

STAFF SUMMARY FOR AUGUST 4-5, 2015

6. COMMERCIAL HAGFISH**Today's Item**Information Action

Authorization to publish notice of intent to amend commercial hagfish fishery regulations.

Summary of Previous/Future Actions

- **Today's notice hearing** **Aug 4-5, 2015; Fortuna**
- Discussion/adoption hearing Oct 7-8, 2015; Los Angeles

Background

DFW requests that FGC publish notice of its intent to amend the commercial hagfish fishery regulations. DFW recommends permitting the use of 40-gallon barrel traps in the commercial hagfish fishery, limiting the number of barrel traps to 25 per vessel, limiting the number of vertical lines attached to the barrel traps to two per vessel, prohibiting the use and possession of other types of traps when using barrel traps, and prohibiting the use of popups on buoy lines for barrel traps. The proposal is intended to maintain the sustainability of California's hagfish fishery, reduce interaction with other bottom fishing gear, and reduce the potential for entanglement of vertical trap lines with marine mammals.

Current statutes specify the maximum number of bucket traps and Korean traps that may be used, require a general trap permit, prohibit possession of other species or gear while targeting or having in possession hagfish, and prohibit the use of popups on buoy lines for bucket and Korean traps. While statutes place a limit on the number of Korean traps and bucket traps that may be used to take hagfish, statutes do not limit the type of gear to only these two types of gear. Title 14 regulations require that all escapement holes, except for the entrance funnel, of all hagfish traps have a minimum diameter of 9/16 inch to minimize take of immature hagfish.

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

FGC staff: Authorize publication of the notice as recommended by DFW.

DFW: Authorize publication of the notice of proposed regulatory action.

Exhibits

1. [DFW memo, received Jun 30, 2015](#)
2. [ISOR](#)
3. [DFW presentation](#)

Motion/Direction

Moved by _____ and seconded by _____ that the Commission authorizes publication of a notice of its intent to amend Section 180.6 regarding commercial hagfish traps as recommended by the Department.

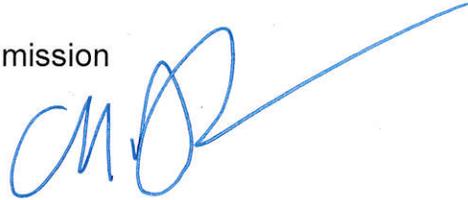
State of California
Department of Fish and Wildlife

Memorandum

Date: June 30, 2015

To: Sonke Mastrup
Executive Director
Fish and Game Commission

From: Charlton H. Bonham
Director



Subject: **Agenda Item for the August 4-5, 2015, Fish and Game Commission Meeting Regarding the Proposed Amendment of Section 180.6, Title 14, California Code of Regulations, Re: Hagfish Barrel Traps**

The Department of Fish and Wildlife (Department) is recommending a regulation permitting the use of 40-gallon barrel traps in the commercial hagfish fishery, limiting the number of barrel traps to 25 per vessel, and limiting the number of vertical lines attached to the barrel traps to two per vessel. This proposal is intended to maintain the sustainability of California's hagfish fishery, reduce interaction with other bottom fishing gear, and reduce the potential for entanglement of vertical trap lines with marine mammals.

If you have any questions regarding this item, please contact Dr. Craig Shuman, Regional Manager at (805) 568-1246. The public notice for this rulemaking should identify Environmental Scientist, Travis Tanaka as the Department's point of contact. Mr. Tanaka can be reached at (831) 649-2881 or Travis.Tanaka@wildlife.ca.gov.

Attachments

ec: Dan Yparraguirre, Deputy Director
Wildlife and Fisheries Division
Dan.Yparraguirre@wildlife.ca.gov

Craig Shuman, D. Env., Regional Manager
Marine Region
Craig.Shuman@wildlife.ca.gov

Craig Martz, Manager
Regulations Unit
Wildlife and Fisheries Division
Craig.Martz@wildlife.ca.gov

Travis Tanaka, Environmental Scientist
Marine Region
Travis.Tanaka@wildlife.ca.gov

Mike Randall, Analyst
Regulations Unit
Wildlife and Fisheries Division
Mike.Randall@wildlife.ca.gov

Present Regulations

Statutes specify the maximum number of traps allowed by type (whether bucket or Korean), require a general trap permit, prohibit possession of other species or gear while targeting or having in possession hagfish, and prohibit the use of popups on buoy lines for bucket and Korean traps (Sections 9000.5, 9001, 9001.6, Fish and Game Code). Fish and Game Code Section 9001.6(a) is only a limitation on the use of Korean and bucket traps, not a limitation on the type of gear that may be used to take hagfish. Effective January 1, 2015, all escapement holes, except for the entrance funnel, must have a minimum diameter of 9/16 inch (CCR Title 14, Section 180.6) to minimize take of immature hagfish.

