monday-Sunday) from 2008-2015. Data are from CRFS.

<b>Year</b>	<b>Total Yearly Sampled Fish</b>	<b>Highest Weekly Number of Sampled Fish</b>	<b>Week of Highest Sample Number</b>
<b>2008</b>	204	37	June 30-July 6
<b>2009</b>	387	79	July 27-August 2
<b>2010</b>	203	39	August 9-15
<b>2011</b>	131	25	August 1-7
<b>2012</b>	316	47	August 20-26
<b>2013</b>	328	67	August 5-11
<b>2014</b>	311	58	July 7-13
<b>2015</b>	217	96	July 6-12

### **Weather and Ocean Conditions**

Weather and ocean conditions are variable and strongly influence anglers' ability to fish for Pacific halibut off of California's north coast. Catches in 2015 exhibited a very strong correlation with the weather: when the weather was good, catches tended to be higher, and when the weather was poor, catches tended to be lower or zero (Figure 2).

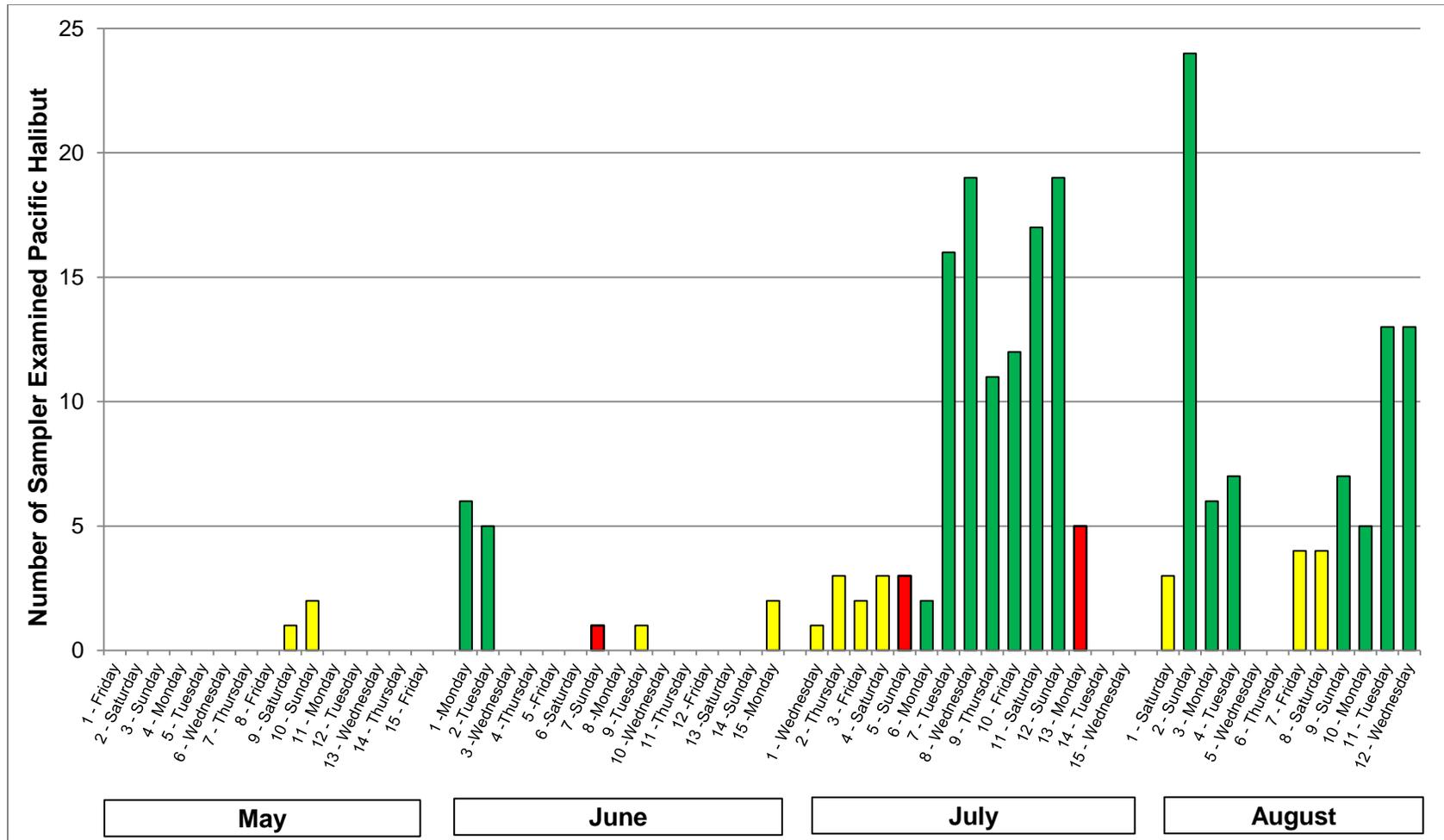


Figure 2. Daily number of sampler-examined Pacific halibut in California during the open periods from May through August 2015. Bar color indicates prevailing weather and ocean conditions: green indicates good conditions; yellow indicates mixed conditions from different ports; and red indicates poor conditions. Sample data are from CRFS. Daily weather and ocean conditions are assigned from CRFS weekly sampler reports and may be subjective. Except for May 13 and 14, and June 8, days with zero sampled Pacific halibut experienced poor or variable weather conditions. No sample assignments occurred on July 15.

