Staff Summary for December 11-12, 2024

## 5. Recreational Take of Barred Sand Bass

**Today's Item** **Information ☐** **Action ☒**

Consider authorizing publication of notice of intent to amend recreational fishing regulations for barred sand bass.

### Summary of Previous/Future Actions

| | |
|---|---|
| • Department update to the Marine Resources Committee (MRC) and discussion on the recreational barred sand bass fishery and considerations for potential regulation changes | July 17-18, 2024; MRC |
| • Update and MRC recommendation | November 6-7, 2024; MRC |
| • **Today's notice hearing** | **December 11-12, 2024** |
| • Discussion hearing | February 12-13, 2025 |
| • Adoption hearing | April 16-17, 2025 |

### Background

The recreational barred sand bass fishery is open year-round and managed collectively with kelp bass and spotted sand bass. Current regulations were established in 2013 due to concerns about the status of kelp bass and barred sand bass populations; the regulations impose a 5-fish bag limit for any combination of the three species and a 14-inch minimum size limit.

Recent data analysis has revealed a significantly depleted population of barred sand bass in southern California. Both fishery-independent and fishery-dependent data indicate a lack of substantial recruitment in recent years, which suggests that the 2013 regulations have not adequately protected the stock. As a result, the Department began consulting with fishing industry representatives, fishery researchers, and other stakeholders to explore potential regulatory changes.

In June 2024, the Department requested, and the Commission agreed to, refer the topic of barred sand bass to MRC. MRC discussed the issue in July and November of 2024 (see Exhibit 1 for a summary of population trends, management responses, and stakeholder engagement).

Based on discussions with a Department-formed working group, at the November 2024 MRC meeting, the Department proposed for the recreational take of barred sand bass a near-term reduction of the sub-bag limit from 5 to 4 fish within the overall bag limit of 5 fish (for any combination of kelp bass, barred sand bass, and spotted sand bass), with a 3-year sunset provision. This interim measure was proposed to ensure conservation of barred sand bass while the Department, alongside stakeholders, addresses data gaps and modeling needs and evaluates potential future regulatory proposals.

MRC supported the proposed sunset provision and recommended that the Commission authorize a notice of intent to amend regulations governing the recreational take of barred

sand bass, to commence in December (this meeting), with a 3-year sunset provision as proposed by the Department. However, MRC expressed concern about the adequacy of the proposed interim sub-bag limit for barred sand bass, particularly during spawning season. Instead of endorsing a specific sub-bag limit, MRC recommended including a range of options (1-5 fish) for setting sub-bag limits during and outside the spawning season, to allow the Commission to deliberate and make the final decision.

For today's meeting, the Department's memo (Exhibit 2) outlines the recommended changes to recreational barred sand bass regulations, aligned with the MRC recommendation. The memo includes draft proposed regulatory language the Commission may choose to refine or direct staff to modify prior to notice. The proposal includes:

- a sub-bag limit for barred sand bass during the spawning season (June through August), ranging from 1 to 5 fish;
- a sub-bag limit for barred sand bass during all other months, ranging from 1 to 5 fish; and
- a sunset provision for the new regulation, repealing the regulation as of June 1, 2028.

Visual aids and additional background information on the proposal are in the Department's presentation (Exhibit 3).

If the Commission chooses to select specific sub-bag limits in the proposed regulatory language, the initial statement of reasons developed prior to issuing notice could clarify that during the rulemaking process the Commission is still considering a range of sub-bag limits for recreational take of barred sand bass.

**Significant Public Comments**

Two fisheries scientists and an environmental non-governmental organization (NGO) recommend a zero-fish bag limit (aka closure) during the spawning season (June through August) (exhibits 4-6). The scientists argue that the barred sand bass fishery is not data-limited, it is a misconception that existing data are inadequate, and stronger measures are needed to recover spawning aggregations and rebuild the fishery (exhibits 4 and 5).

- A fisheries scientist also recommends coupling the seasonal closure with a size limit reduction to 13 inches, drawing on key vulnerability factors for the fishery and lessons learned from management measures in other fisheries (Exhibit 4).
- A scientist who served as a barred sand bass expert on the Department's collaborative working group, highlights previous management measures in the fishery and assesses contemporary scientific data, including 31 published scientific papers from 1996 to 2024 on barred sand bass. They argue a seasonal closure would not cause significant hardship to the recreational fishery, and that potential short-term economic impacts should not outweigh action necessary to ensure the fishery's long-term health. (Exhibit 5)
- An environmental NGO urges the Commission to incorporate into its public notice a zero-fish bag limit option for June through August, and to ultimately adopt this closure option at the adoption hearing (Exhibit 6).

Staff Summary for December 11-12, 2024

## Recommendation

***Commission staff:*** Authorize publication of a notice of intent to amend regulations as recommended by MRC and the Department. Confirm the proposed season dates in the draft regulatory language and identify sub-bag limits for the two time periods to include in the notice, to support transparency during the notice period.

***Committee:*** Authorize publication of a notice of intent to amend regulations regarding recreational take of barred sand bass with a sub-bag limit range of 1 to 5 fish, a season date option for differing bag limits, and a three-year sunset provision.

***Department:*** Authorize publication of a notice of intent to amend regulations regarding recreational take of barred sand bass as outlined in the Department's memo and presentation.

## Exhibits

1. Staff summary for Agenda Item 5, November 6-7, 2024 MRC (*for background purposes only)*
2. Department memo, including draft proposed regulatory language, received November 27, 2024
3. Department presentation
4. Email from Erica Mason, Ph.D., received November 25, 2024
5. Email from Lyall Belquist, Ph.D., received November 26, 2024
6. Email from Greg Helms, Manager, Fish Conservation Program, Ocean Conservancy, received December 2, 2024

## Motion

Moved by _____ and seconded by _____ that the Commission authorizes publication of a notice of its intent to amend Section 28.30 related to recreational take of barred sand bass, with a sub-bag limit range of _____ fish for the summer spawning season (June through August); a sub-bag limit range of _____ fish for the remainder of the year; and a sunset provision of three years, to expire June 1, 2028, as discussed today; and requests that the Department continue to collaborate with the sport fishing industry, researchers, and stakeholders to fill data gaps and develop longer-term management options.

Committee Staff Summary for November 6-7, 2024 MRC
*For Background Purposes Only*

## 5. Recreational Barred Sand Bass Fishery

**Today's Item** **Information ☐** **Action ☒**

Receive and discuss Department's update on the recreational barred sand bass fishery, barred sand bass working group outcomes, and recommendations for potential regulation changes; develop potential committee recommendation.

**Summary of Previous/Future Actions**

- Department update and discussion on the recreational barred sand bass fishery and considerations for potential regulation changes — July 17-18, 2024; MRC
- **Today receive an update and recommendations for potential regulation changes** — **November 6-7, 2024; MRC**

**Background**

The barred sand bass fishery is an historic recreational fishery in southern California that is open year-round and managed collectively with kelp bass and spotted sand bass. Current regulations include a five-fish bag limit (in any combination of the three species) and a minimum size limit of 14 inches (35.6 centimeters); these were established in 2013 due to concerns about the status of kelp bass and barred sand bass stocks.

***Population Trends, Management Response, and Stakeholder Engagement***

While no formal stock assessment exists for barred sand bass, abundance estimates suggest a severely depressed population in southern California. The presumed decline is likely due to a combination of environmental conditions, poor recruitment, and fishing pressure on easily targeted spawning aggregations.

The Department has analyzed available data for the species. Fishery-dependent data indicate continued declines in barred sand bass, except for the past year, with spawning aggregations becoming much smaller or difficult to find. Fishery-independent data over the past several years have shown a pulse of fish entering the fishery, corroborated by the fishery-dependent data showing a slight increase in catch. However, there has been no sizeable recruitment pulse seen behind the entry fish, suggesting that current regulations established in 2013 (lower bag limit and increased size limit) are insufficient to protect the stock, especially if the observed year class of juveniles enters the fishery and fishing effort increases.