Proposed Regulation

The proposed regulation will allow hagfish to be taken in 40-gallon barrel traps, and will allow up to 25 barrel traps on each vessel. To reduce whale entanglements, the proposal requires that all traps on each vessel be fished on no more than two ground lines. The proposed regulation specifies that if using barrel traps, no other trap type may be used or possessed aboard the vessel, and popups are not authorized for use with buoy lines attached to barrel traps.

This proposal is intended to offer hagfish fishermen a gear alternative that, when used in high traffic areas, would lessen the possibility of negative interactions with other fishing gears (lost traps) and cetaceans (entanglement). The larger capacity of this trap type could also reduce stress or mortality of captured hagfish due to crowding.

Two fishermen possessed Commission approved Experimental Gear Permits to fish barrel traps for the take of hagfish. The Department conducted an evaluation of this gear, including onboard observation, logbooks, and laboratory dissection of sampled fish. Based on the results from the Department's evaluation, the Department recommends authorizing the use of 40-gallon barrel traps in the commercial hagfish fishery.



40-gallon barrel trap in orientation as if sitting on the sea floor.

Rationale

Hagfish have been exported to South Korea in live condition as human food since 2007, with interest by California fishermen remaining steady. In 2014, hagfish were landed regularly at five port complexes with 31 participating vessels statewide. The hagfish fishery along the west coast of North America now occurs coast-wide from Washington to Mexico. The use of barrel traps for the take of hagfish is legal in the states of Oregon and Washington. Washington allows for the use of up to 100 barrel traps and Oregon allows up to 200 traps with no limitation on trap type or size. The Department does not have information concerning the method(s) used in the Mexican hagfish fishery.

The California hagfish fishery occurs in areas utilized by other commercial and recreational fisheries. Both experimental gear permittees reported that the gear from these fisheries and the hagfish trap fishery, when fished in close proximity, created conflicts. This is apparent in areas where there could be thousands of crab traps (both commercial and recreational) on the same fishing grounds. Due to ocean swells and current, crab traps and hagfish trap strings will move, sometimes resulting in tangles or lost gear. Since hagfish ground lines are very long, many over 1000 ft., they are sometimes snagged by salmon trollers or trawlers fishing the bottom. In addition, the smaller capacity of current legal gear (5-gallon bucket traps) may negatively impact quality and survivorship due to crowding.

Depending up the number of bucket traps fished, fishermen have been reported to use up to six ground lines to fish 200 bucket traps. These

vertical lines combined with vertical lines from other fisheries, present an entanglement hazard to migrating cetaceans.

It is the policy of the State to encourage the conservation, maintenance, and utilization of the living resources of the ocean and inland waters under the jurisdiction and influence of the State for the benefit of all the citizens of the State and to promote the development of local California fisheries. The objectives of this policy include, but are not limited to, rebuilding depressed stocks and achieving the sustainable use of the State's fishery resources. Where a species is the object of commercial fishing, a sufficient resource shall be maintained to support reasonable take, taking into consideration the necessity of regulating fishing practice such that a sustainable population exists to withstand fishing pressure.

Allowing hagfish take in 40-gallon barrel traps, when fished on a central ground line, could reduce or eliminate negative interactions with cetaceans and other fishing gear, and lost fishing gear, particularly in areas utilized by multiple fisheries. The larger capacity of this trap type could also reduce stress or mortality of captured hagfish due to crowding.

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

Authority cited: Sections 8403 and 9022, Fish and Game Code.
Reference: Sections 8403, 9022, 9001.6 and 9001.7, Fish and Game Code.

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

None.

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

Final Report: Evaluation of the Use of 40-gallon Barrel Traps for the Take of Hagfish

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

No public meetings were held prior to the notice publication; however, 14 fishery participants were called asking for their opinion regarding the proposal. A message explaining the reason for the call and requesting a prompt return call was left with unresponsive participants. Five hagfish fishermen responded, each providing feedback in favor of the proposal.