## Reporting and Coordination with NMFS and the IPHC

The weekly projection and cumulative total projected catch was provided by CDFW staff to NMFS and the IPHC for discussion to evaluate the catch status to date. CDFW also provided weekly updates to its Pacific halibut webpage

(<https://www.wildlife.ca.gov/Conservation/Marine/Pacific-Halibut#28555772-2015-in-season-tracking>) and Pacific halibut inseason catch tracking “thermometer” to inform the public of projected catch to date throughout the season (Figure 3).

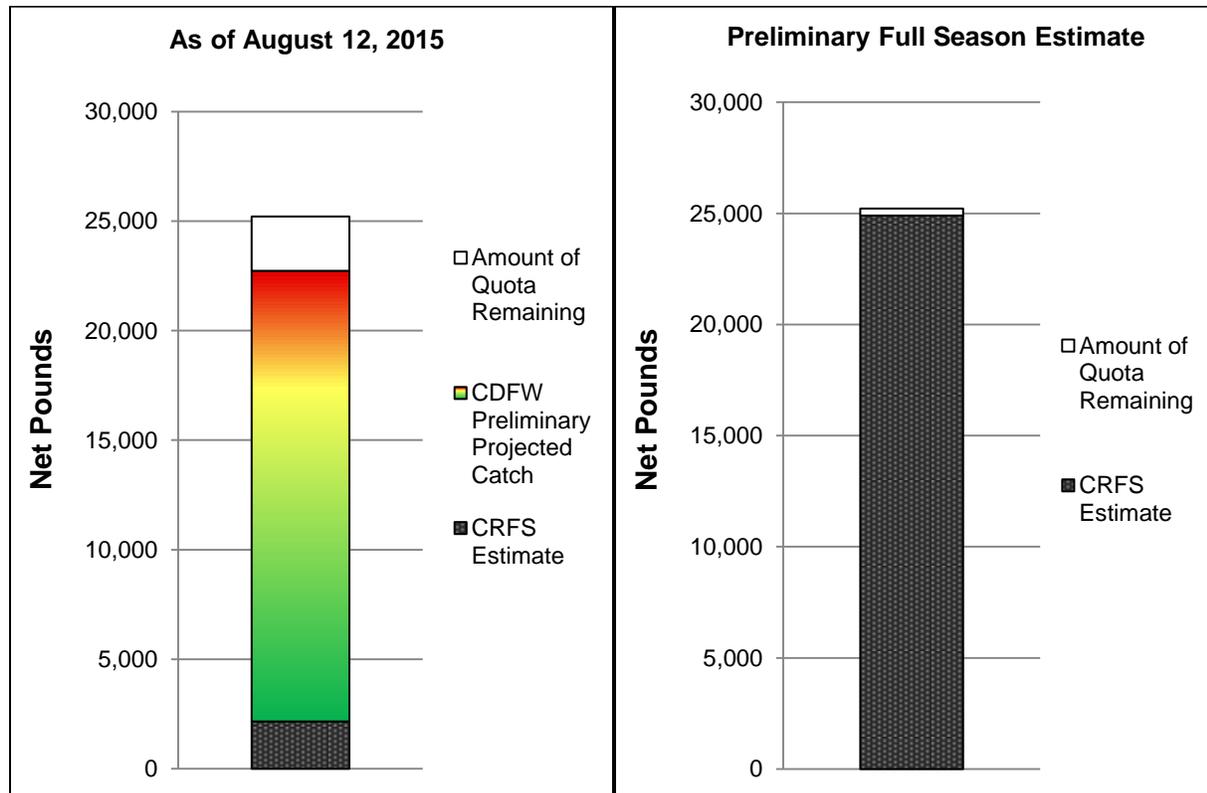


Figure 3. Examples of the CDFW online Pacific halibut inseason catch tracking “thermometer.” The figure on the left shows catch projections (colored gradient) combined with monthly estimates (grey stippled). The figure on the right shows the full season with monthly estimates, which replaced all projections. The “thermometer” was updated weekly during the open season, with a final update post-season when full season estimates became available.

## Fishery Closure

Provisions in the CSP allow for flexible inseason management of the recreational Pacific halibut fisheries in Area 2A. These provisions include modifications to sport fishing periods, or the length of the season via inseason changes. Notice of any inseason action is provided by NMFS on their halibut hotline.

During the May through August open periods, CDFW coordinated weekly with NMFS and the IPHC on the status of projected catch amounts to date. Catch projections through August 2 showed more than 70 percent of the quota had already been taken. Good weather forecasts and the potential for high catch rates, similar to those seen during the July open period, prompted CDFW to hold conference calls with NMFS and the IPHC on August 6 and August 10 to review recent catch information and determine if predicted catch rates for the remainder of the August open period would lead to catches that exceeded the California quota. Based on then current fishery trends and predicted weather conditions, CDFW, NMFS and IPHC determined that a fishery closure effective Thursday, August 13 was necessary to avoid exceeding the quota.