Due to population concerns, the Department began discussions with the recreational fishing community and academic community about potential changes to barred sand bass fishery regulations. The Department also requested the Commission refer the topic to MRC and committed to bring a range of recommendations for MRC discussion.

***July 2024 MRC Meeting***

Committee Staff Summary for November 6-7, 2024 MRC
*For Background Purposes Only*

At the July MRC meeting, the Department presented an overview of the available data for barred sand bass, highlighted outreach to date regarding the types of potential management changes under consideration, and described additional collaboration with sport fishing associations and researchers to help recover barred sand bass populations while minimizing impacts to recreational fishing. The Department committed to forming a working group of researchers, recreational fishery representatives, and stakeholders to jointly develop a recommendation for recreational fishery regulations to bring to the November 2024 MRC meeting for discussion, and to support developing a potential recommendation for Commission consideration.

### *Update*

Following the July MRC meeting, the Department convened and has worked closely with a group of sport fishing associations and researchers, including facilitating two meetings. The goals of the working group are to improve shared understanding of the current status of the barred sand bass population and fishery; develop a shared understanding of the current need for a conservation measure; identify information gaps and strategies to collaborate on future data collection; and support an open, collaborative process to share information on the species and fishery.

Today, the Department will present additional details regarding barred sand bass life history and fishery analyses reviewed with the working group, present the outcomes of the working group and its collaboratively-developed options for regulation changes, and provide recommendations for discussion and potential committee recommendation (Exhibit 1). The Department supports a management measure for a period of three years, during which time Department staff would continue to work with stakeholders to fill priority research gaps and develop a long-term conservation strategy to protect barred sand bass spawning aggregations.

### Significant Public Comments

1. A sport fishing association representative, who is also a member of the Department's barred sand bass working group, supports the recommended barred sand bass sub-bag limit of four as a three-year, interim, conservation measure (Exhibit 2). They also support utilizing sport fishing organizations to fill knowledge and data gaps. In addition, they share observations about the fishery, including barred sand bass migration and spawning behavior, the relationship between catch rate and regulations, and shifts in fishing effort.
2. A representative of a recreational fishing advocacy organization shares the Department's concern about the health of the barred sand bass population and urges the Commission to take steps to allow it to recover (Exhibit 3). Rather than changing bag or size limits, they propose closing some of the known spawning aggregation sites in southern California to barred sand bass fishing for a specific period or closing barred sand bass fishing during spawning months, as there are other sport fishing opportunities available in the summer. Alternatively, they suggest the regulation changes could be a combination of some fraction of the spawning season combined with size and bag limit adjustments.

Committee Staff Summary for November 6-7, 2024 MRC
*For Background Purposes Only*

## Recommendation

***Commission staff:*** Support the Department's recommendation to advance a regulation for the barred sand bass fishery, with a regulation sunset date, and public notice in December as discussed today. Support continuation of the Department's work with stakeholders to fill data gaps and develop a long-term conservation strategy for barred sand bass.

***Department:*** Support developing an interim regulation of a year-round bag limit of four barred sand bass, with no more than five bass in combination, with a sunset date after three years, while the Department continues to work with stakeholders to fill priority research gaps and develop a long-term conservation strategy based on best available science to protect barred sand bass spawning aggregations.

## Exhibits

1. Department presentation
2. Email from Merit McCrea, Sportfishing Association of California, received October 24, 2024
3. Email from Matt Band, Allwaters Protection & Access Coalition, received October 24, 2024

## Committee Direction/Recommendation

The Marine Resources Committee recommends that the Commission: (1) schedule a rulemaking with notice in December 2024 to set a year-round bag limit of four barred sand bass, with no more than five bass in combination, and a regulation sunset of three years, as recommended by the Department; and (2) support the Department's efforts to continue to work with stakeholders to fill priority research gaps and develop a long-term conservation strategy based on best available science to protect barred sand bass spawning aggregations.

**State of California**
**Department of Fish and Wildlife**

**Signed Original on File**
**Received November 26, 2024**

# M e m o r a n d u m

**Date:** November 22, 2024

**To:** Melissa Miller-Henson
Executive Director
Fish and Game Commission

**From:** Charlton H. Bonham
Director

**Subject:** **Agenda Item for the December 11-12, 2024 Fish and Game Commission Meeting, Re: Barred Sand Bass Limit for 2025**

The Department of Fish and Wildlife (Department) requests the Fish and Game Commission (Commission) authorize publication of notice of its intent to amend regulations for barred sand bass bag and possession limits at its December 11-12, 2024, meeting. Approval of this request will allow for discussion at the February 12-13, 2025 meeting, and possible adoption of the proposed regulatory changes at the April 16-17, 2025 meeting, in time for the regulations to take effect by June 1, 2025.

In consultation with fishing industry representatives, fishery researchers, and stakeholders, and with guidance from the Commission's Marine Resources Committee (MRC), the Department proposes modifications to Title 14, Section 28.30. Proposed language in 28.30, intended to limit take and possession of barred sand bass, includes a range of options for a sub-bag and possession limit for barred sand bass within the overall five-fish combined limit for kelp bass, barred sand bass and spotted sand bass, to be decided through the Commission public noticing process. The options are a range of bag and possession limits of 1-5 barred sand bass, either year-round, or varying seasonally, with a sunset provision repealing the regulations as of June 1, 2028.

The sunset provision would allow for conservation of barred sand bass while the Department works with partners on further reviewing data and developing models to evaluate potential future regulations, to be in effect indefinitely, that will help increase and sustain the barred sand bass population and support public fishing opportunities. The proposed regulation amendment is intended to reduce the overall number of barred sand bass taken by the fishery, specifically during the summer spawning months when barred sand bass are most vulnerable to fishing. To have the most effective impact on conservation, this amendment should take effect no later than June 1, 2025. This will help reduce the number of barred sand bass taken during the summer months when they are most easily targeted while forming spawning aggregations, which typically occurs June through August.

Per direction from the MRC a range of bag and possession limit options to consider in amending in Title 14, Section 28.30 is outlined below:

Current Regulations

§ 28.30, Kelp Bass, Barred Sand Bass and Spotted Sand Bass:

(a) Minimum size: Fourteen inches total length or ten inches alternate length.

(b) Limit: Five in any combination of species.

Proposed Changes

Add subsection (c)(1) which would create a limit within the spawning season on barred sand bass and (c)(2) which would create a limit during all other months. The square brackets indicate a range with a final number to be determined by the Commission at adoption. Add subsection (d), which would provide for a sunset provision for subsection (c), repealing it as of June 1, 2028.

The subsections would read as follows or substantially similar:

(c) Barred Sand Bass Limit: Notwithstanding subsection (b);

(1) From [June 1 – August 31] a maximum of [1 - 5] barred sand bass may be taken or possessed.

(2) From [September 1 – May 31] a maximum of [1 - 5] barred sand bass may be taken or possessed.

(d) Sunset Provision: Subsection (c) shall remain in effect until June 1, 2028, and as of that date is repealed.