The 45-day comment period provides adequate time for review of the proposed amendments.

IV. Description of Reasonable Alternatives to Regulatory Action:

(a) Alternatives to Regulation Change:

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

(b) No Change Alternative:

If the proposed regulation is not implemented, fishermen will continue to use current, legal, 5-gallon bucket or Korean traps on long ground lines. Possible gear interactions or gear loss would continue in areas that are used by multiple fisheries. The risk for marine mammal entanglements (due to the number of vertical lines used) would not be reduced.

(c) Consideration of Alternatives:

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

V. Mitigation Measures Required by Regulatory Action:

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

VI. Impact of Regulatory Action:

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

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

The proposed action will not have a significant statewide adverse

economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states. The proposed regulation will offer commercial hagfish fishermen an option to use fishing gear that could reduce financial loss related to lost fishing gear.

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

The Commission does not anticipate any impacts on the creation or elimination of jobs, the creation of new business, the elimination of existing businesses or the expansion of businesses in California or any benefits to the health and welfare of California residents or worker safety.

The Commission does anticipate possible benefits to the State's environment due to the anticipated reduction in lost fishing gear.

- (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.

The use of the proposed trap is voluntary. However, should a fisherman choose to change gear types, the approximate cost of one barrel trap is \$60, ground line (including buoy and two weights) cost could range from \$75 to \$150. Based on the current minimum wage, the cost for labor to construct new traps is estimated to be \$27.00 per trap.

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

None.

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

None.

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

None.

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

None.

- (h) Effect on Housing Costs:

None.

VII. Economic Impact Assessment:

The proposed regulation will allow a new type of hagfish fishing gear in California. Presently the only traps in use are Korean traps (up to 500) and 5-gallon bucket traps (up to 200). In other states the 40-gallon barrel trap is in common use, but not permitted in California waters. This proposal is intended to provide the fishery with an alternative gear type of 40-gallon barrel traps. Use of barrel traps is up to the individual fisherman. No new fees are associated with this regulation. A limit of 25 barrel traps is proposed; therefore the volume of possible catch is the same as with 200 5-gallon bucket traps.

In 2014, hagfish were landed regularly at five port complexes with 31 participating vessels statewide. This fishery is entirely for export. In 2013, the hagfish fishery's ex-vessel value was over \$1,015,000.

- (a) Effects of the regulation on the creation or elimination of jobs within the State:

The regulation is unlikely to affect the creation or elimination of jobs which are influenced more by the foreign market demand for hagfish.

- (b) Effects of the regulation on the creation of new businesses or the elimination of existing businesses within the State:

The regulation is unlikely to affect the creation or elimination of hagfish businesses which are influenced more by the foreign market demand for hagfish. Fisherman will have a choice in the type of gear to use which they may perceive to benefit their business.

- (c) Effects of the regulation on the expansion of businesses currently doing business within the State

The regulation is unlikely to affect the expansion of hagfish businesses which are influenced more by the foreign market demand for hagfish.

- (d) Benefits of the regulation to the health and welfare of California residents
This fishery is entirely for foreign export; therefore the regulation is unlikely to affect the health and welfare of California residents.

- (e) Benefits of the regulation to worker safety

The regulation does not affect worker conditions or safety.

- (f) Benefits of the regulation to the State's environment

It is the policy of the State to encourage the conservation, maintenance, and utilization of the living resources of the ocean and inland waters under the jurisdiction and influence of the State for the benefit of all the citizens of the State and to promote the development of local California fisheries. The objectives of this policy include, but are not limited to, rebuilding depressed stocks and achieving the sustainable use of the State's fishery resources. Where a species is the object of commercial fishing, a sufficient resource shall be maintained to support reasonable take, taking into consideration the necessity of regulating fishing practice such that a sustainable population exists to withstand fishing pressure.

This proposal is intended to offer hagfish fishermen a gear alternative that could lessen the possibility of negative interactions with other fishing gear or cetaceans. Allowing hagfish take in 40-gallon barrel traps, could reduce or eliminate these interactions and lost fishing gear, particularly in areas utilized by multiple fisheries. The larger capacity of this trap could reduce stress or mortality of captured hagfish due to crowding.