The CDFW provided notice of the early closure to its constituents through a variety of methods: a news release (<https://cdfgnews.wordpress.com/2015/08/11/recreational-pacific-halibut-fishery-to-close-august-13/>) the details of which were carried in several local north coast news publications; information on its Pacific halibut webpage (<https://www.wildlife.ca.gov/Conservation/Marine/Pacific-Halibut#>); CDFW Marine Region blog; CDFW groundfish regulations hotline; and a flyer posted at local harbors, launch ramps, and tackle shops and handed out to the public by CRFS samplers (Figure 4 and Figure 5). NMFS updated its Pacific halibut hotline with the closure information, and the IPHC posted a news release about the closure to its website. CDFW staff is also aware that a number of local organizations posted the information online or in printed media, and provided notice by marine radio.



# Pacific Halibut Fishery in California CLOSED,



## Effective Thursday August 13

The California Department of Fish and Wildlife (CDFW) announces that the recreational **Pacific halibut fishery in California will close Thursday, August 13 at 12:01 a.m. for the remainder of 2015.**

Based on the latest catch projections, CDFW expects the 2015 quota of 25,220 pounds will be exceeded unless the fishery is closed. Authority to close the fishery resides with the International Pacific Halibut Commission (IPHC) and the National Marine Fisheries Service (NMFS), which took action to close the fishery following consultation with CDFW.

During this season, CDFW field staff sampled public launch ramps and charter boat landings to monitor catches of Pacific halibut along with other marine sportfish. Using this catch information, CDFW conferred with NMFS and the IPHC on a weekly basis to review projected catch amounts and determine when the quota would be attained.

For current information about the Pacific halibut fishery, science or management, please check one of the following resources:

- NMFS Halibut Hotline, (800) 662-9825
- CDFW Recreational Groundfish Regulations Hotline, (831) 649-2801
- CDFW website, <http://www.dfg.ca.gov/marine/pacifichalibut.asp>
- IPHC website, [www.iphc.int](http://www.iphc.int)



Figure 4. CDFW flyer announcing the August 13, 2015 closure of the recreational Pacific halibut fishery in California. The flyer was posted at launch ramps and marinas, and provided to tackle shops and the public to notify them of the early season closure.



Figure 5. CRFS sampler Dani Schaut posting the CDFW Pacific Halibut Closure Notice flyer at the Eureka Public Marina on August 11, 2015. Photo by Shannon Walkenhauer.

### **Angler Compliance with Closed Time Periods**

The CRFS program continues its sampling coverage in north coast ports at the same rate when the Pacific halibut fishery is closed, due to the need to collect information on open fisheries (i.e., salmon, groundfish). This continuous sampling coverage provided an opportunity to examine angler compliance with the closures in 2014 and 2015.

One element of the CRFS survey plan is to collect information from anglers at the end of their trip on fish they released. Anglers are asked for the species of fish, and whether the fish was released alive or dead. The August 2014 fishery closure was the first time anglers experienced a mid-season closure, and during that closure, all Pacific halibut reported as caught during that month were also reported as released alive. No fish were reported by CRFS samplers as kept, or reported by anglers as being kept or released dead during the August 2014 closure (Table 5).

Prior to and during the 2015 Pacific halibut season, extensive public outreach by CDFW and an active online community of anglers on California's north coast helped educate anglers about the new season structure, the season dates and the inseason closure. By the end of 2015, CDFW CRFS samplers only received two reports of a fish caught and released during closed time periods (Table 5). No other fish were examined by samplers, or reported by anglers as caught and kept, or caught and released during any of the closed periods of the fishing season, including the period from August 13-15 when the fishery was originally scheduled to be open but was closed inseason. This is

likely due to the fact that anglers do not fish in the same areas with the same gear types used to target Pacific halibut when targeting other species of fish.

In the weeks following the August 12<sup>th</sup> closure, sampler and angler reports from all five major port areas suggest that anglers were complying with the early 2015 season closure, and that agency, industry and community outreach to raise awareness of the inseason closure worked effectively. Additionally, CDFW enforcement officers along the north coast reported good compliance with the closure; no violations or warnings for Pacific halibut take out of season were issued in 2015, nor were any CalTIP<sup>3</sup> reports received.

Table 5. Number of kept and released Pacific halibut examined by or reported to CRFS samplers during periods of time closed to Pacific halibut fishing off of California in 2014 and 2015. Data are from CRFS.

Closed Period	Number of Fish	
	Kept	Released (Alive)
August 1-31, 2014	0	5
May 16-31, 2015	0	1
June 16-30, 2015	0	1
July 16-31, 2015	0	0
August 13-15, 2015	0	0
August 16-31, 2015	0	0
September 1-October 31, 2015	0	0

## Estimating Discard Mortality

In recent years, IPHC has requested that state fisheries agencies provide an annual estimate, if possible, of discard mortality in its recreational fishery. The current sampling protocol of CDFW's CRFS program includes the observation and estimation of the total number of both retained and discarded fish, and documentation of the weight of retained fish when possible. Discarded fish that are returned dead are also documented. However, unlike retained fish, no information on the size of discarded fish is collected.