If you have any questions or need additional information, please contact Dr. Craig Shuman, Marine Regional Manager at R7RegionalMgr@wildlife.ca.gov. The Department point of contact for this rulemaking is Environmental Scientist, Armand Barilotti, who can be contacted via email at AskMarine@wildlife.ca.gov.

ec: Chad Dibble, Deputy Director
Wildlife and Fisheries Division

Eric Kord, Assistant Chief
Law Enforcement Division

Craig Shuman, Regional Manager
Marine Region

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Fish and Game Commission

Susan Ashcraft, Marine Adviser
Fish and Game Commission

David Haug, Analyst
Fish and Game Commission

# Notice: Regulation Change Considerations for Barred Sand Bass

*December 11, 2024*

*Presented to:*

**California Fish and Game Commission**

*Presented by:*

**Armand Barilotti**

**Environmental Scientist**
**CDFW Marine Region**

# Life History

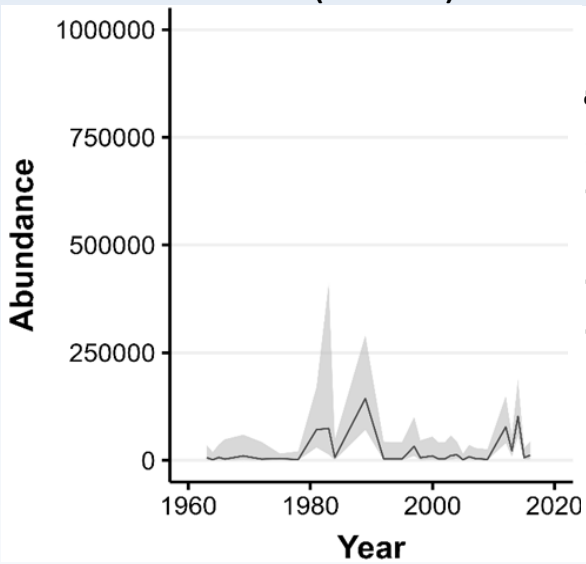
- Barred sand bass (*Paralabrax nebulifer*, referred as BSB hereon).
- Range: southern Baja California, Mexico to Santa Cruz, California; rare north of Pt. Conception.
- Habitat: coastal rocky reef, soft bottom, and bays.
  - Preference for ecotone where reef meets soft bottom.
- Size: up to 67 cm (26.4 in) and 6 kg (13 lb).
- Mature by 27 cm (10.6 in) and 5 years old.
- Life span: up to 25 years.
- Small home range:
  - 2,682–240,000 m2 (0.66 – 59 ac).
- Migrate to form spawning aggregations in summer months over soft bottom habitat.

Photo Credit M. Haggerty, CDFW

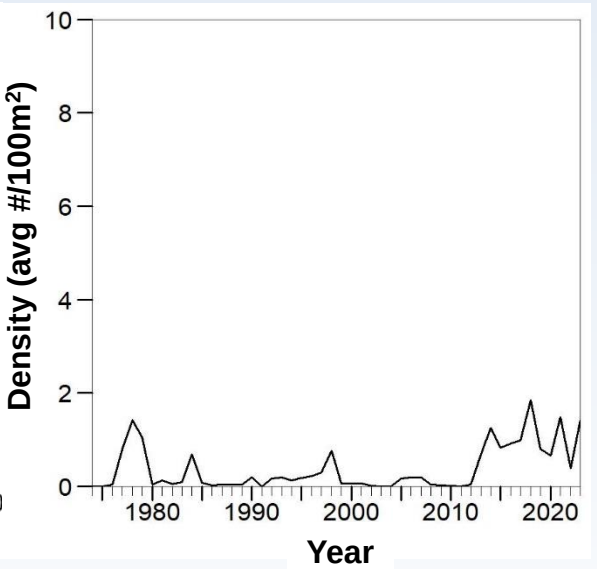
# BSB Spawning and Recruitment

- Spawning peaks June through August.
- BSB show minimal annual recruitment.
- Sporadic recruitment from Mexico.
  - 4 major recruitment events in last 60 years .
  - Can occur when upwelling in northern Baja CA is interrupted during warm water years.
- Kelp Bass have higher (~6x) annual baseline recruitment.

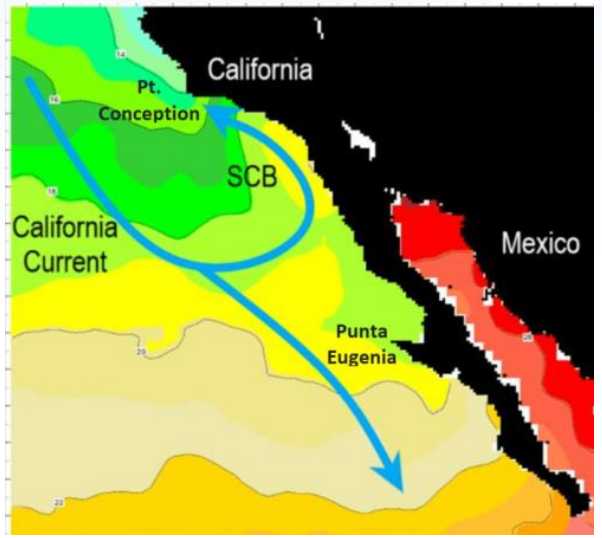
CalCOFI (larvae)




VRG King Harbor (BSB < 20 cm)