Informative Digest/Policy Statement Overview

Current statutes provide that Pacific hagfish, *Eptatretus stoutii*, (hagfish) may be taken by Korean style traps or 5-gallon bucket traps; specify the maximum number of traps allowed by trap type; require a general trap permit; prohibit possession of other species or gear while targeting or having in possession hagfish, and prohibit the use of popups on buoy lines for bucket and Korean traps (Sections 9000.5, 9001, 9001.6, Fish and Game Code). Fish and Game Code subsection 9001.6(a) is only a limitation on the use of Korean and bucket traps, not a limitation on the type of gear that may be used to take hagfish. Current regulation provides that all escapement holes, except for the entrance funnel, must have a minimum diameter of 9/16 inch [Section 180.6, Title 14, California Code of Regulations (CCR)] to minimize take of immature hagfish.

Proposed Regulation

The proposed changes to Section 180.6, Title 14, CCR, will allow hagfish to be taken in 40-gallon barrel traps and will allow the use of up to two ground lines and up to 25 barrel traps per vessel. The proposed regulation specifies that if using barrel traps, no other trap type may be used or possessed aboard the vessel, and popups are not authorized for use with buoy lines attached to barrel traps.

BENEFITS OF THE PROPOSED REGULATIONS

The proposed regulations could reduce or eliminate negative interactions with cetaceans and other fishing gear, and lost fishing gear, particularly in areas utilized by multiple fisheries. The larger capacity of this trap type could reduce stress or mortality of captured hagfish due to crowding.

Adoption of sustainable fishing regulations including gear type provides for the maintenance of sufficient fish populations and ensures their continued existence.

EVALUATION OF INCOMPATIBILITY WITH EXISTING REGULATIONS:

Section 20, Article IV, of the State Constitution specifies that the Legislature may delegate to the Fish and Game Commission such powers relating to the protection and propagation of fish and game as the Legislature sees fit. The Legislature has delegated to the Commission the power to regulate the commercial take of finfish using traps (Sections 8403 and 9022, Fish and Game Code). No other State agency has the authority to promulgate commercial fishing regulations. The proposed regulations are compatible with Sections 180, 180.2, 180.4 and 180.5, Title 14, CCR, which address other aspects of commercial take of finfish using traps. The Commission has searched the CCR for any regulations regarding the use of traps for the commercial take of hagfish and has found no such regulation; therefore the Commission has concluded that the proposed regulations are neither inconsistent nor incompatible with existing State regulations.

REGULATORY TEXT

Section 180.6, Title 14, CCR, is amended to read:

(a) All openings in traps used to take hagfish, excluding the entrance funnel, shall have a minimum diameter of 9/16 inch in any dimension.

(b) Hagfish may be taken in 40-gallon barrel traps, if attached to a central ground line. No more than 25 barrel traps may be possessed aboard a vessel or in the water. Barrels may be attached to a maximum of two ground lines. If using barrel traps, no other trap type may be used or possessed aboard the vessel. Popups shall not be used on buoy lines attached to barrel traps.

Note: Authority cited: Sections 8403 and 9022, Fish and Game Code. Reference: Sections 8403, 9022, 9001.6 and 9001.7, Fish and Game Code.

DRAFT

Proposed Hagfish Regulations to Authorize 40-Gallon Barrel Traps



Credit: T. Tanaka, CDFW

Fish and Game Commission Meeting

August 4-5, 2015, Fortuna

Travis H. Tanaka

Marine Region



Presentation Overview

- Hagfish fishery
- Hagfish trap regulations
- Experimental gear background
- Experimental gear evaluation
- Proposed regulation

Hagfish Fishery

- Export live for human food
- 33 vessels in 2014 (744 tons)
- Ports of landing from Eureka to San Diego