Using CFRS data from 2008 to 2015, CDFW estimated the weight of fish discarded alive and those discarded dead, assuming that the average weight of a discarded fish is the same as a retained fish (see the Trends in Length and Weight section of this document, beginning on page 19, for a discussion of trends in fish size). In 2015, 117 fish were estimated to have been released (based on the expansion of sample data) and of those, seven percent were estimated to have died, resulting in a 2015 discard

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<sup>3</sup> CalTIP (*Californians Turn In Poachers and Polluters*) is a confidential secret witness program that encourages the public to provide Fish and Wildlife with factual information leading to the arrest of poachers and polluters. This service is available via a toll free hotline, texting, a mobile device application, or the internet.

mortality estimate of 130 net pounds. Given that the daily bag limit is one fish per person, with no minimum size or slot limit, recreational anglers could be expected to discard smaller fish and retain the larger ones – therefore the estimated discard mortality is likely an overestimate.

In producing these estimates, a mortality rate of seven percent was applied to fish reported as discarded either dead or alive. This mortality rate was established by the Council’s Groundfish Management Team as a presumed rate of discard mortality for flatfish<sup>4</sup>. Application of this rate to discarded fish is also consistent with methods used to estimate discard mortality by the Oregon Department of Fish and Wildlife. The results of this analysis suggest that on average, annual discard mortality was about 132 net pounds each year from 2008 to 2015 in California’s recreational Pacific halibut fishery (Table 6).

Table 6. Estimated number of fish and weight of recreationally caught Pacific halibut discards, and estimated total discard mortality (net pounds) in California from 2008-2015. Data from 2015 is preliminary and subject to change. Data are from CRFS.

Year	Discarded Alive			Discarded Dead		Total Discard Mortality (net pounds)
	Estimated Number of Fish	Estimated Net Pounds	Estimated Discard Mortality (7 percent of net pounds)	Estimated Number of Fish	Estimated Discard Mortality (7 percent of net pounds)	
<b>2008</b>	133	1,559	109	4	4	113
<b>2009</b>	226	3,040	213	0	0	213
<b>2010</b>	63	865	61	0	0	61
<b>2011</b>	24	293	21	0	0	21
<b>2012</b>	157	2,315	162	0	0	162
<b>2013</b>	120	2,095	147	0	0	147
<b>2014</b>	197	2,938	206	0	0	206
<b>2015</b>	117	1,861	130	0	0	130
<b>Average</b>	130	1,871	131	0.5	0.5	<b>132</b>

## Fishery Trends

CDFW worked closely with constituents to develop a season structure and season dates for 2015 that would allow the most opportunity possible throughout the months of May through October while also avoiding exceeding the quota. The 57 open fishing

<sup>4</sup> PFMC (Pacific Fishery Management Council) and NMFS (National Marine Fisheries Service). 2009. Proposed Acceptable Biological Catch and Optimum Yield Specifications and Management Measures for the 2009-2010 Pacific Coast Groundfish Fishery Final Environmental Impact Statement Including Regulatory Impact Review and Initial Regulatory Flexibility Analysis. Pacific Fishery Management Council, Portland, OR. January 2009, Table 4-56.

days during 2015 was almost a 70 percent decrease compared to the annual number of open fishing days from 2008-2013 (Figure 6 and Figure 7).

Unsurprisingly, changes to California’s recreational Pacific halibut season length have coincided with changes in average estimated daily catches. From 2008 to 2013, an average of 60 to 200 pounds of Pacific halibut was caught per day (Figure 7). In 2014, the season length was reduced by one month from 184 days to 153 days, and average daily catch was just over 200 pounds per day. In 2015, when the season length was further reduced to only 57 days, average daily catch rose steeply to over 400 pounds per day (Figure 7). The abrupt increase in the average daily estimated catch from 2014 to 2015 may be an indication that the recreational Pacific halibut fishery in California is transitioning to a derby style fishery, much like many areas of Oregon and Washington’s recreational Pacific halibut fisheries. In addition, it indicates that even with increased effort on open days, there is no shortage of Pacific halibut available.