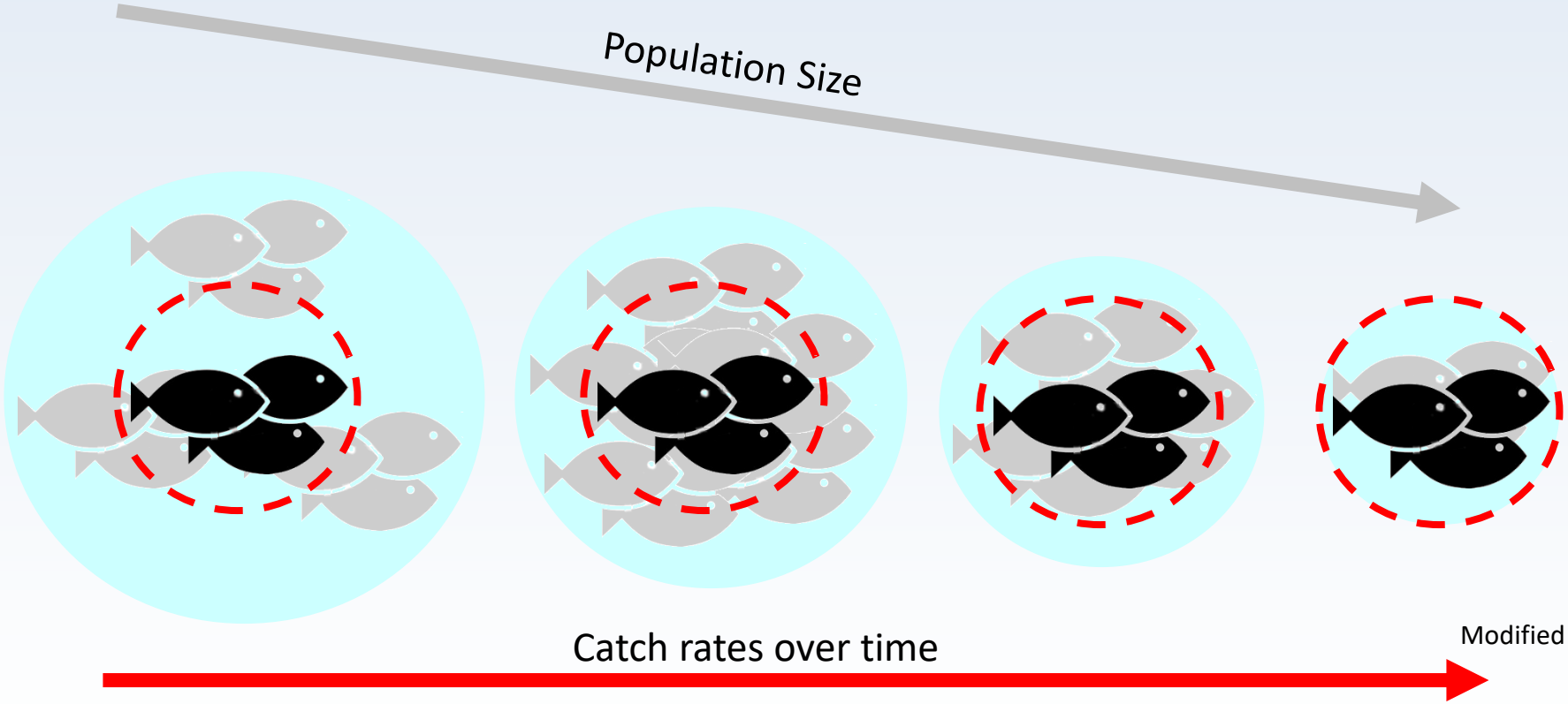

Jarvis Mason et al. 2024



# Current Bass (*Paralabrax sp.*) Regulations

- CCR, Title 14, Section 28.30. Kelp Bass, Barred Sand Bass (BSB) and Spotted Sand Bass
    a. Minimum size: Fourteen inches total length or 10 inches alternate length.
    b. Limit: Five in any combination of species.
- Effective March 1, 2013
  – Enacted to help protect and recover BSB & kelp bass.
  – Seasonal closure for BSB was recommended by CDFW but rejected by the Fish and Game Commission.

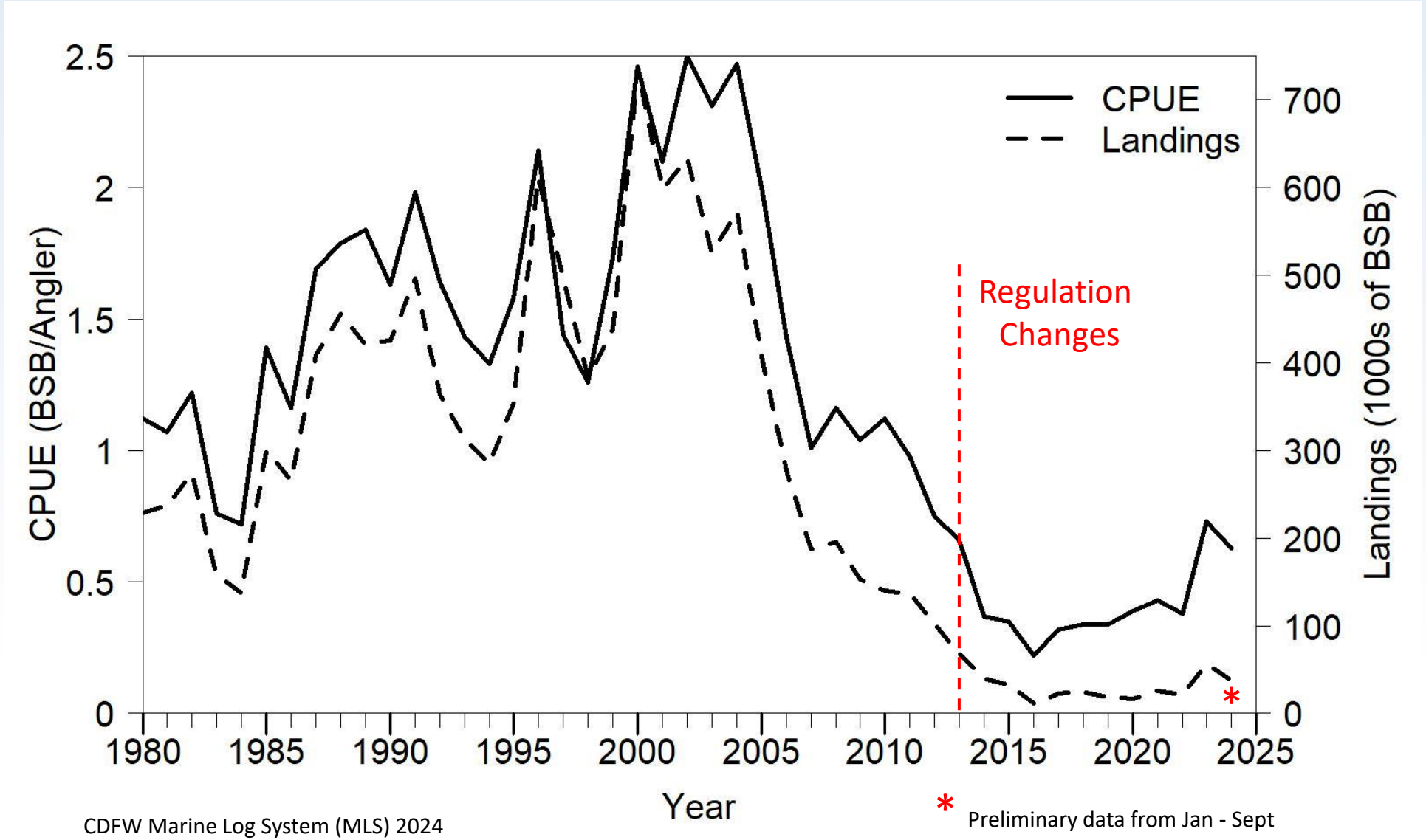
# Hyperstability & Population Size




Modified from *Larry G. Allen, 10-18-10*

- CPUE remains constant while populations size drops.
  - Decrease in population abundance masked by aggregating behavior.