Credit: T. Tanaka, CDFW

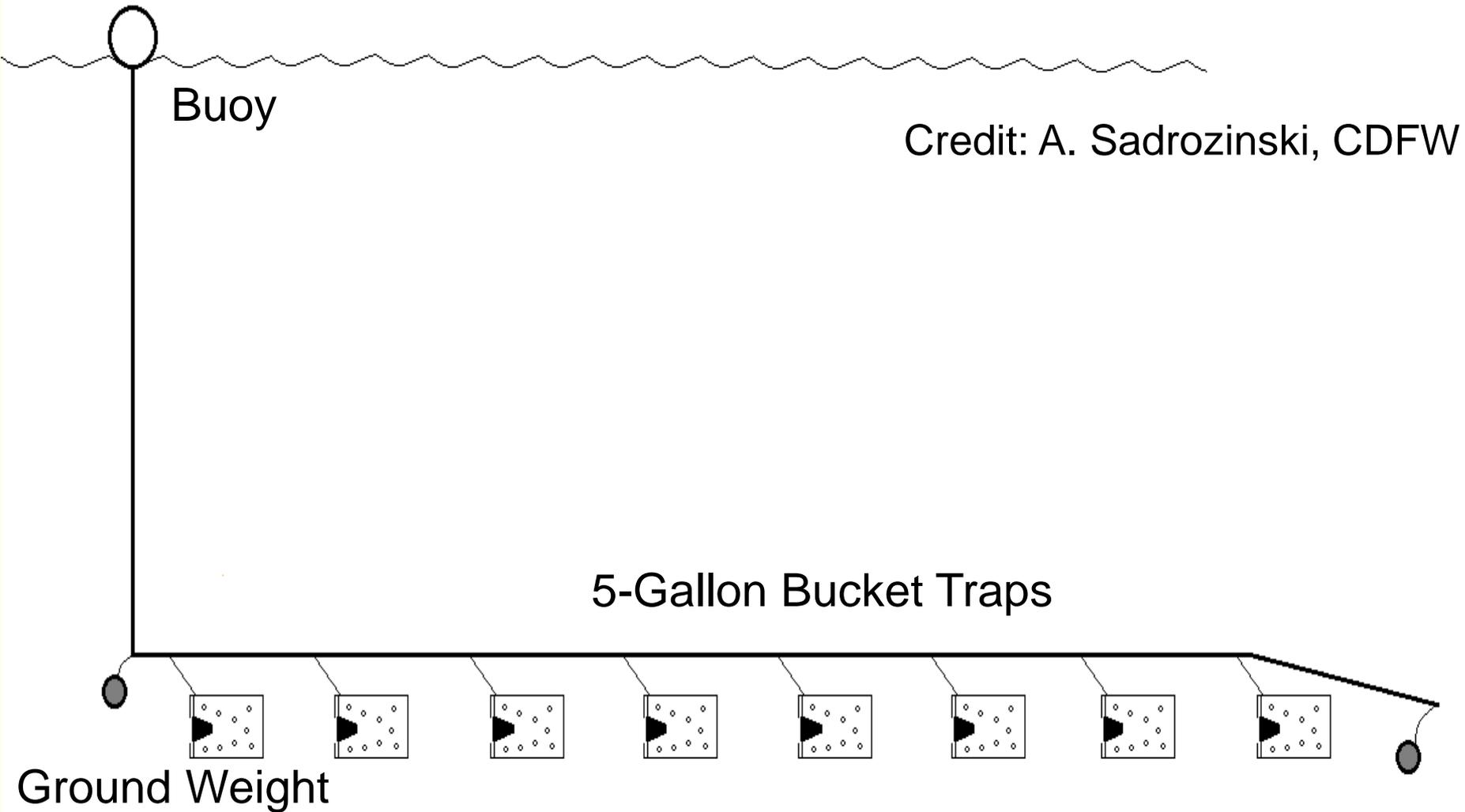
Hagfish Trap Regulations

- General trap permit
- 200 bucket traps or 500 Korean-style traps
- 9/16th inch minimum hole diameter
- Destruct device