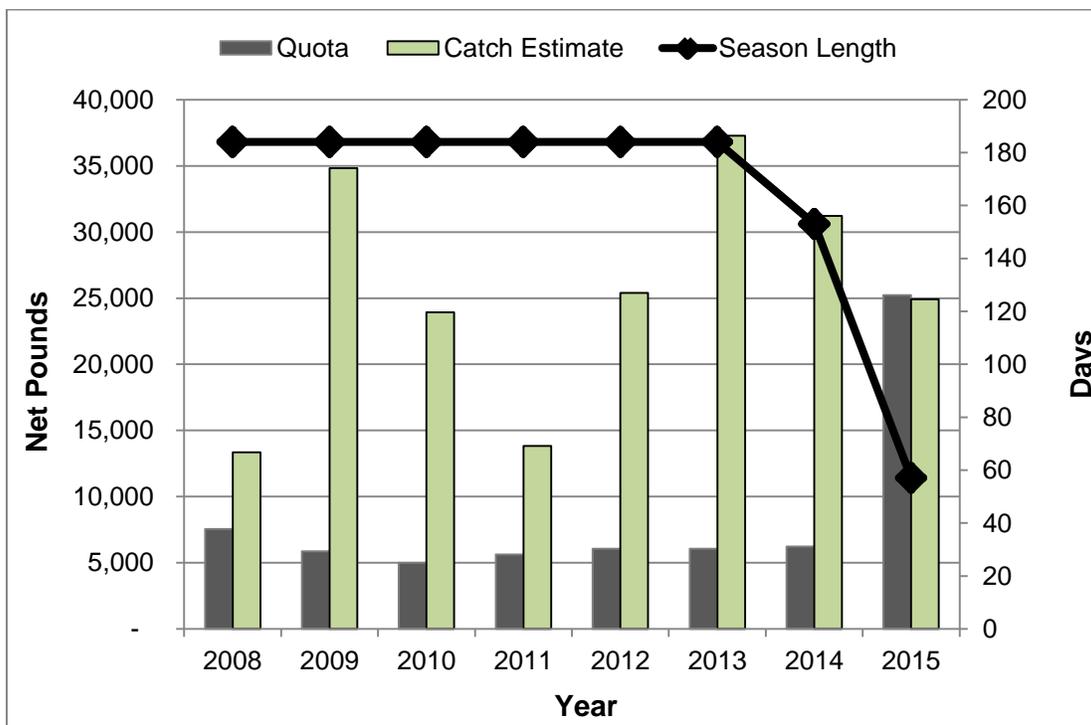


Figure 6. California quota, catch estimates, and number of days open to fishing by year from 2008-2015. Quota prior to 2014 was shared with Southern Oregon. Prior to 2015, there was no mechanism for inseason action if the quota would be exceeded. Catch data for 2015 are preliminary.

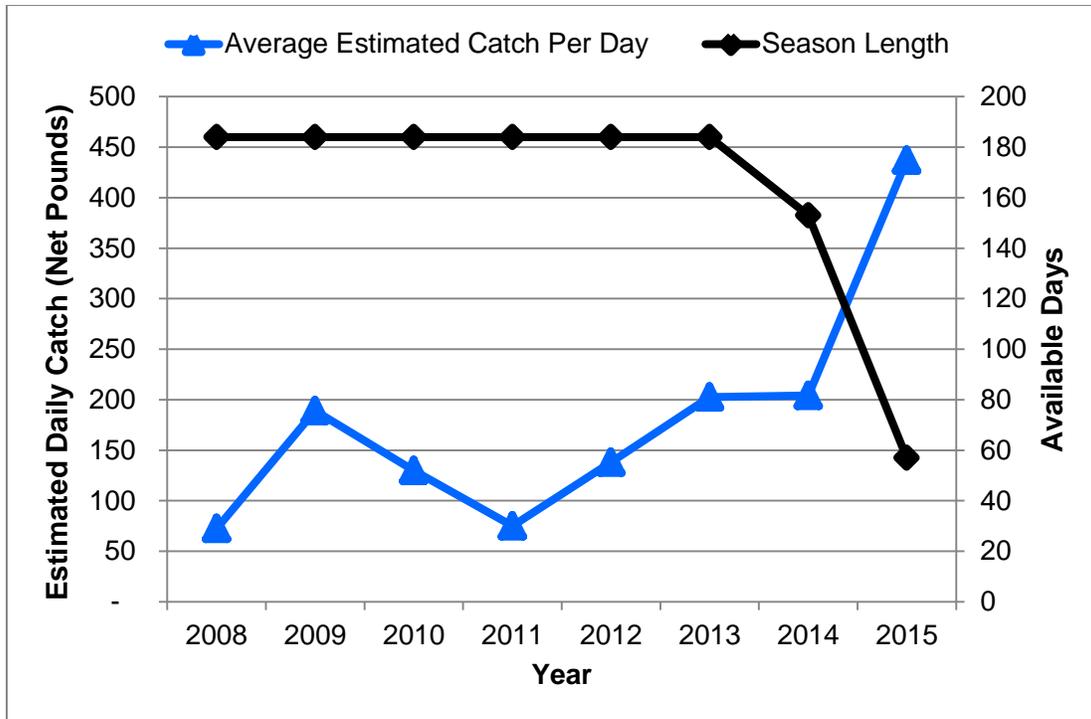


Figure 7. Average estimated volume (net pounds) of Pacific halibut caught per day and number of open days per year from 2008-2015. Data are from CDFW and CRFS. Catch data for 2015 are preliminary.

Despite the recent changes in catch and fishing effort, the proportion of fishing activity by general location of catch in California has remained fairly steady. From 2008 to 2015, 85 percent of the sampler-examined Pacific halibut have come from three port areas: Trinidad, Eureka, and Fields Landing (Figure 8). The amount of sampling coverage in each area during each year has remained the same.