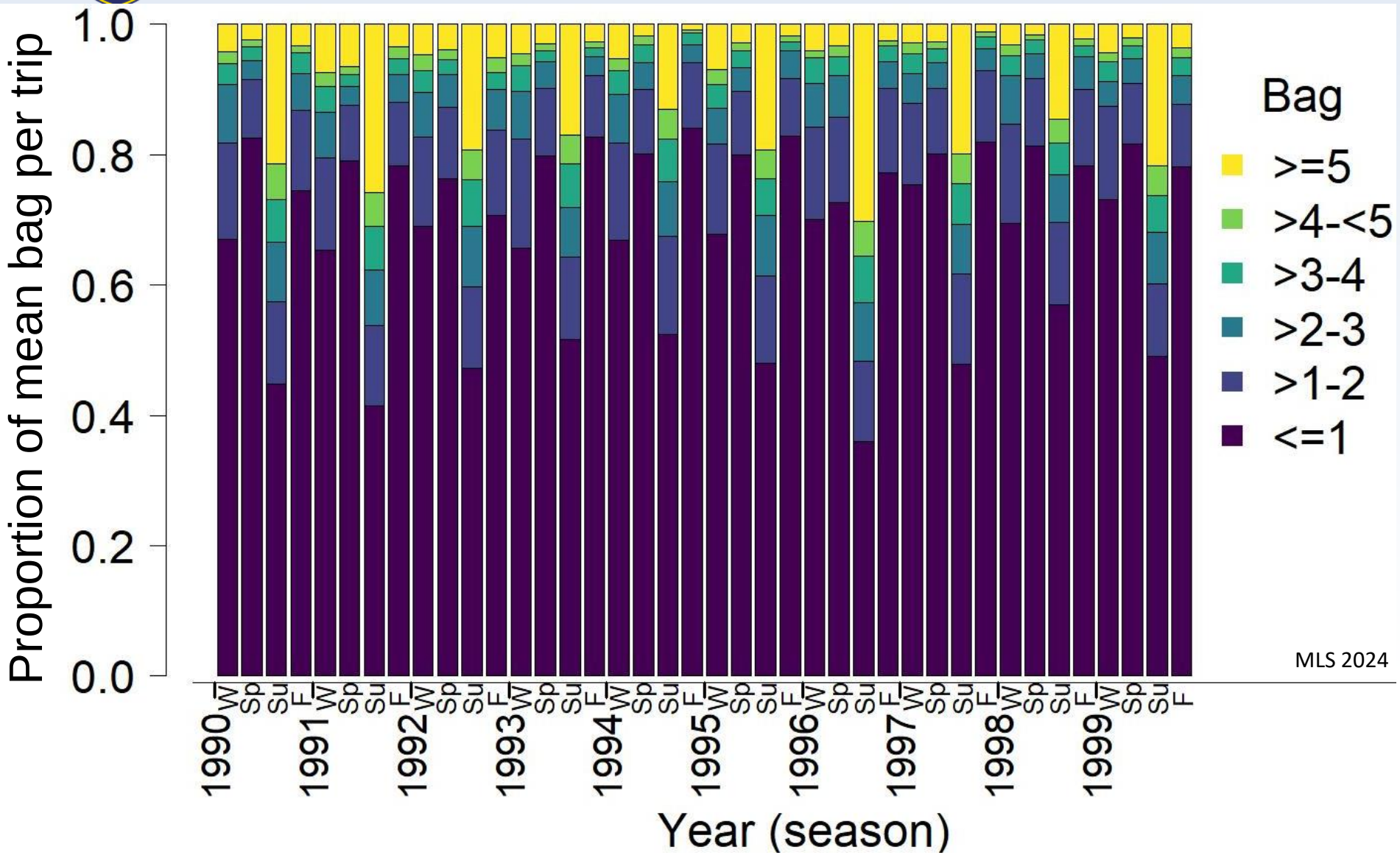
# BSB CPFV Landings 1980 - 2023




CDFW Marine Log System (MLS) 2024

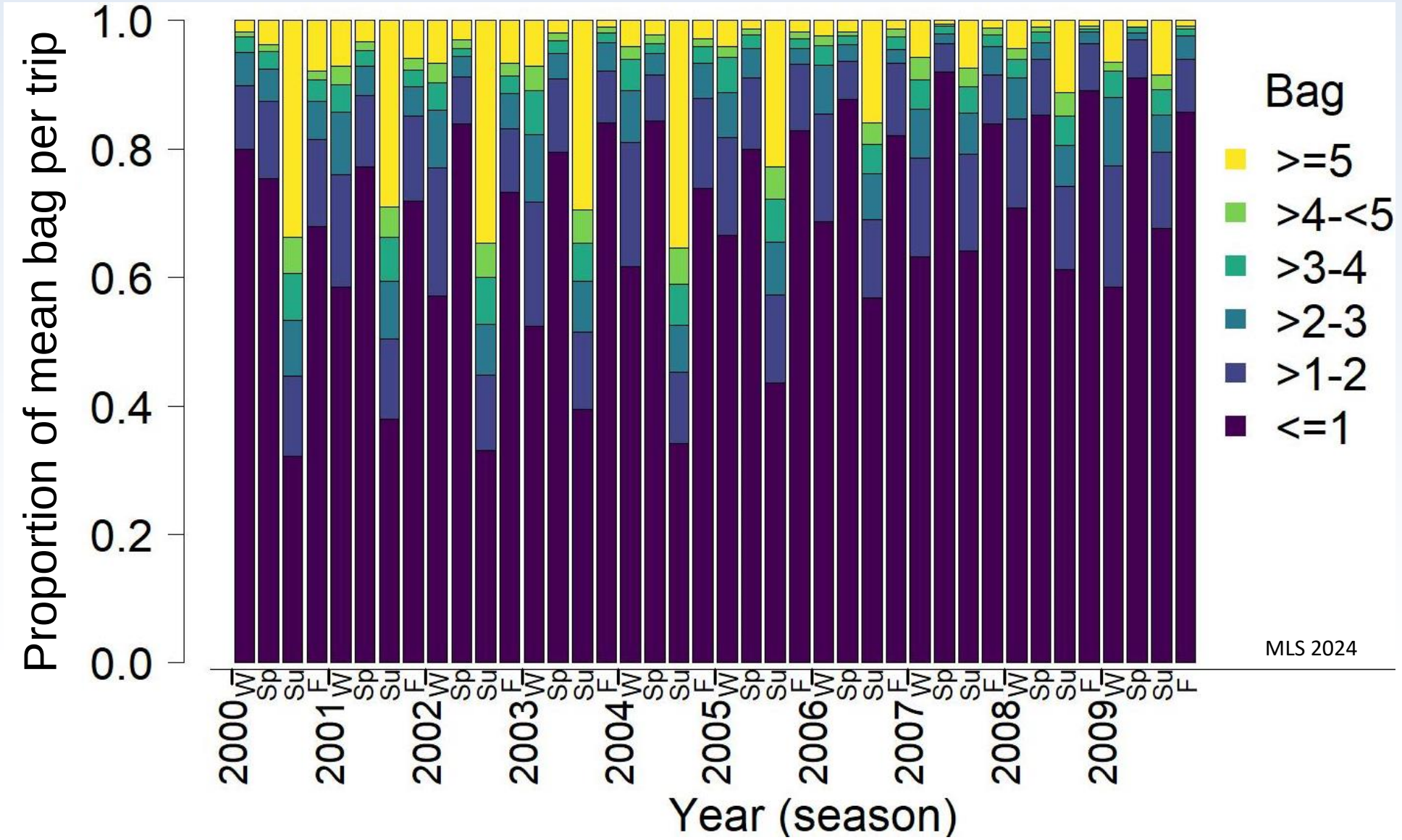
* Preliminary data from Jan - Sept

# 1990s Mean BSB Bag per Trip

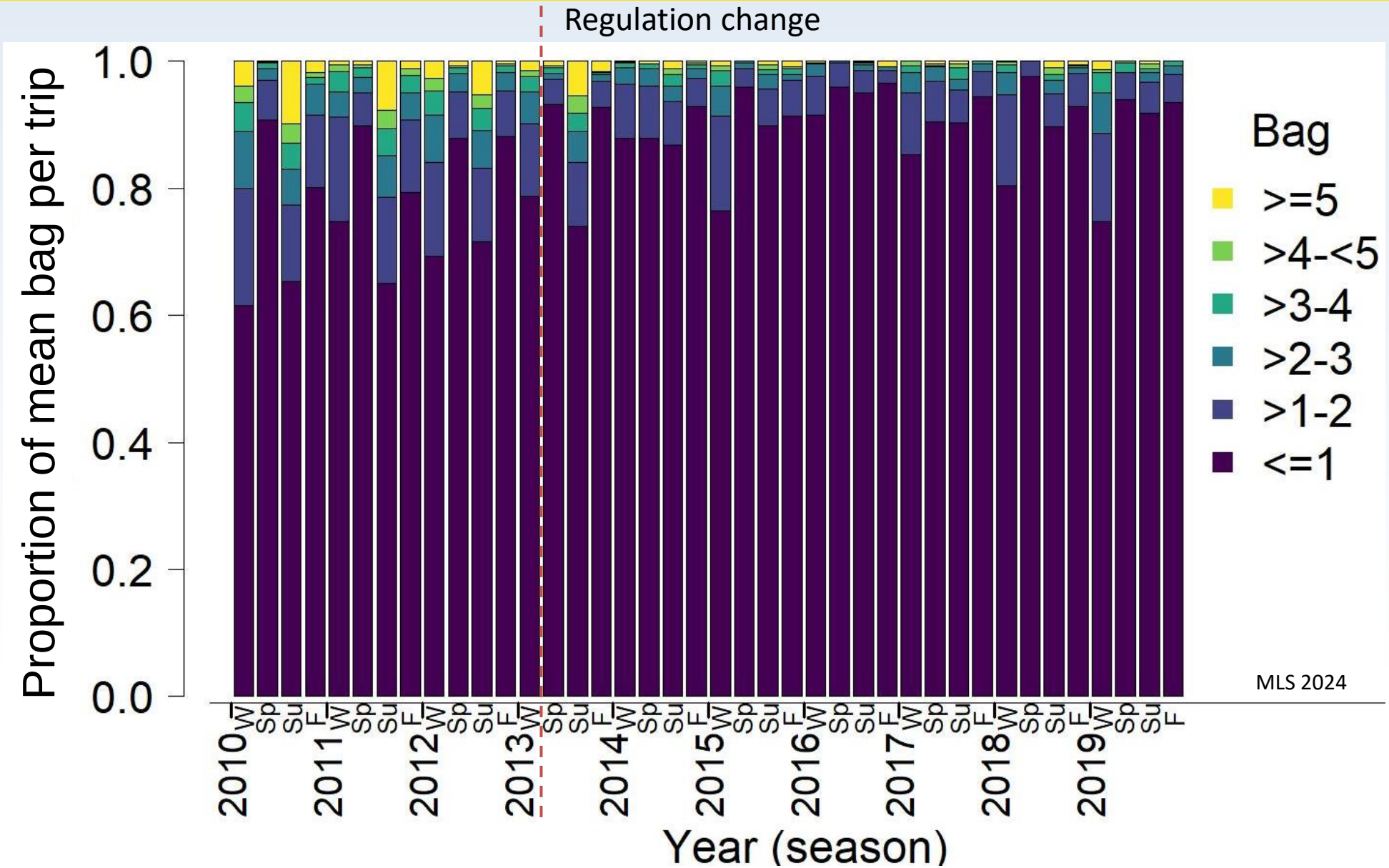



- Bag = # BSB / # anglers
- W = Dec – Feb
- Sp = Mar – May
- Su = June – Aug
- F = Sept - Nov