Credit: T. Tanaka, CDFW

Bucket Trap String



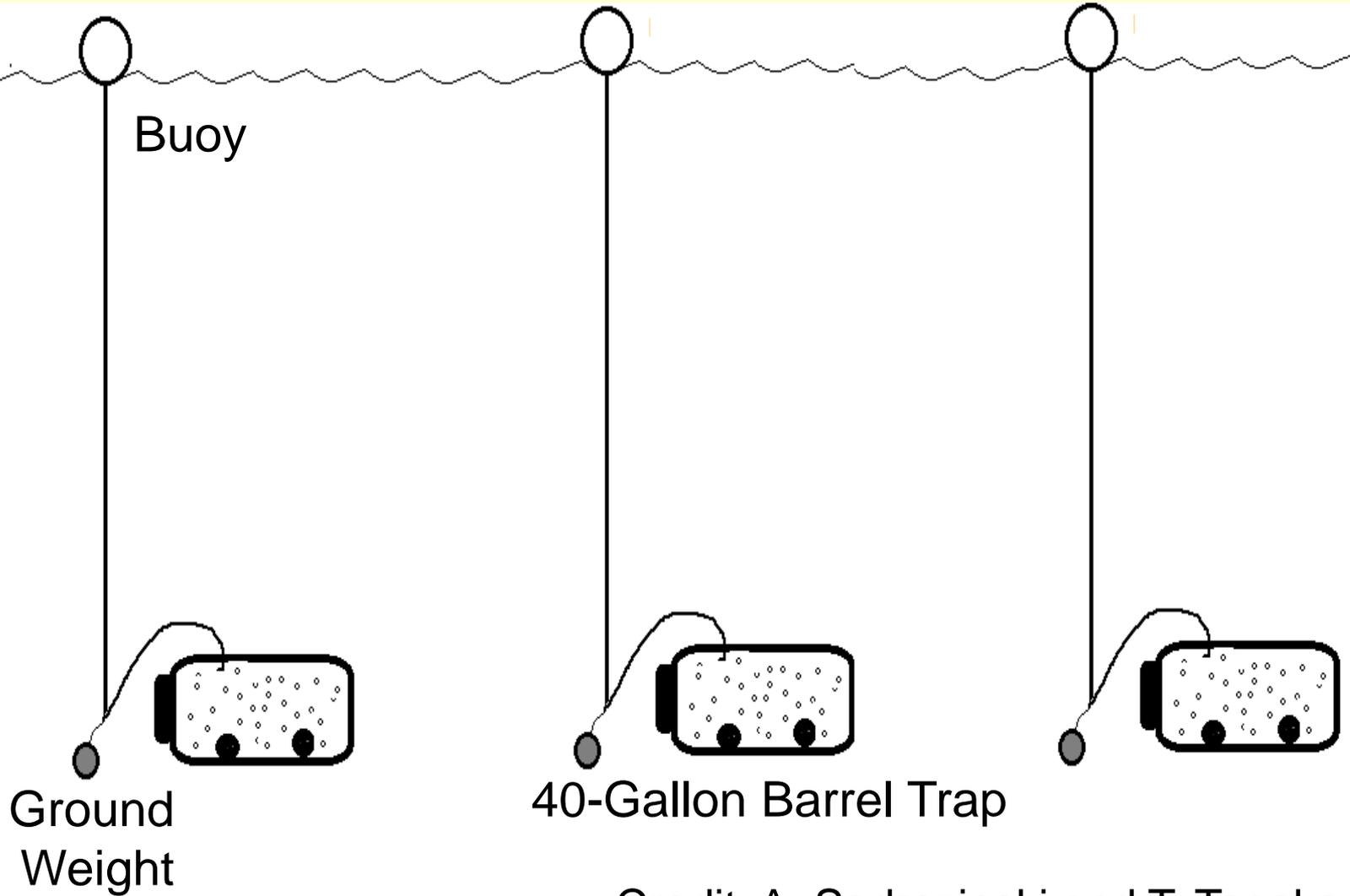
Experimental Gear

- 40-gallon barrel trap
 - Reduce negative gear interaction potential
 - Improve quality of retained hagfish
- 40 traps maximum authorized



Credit: T. Tanaka, CDFW

Experimental Gear



Credit: A. Sadrozinski and T. Tanaka, CDFW

Gear Evaluation

- Onboard observation
 - 3 days observed per vessel
 - Documented incidental and gear conflict, if any
 - Sampled for avg. size (count-per-pound or CPP)



Gear Evaluation, cont.