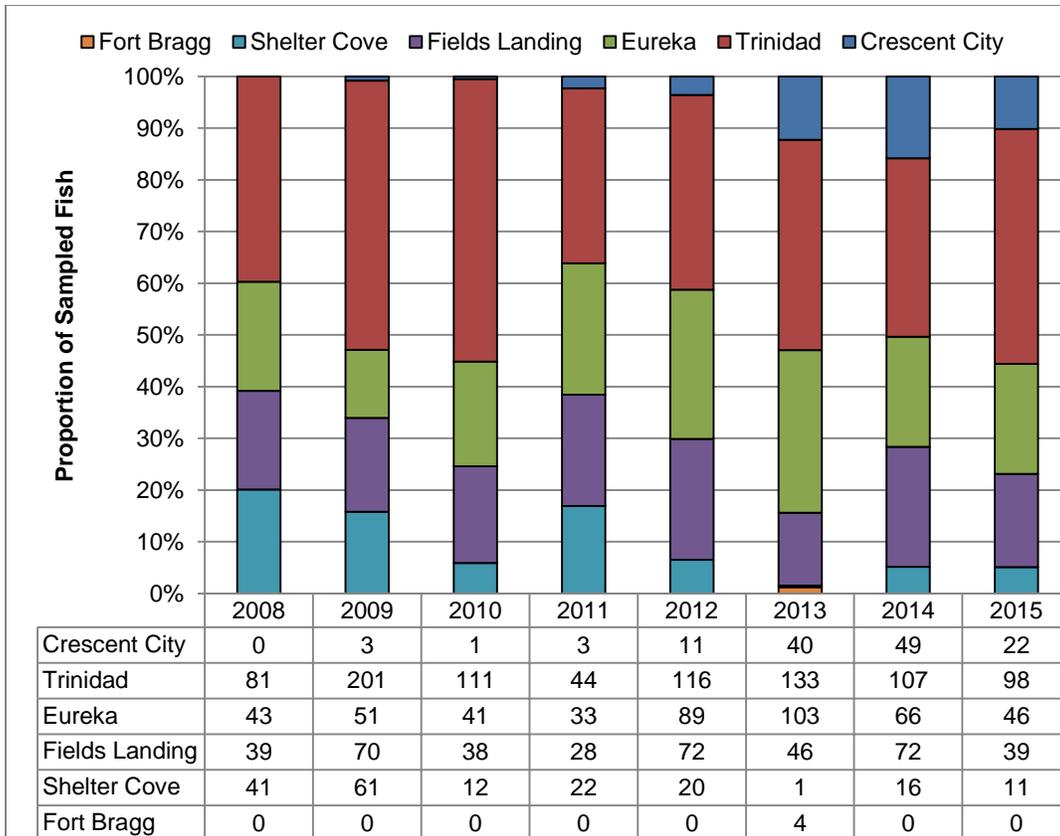


Figure 8. Annual proportion of sampler examined Pacific halibut (chart) and number of individual sampler examined Pacific halibut (table) by port area in California. Data from CRFS.

### Trends in Length and Weight

CRFS data also provides information on sizes of fish encountered by samplers. CRFS samplers measure the length of fish they examine, and also try to weigh fish if possible. From 2013 to 2015, sampler examined Pacific halibut ranged from 20 to 58 inches long; approximately half of the measured Pacific halibut were between 30 and 40 inches long (Figure 9) although the mode ranged from 32.3 to 35.4 inches long (Table 7). During this same time period, sampler examined Pacific halibut weights (measured weights, or calculated weights using the standard length/weight regression formula) have ranged from less than five net pounds up to 78 net pounds (Figure 10); approximately half of the fish weighed each year were between 10 and 25 pounds net weight.