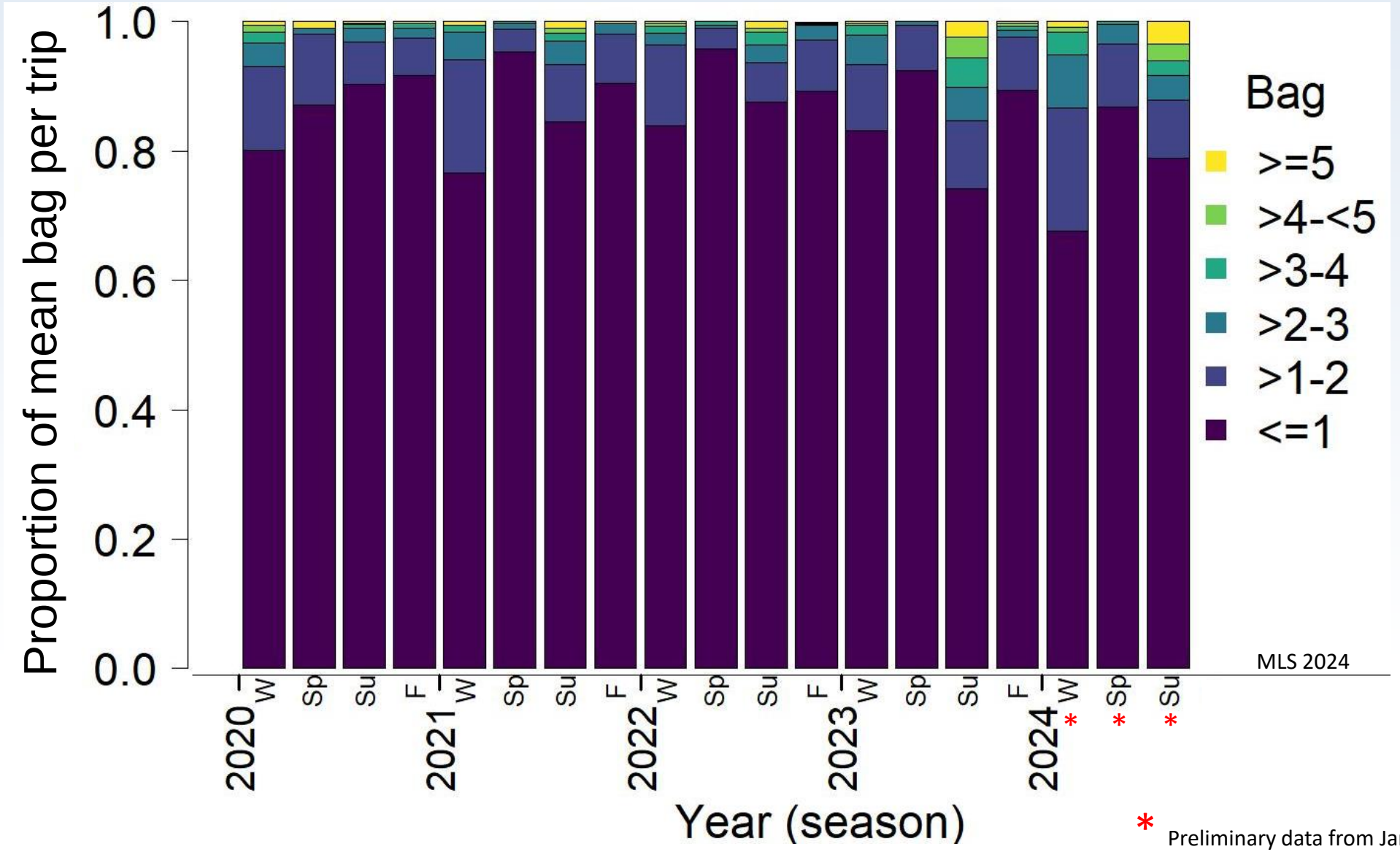
# 2000s Mean BSB Bag per Trip



# 2010s Mean BSB Bag per Trip



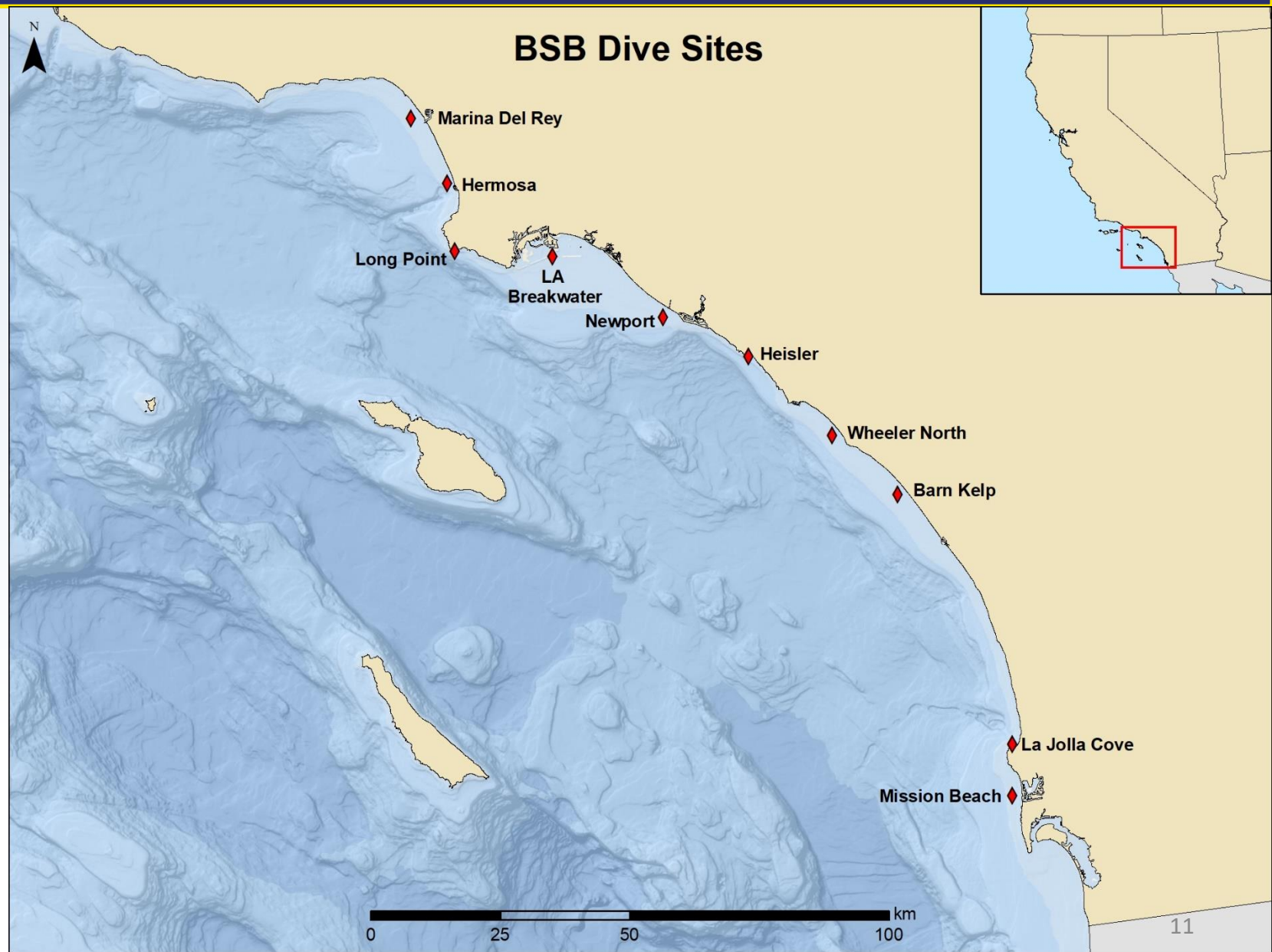
# 2020s Mean BSB Bag per Trip



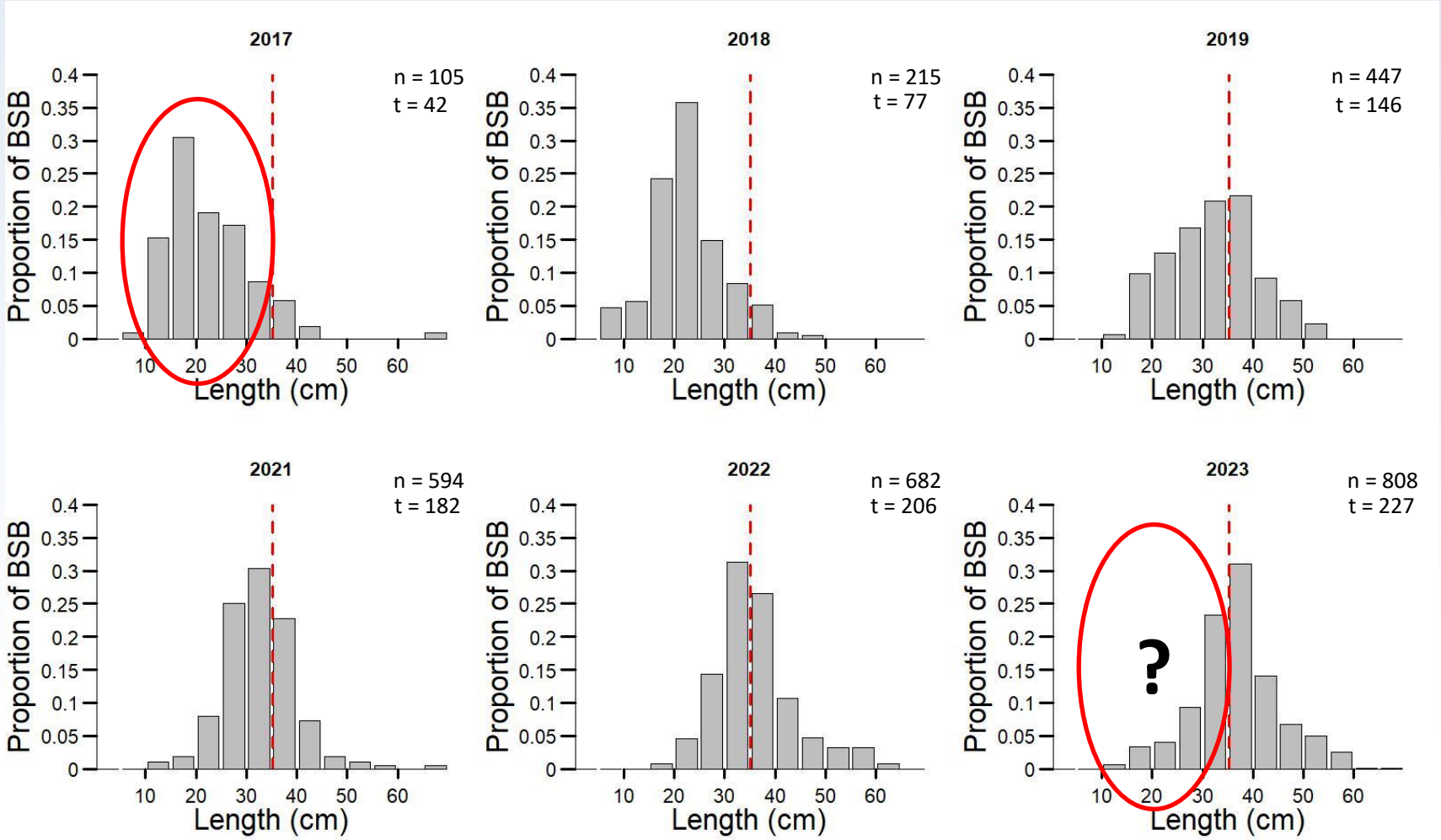

* Preliminary data from Jan - Sept

# CDFW BSB Dive Surveys 2017 - 2023

- 10 sand/reef ecotone sites from San Diego to Santa Monica Bay.
  - 6 artificial reefs.
  - 4 natural reefs.
  - 3 MPAs.
- Survey Sept – Nov.
  - Sample each site monthly.
  - Minimum of 3 transects per site visit.



# CDFW BSB Dive Surveys 2017 – 2023 (cont.)




- No sizeable recruitment pulse behind these legal fish as seen in previous years.
- With less recruitment, increased fishing success on these spawning aggregations is potentially unsustainable.

CDFW unpublished data 2024

# Outreach

| Engagement category | Stakeholder Group | Format | Date |
|---|---|---|---|
| Presentation & discussion | Fishing industry (SAC, CCA CA) | Remote | Feb. 20, 2024 |
| Presentation & discussion | BSB Researchers | Remote | Feb. 21, 2024 |
| Presentation & discussion | Fishing industry | Remote | Apr. 30, 2024 |
| Tribal notification | Tribal leaders and representatives | Letter | Jul. 8, 2024 |
| Working group meeting | Fishing industry, BSB researchers, CDFW | Hybrid | Sept. 4, 2024 |
| Working group meeting update | Fishing industry, BSB researchers, CDFW | Remote | Oct. 7, 2024 |

# BSB Working Group

- Goals:
  - Improve understanding of the current status of the BSB population and fishery.
  - Develop a shared understanding of the current need for a conservation measure.
  - Identify information gaps and strategies to collaborate on future data collection.
  - Support an open collaborative process (now and in the future) to share information on the species and fishery.