- Logbooks
 - # of traps fished
 - pounds caught
 - bycatch
 - trap loss
 - negative gear interactions
 - catch quality
- Hagfish samples dissected



Credit: K. Lesyna, CDFW

Onboard Observation Results

- Avg. CPP -equivalent to bucket traps (4.67 CPP)
- No observed increase in incidental catch
- No negative gear interactions
- High catch quality; no dead loss

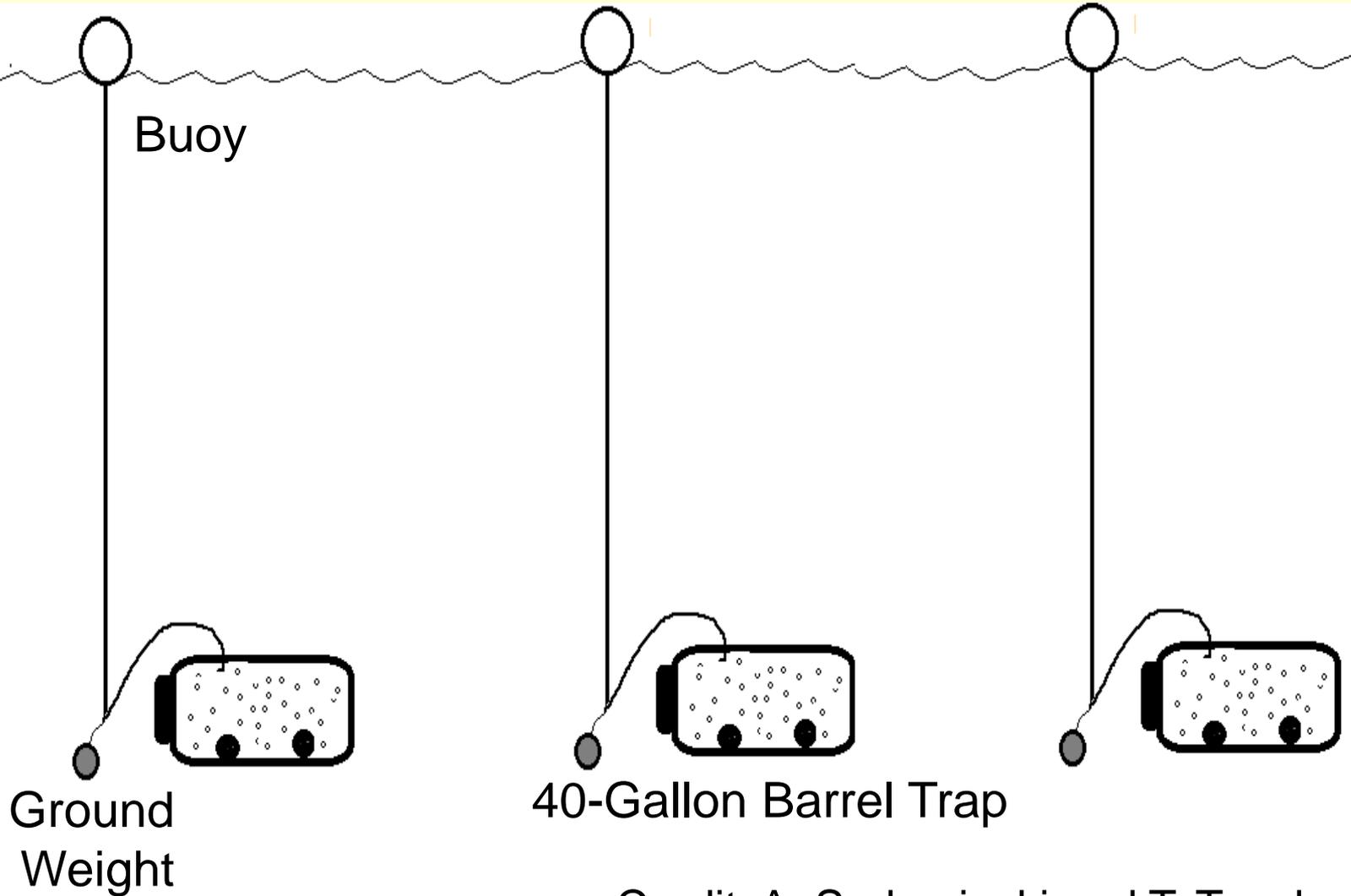


Credit: K. Lesyna, CDFW

Logbook and Laboratory Results

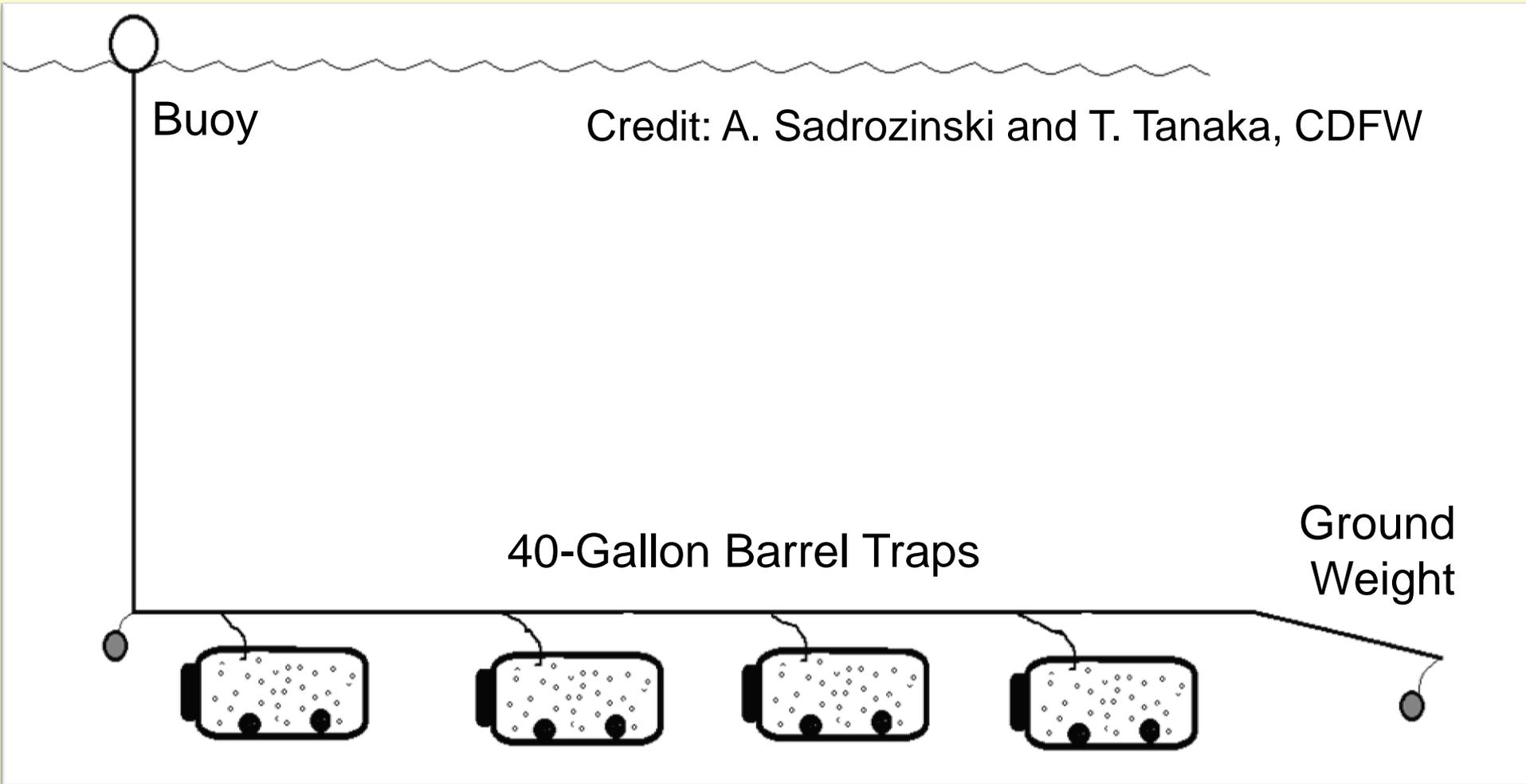
- Logbooks
 - Matched onboard observations
 - One trap reported lost
- Laboratory
 - Although CPP was similar to buckets, barrel-caught hagfish were longer and heavier on average
- Results indicate viable gear alternative

Experimental Gear



Credit: A. Sadrozinski and T. Tanaka, CDFW

Proposed Gear



Proposed Gear Regulations

- Authorize 40-gallon barrel traps for hagfish
- No more than 25 barrel traps per vessel
- All traps attached to no more than two ground lines
- Fishermen must choose one gear type; prohibits possessing different types
- All other regulations for this fishery still apply

Rulemaking Schedule

Aug 4, 2015: Request for authorization to publish Notice

Oct 7, 2015: Discussion/Adoption

Jan, 2016: Regulation effective

Questions



Thank You



Credit: K. Lesyna, CDFW

Travis H. Tanaka
Environmental Scientist
831-649-2881

Travis.Tanaka@wildlife.ca.gov