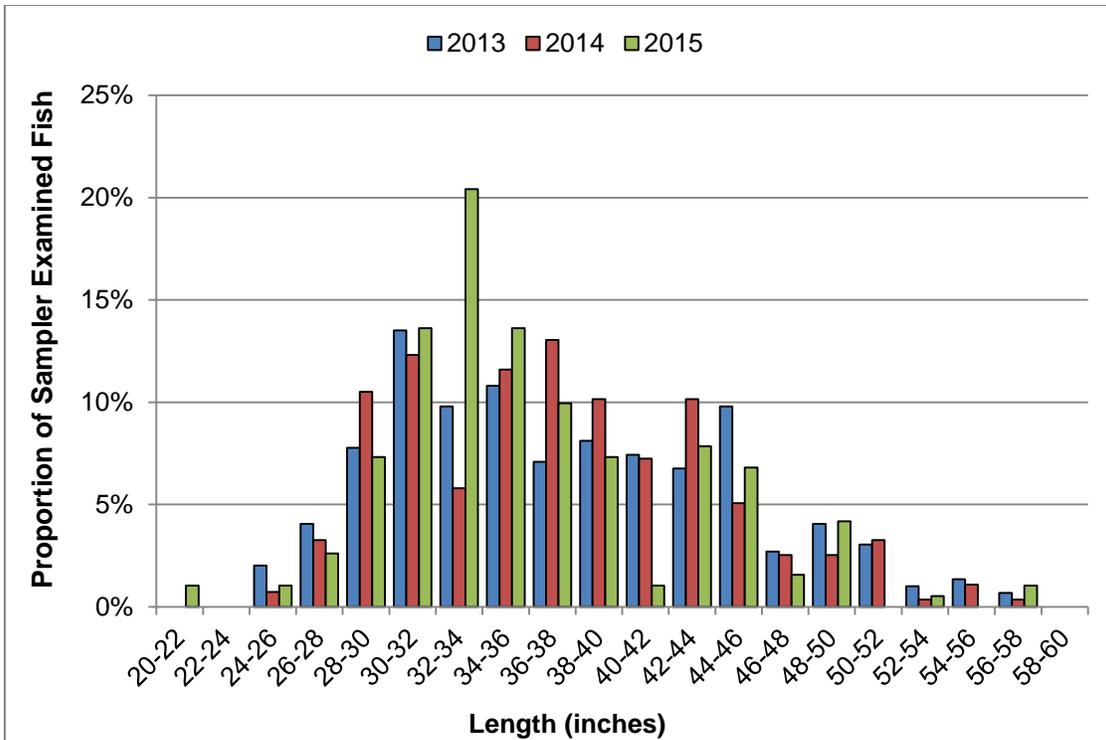


Figure 9. Fork lengths (inches) of sampler examined Pacific halibut by year from 2013-2015. Data are from CRFS. The number of fish per year from 2013-2015 are 297, 277 and 191, respectively.

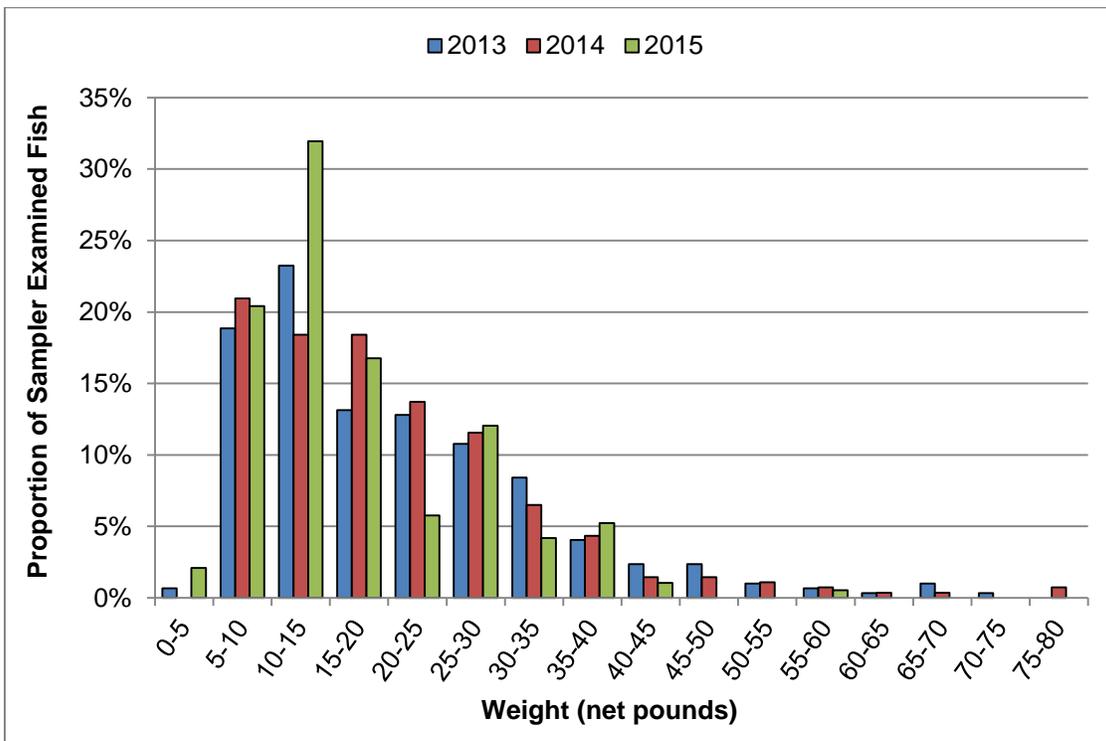


Figure 10. Weights (net pounds) of sampler examined Pacific halibut from 2013-2015. Data are from CRFS. The number of fish per year from 2013-2015 are 297, 277, and 191, respectively.

Table 7. Annual average, median and mode values for length (inches) and weight (net pounds) of sampler examined Pacific halibut off of California from 2013-2015. Length data are based on measured fish; weights are based on a combination of actual weights and those calculated using the standard length/weight regression formula. Data from CRFS.

	Average		Median		Mode	
	Length (inches)	Weight (net pounds)	Length (inches)	Weight (net pounds)	Length (inches)	Weight (net pounds)
<b>2013</b>	37.7	21.3	37.0	17.8	32.3	27.4
<b>2014</b>	37.3	20.4	36.7	17.4	35.4	17.4
<b>2015</b>	36.0	17.2	34.6	14.1	33.1	9.1

As mentioned earlier in this document, the average estimated weight per Pacific halibut in 2015 was 25 net pounds. Since 2008 there has been an increasing trend in the average estimated weight per fish caught in California (Figure 11). The average estimated weight value is calculated during the CRFS estimation process using data collected by samplers (discussed above) which is then binned and expanded by fishing mode, trip type, location, and timing (month/year) of fishing activity. For these reasons, the estimated average weight of all fish caught may differ from the average weight of sampled fish.

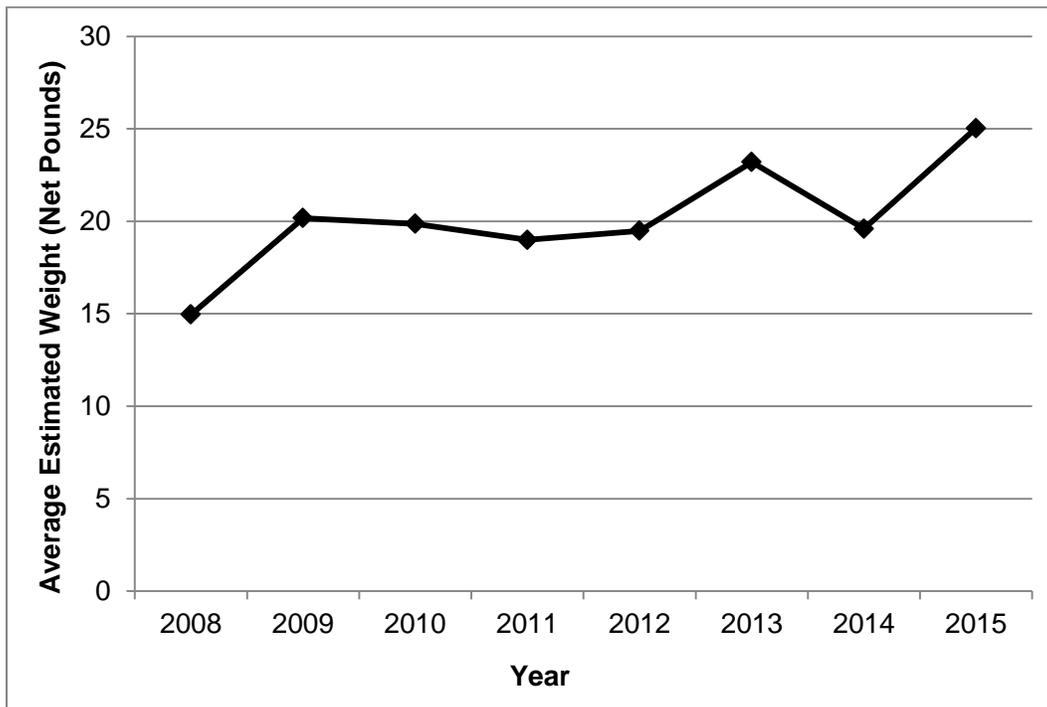


Figure 11. Annual average estimated weight of Pacific halibut off of California from 2008-2015. Data are from the CRFS catch estimation program.

## Fishery Potential

CDFW staff received a number of inquiries regarding the growth of the Pacific halibut fishery in California over the past few years. Many of the inquiries have come from Congressional offices and municipal representatives who are scoping prospective economic development opportunities for local communities on the north coast. This has become increasingly important with the potential loss of salmon opportunities due to the extended drought. In 2015, the California recreational fishery occurred over a 57-day period, with four different open periods over four months, and catch was constrained to the California quota of 25,220 pounds. However, catch rates witnessed in July 2015 were the highest on record in California, possibly suggesting that our fishery is still developing, the stock's local availability is increasing, and/or anglers are more efficient at catching Pacific halibut.

Considering current fishery trends, if the fishery were open for the full May through October season as it was prior to 2014, with a bag limit of one fish, and assuming high catch rates for the whole season, CDFW projects the catch could attain or exceed 62,000 pounds. While it is difficult to precisely estimate the economic value to local economies if full fishery opportunities were available, CDFW and its partners have previously assessed impacts of open and closed fishing seasons on local businesses<sup>5</sup>.

For northern California fishing communities, the fishing portfolio for both offshore recreational and commercial fishermen generally includes salmon, groundfish and Dungeness crab as fishery targets, and occasionally albacore. When recreational and commercial fishing opportunities for groundfish, salmon, and Dungeness crab are limited or decreased on California's north coast, the importance of access to other fisheries will continue to increase. While commercial fishermen in California have not been steady participants in the directed commercial fishery for Pacific halibut off California in recent years, it could become a viable opportunity for fishermen seeking alternative fishing targets in the future. Commercial and recreational anglers have recently experienced reduced opportunities for salmon, groundfish, and crab due to drought, reduced harvest levels, and health closures, respectively. Based on continued improvement in catch trends in recent years of Pacific halibut activity, this may be a fishery where growth is still available to augment north coast opportunities.

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<sup>5</sup> Hesselgrave, T., N. Enelow, and K. Sheeran, 2014. The Estimated Economic Impact of the Northern California Pacific Halibut Closure of August 2014 (recreational and charter boats), conducted by Ecotrust, funded by Humboldt Area Saltwater Anglers.

Takada, M., 2014. Analysis of the Economic Effects of the August Pacific Halibut Closure on California's North Coast Businesses, conducted by Humboldt State University, funded by California Department of Fish and Wildlife.

## Summary

CDFW plans to continue participating in the Pacific halibut management process with co-managers at the IPHC, NMFS, Council, and other agencies in Area 2A, and collecting CRFS sample data for use in inseason tracking and monitoring and the catch estimation process.



Figure 12. CDFW Environmental Program Manager Marci Yaremko, and avid north coast anglers, with Pacific halibut they caught off of Eureka, CA in May 2015.

For more information about California's Pacific halibut fishery, contact:

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