# Provisional Sunset Regulation Options

- Table shows potential regulation options and how they would have changed the 2023 BSB CPFV landings (55,409 BSB landed in 2023).

| BSB bag limit options | % BSB saved | # BSB saved |
|---|---|---|
| 5 year-round (no change) | 0.0% | 0 |
| 4 June-Aug, 5 Sept-May | 3.4% | 1,880 |
| 4 year-round | 3.6% | 1,990 |
| 3 June-Aug, 5 Sept-May | 10.5% | 5,836 |
| 3 June-Aug, 4 Sept-May | 10.7% | 5,946 |
| 3 year-round | 11.2% | 6,227 |
| 2 June-Aug, 5 Sept-May | 21.6% | 11,941 |
| 2 June-Aug, 4 Sept-May | 21.8% | 12,051 |
| 2 June-Aug, 3 Sept-May | 22.3% | 12,332 |
| 2 year-round | 23.5% | 13,017 |
| 1 June-Aug, 5 Sept-May | 38.9% | 21,563 |
| 1 June-Aug, 4 Sept-May | 39.1% | 21,673 |
| 1 June-Aug, 3 Sept-May | 39.6% | 21,954 |
| 1 June-Aug, 2 Sept-May | 40.9% | 22,639 |
| 1 year-round | 44.9% | 24,868 |
| 0 June-Aug, 2 Sept-May (original proposal) | 76.1% | 42,151 |

# Next Steps

- Year-round and/or seasonal bag limit of 1 – 5 BSB, with no more than 5 bass in combination, with a sunset provision of 3 years.
- Discussion = February 2025
- Adoption = April 2025, effective by June 1, 2025
- Continue to work with stakeholders to fill priority research gaps and develop a long-term conservation strategy that is based on best available science to protect BSB spawning aggregations.

# Thank You

**Armand Barilotti**
Environmental Scientist
Southern California Fisheries Research
and Management Project
Department of Fish and Wildlife
Marine Region
Email: AskMarine@Wildlife.ca.gov

Enhanced Status Report:
https://marinespecies.wildlife.ca.gov/barred-sand-bass/true/

Outlook

**Public Comment on Barred Sand Bass Notice**

**From** Erica Mason [redacted]
**Date** Mon 11/25/2024 09:50 AM
**To** FGC <FGC@fgc.ca.gov>

President Murray, Commissioners, and Staff,

In my written comment (attached), I provide background and rationale for an alternative management option to be considered for discussion and public comment should the Commissioners decide to move forward with a Barred Sand Bass rulemaking package at the upcoming FGC meeting in December.

Thank you for your time and consideration.

Erica Jarvis Mason
--
**Erica Jarvis Mason, Ph.D.**
Pronouns: she/her/hers
Current position:
Research Fish Biologist | NOAA Fisheries | Southwest Fisheries Science Center | Ecosystem Research Division | U.S. Antarctic Marine Living Resources

November 22, 2024

Dear Fish and Game Commission,

I write this letter in regards to the Notice for a Barred Sand Bass (BSB) rulemaking. I previously worked for CDFW's Marine Region for several years, where I led life-history studies on BSB[1]. I was also the lead on the rulemaking package for the Saltwater Basses in 2012. In 2023, I received my PhD at Scripps Institution of Oceanography, where I studied the long term population dynamics of BSB and Kelp Bass (KB). I am a member of the BSB Working Group.

***My research on BSB has shown that fishing on their spawning aggregations is not sustainable in the long term. The fishery has had a history of multidecadal windows of fishing opportunity largely driven by sporadic, warm-water recruitment events followed by rapid fishing-induced collapse. A management measure that provides for uninterrupted spawning activity would reduce the risk of sudden collapse and recovery failure.***

Here, I address several topics pertinent to the matter before you and provide an alternative management strategy for your consideration:

I. The misconception that existing data products for sublegal and legal sized BSB are inadequate and do not reflect observations on the water.
II. The key aspects of vulnerability for the BSB fishery.
III. Lessons learned from management measures.
IV. Science and rationale for an alternative management measure that would benefit recreational anglers and CPFV[2] fishing operations while also providing necessary protection for BSB during spawning season.

[1] Jarvis ET, Gliniak HL, Valle CF (2014) Effects of fishing and the environment on the long-term sustainability of the recreational saltwater bass fishery in southern California. Calif Fish Game 100: 234– 259
Jarvis ET, Linardich C, Valle CF (2010) Spawning-related movements of barred sand bass, *Paralabrax nebulifer*, in southern California: interpretations from two decades of historical tag and recapture data. Bull South Calif Acad Sci 109: 123– 143
Jarvis ET, Loke-Smith KA, Evans K, Kloppe RE, Young KA, Valle CF (2014) Reproductive potential and spawning periodicity in barred sand bass (*Paralabrax nebulifer*) from the San Pedro Shelf, southern California. Calif Fish Game 100:289–309
McKinzie MK, Jarvis ET, Lowe CG (2014) Fine-scale horizontal and vertical movement of barred sand bass, *Paralabrax nebulifer*, during spawning and non-spawning seasons. Fish Res 150: 66– 75
Walker KM, Pentilla KM, Jarvis-Mason ET, Valle CF (2020) Validated age and growth of barred sand bass within the Southern California Bight. Calif Fish Wildl 106: 205– 220

[2] Commercial Passenger Fishing Vessel

## *I. Existing data products on sublegal and legal sized BSB are abundant*

- Several fishery-independent datasets, including CDFW's dive survey data, the VRG[3] King Harbor dive survey data, and the CalCOFI[4] BSB larval data, all point to a brief period of high recruitment of young BSB in the mid-2010s. This recruitment ultimately resulted in the recent increase in legal size catch.
- Following more than a decade of no BSB spawning aggregations, it is not surprising that the recent increase in BSB availability may be perceived by some to indicate a recovered, healthy population.
- In response to the 2013 regulations, CDFW initiated a discard survey of the basses in which samplers go on CPFVs to record the lengths of *all* bass discarded. This study and the Department BSB dive survey were intended to provide information on trends in both juvenile and fishery recruitment.
- Between CPFV logbooks, bass discard lengths, fishery-independent data sets, CRFS[5] lengths and catch estimates across all recreational fishing modes, and anecdotal information from industry and private anglers, there is a representative, complete picture of eyes on the water. *None of the data, however, point to a strong fishery recruitment pulse behind the current cohort.*

## *II. Barred Sand Bass is unique in southern California in terms of its vulnerability to fishing*

There are two major stressors acting on the BSB population:

I. **FISHING ON SPAWNING AGGREGATIONS**

1. Aggregate spawner populations can reach a critically low population size after which aggregations cease to form (e.g. adult densities get so low that younger adults no longer learn from the older adults when and where to spawn [1,2].

[3] Vantuna Research Group, Occidental College
[4] California Cooperative Oceanic Fisheries Investigations
[5] California Recreational Fisheries Survey

2. Recovery after fishing-induced collapse is often delayed [3,4,5] or has yet to occur for many spawning aggregation fisheries [6], including BSB. We saw direct evidence of this in the past 10 years. Up and down the coast, year after year, attempts at locating summer BSB aggregations were unfruitful, with some operations eventually giving up targeting them altogether.

3. The risk associated with fishing spawning aggregations increases during periods of environment-driven population recruitment failure [7].

    - We can't change whether or not we have a strong recruitment year, but we can change how much we take. Protection of spawning aggregations has the greatest potential to result in higher annual recruitment – see 2 below.

## II. HIGHLY SPORADIC RECRUITMENT

1. A strong juvenile recruitment year for BSB is a rare event (only 4x in the last 60 y!), and on average, annual juvenile recruitment is minimal [7].

    a. Larval recruitment data were shown to predict future BSB catches. *This means recruitment (or lack thereof) drives the fishery [8].*

    b. Data indicate juvenile BSB recruitment pulses are linked to warm-water events (e.g., some El Niños) that may not be locally sourced [7]. However, *these southern larval pulses aren't enough to sustain productive fishing in southern California without stronger, more consistent, local recruitment*.

    c. If anomalously warm events become more frequent, we may see more consistent recruitment in the future (and more reliable fishing*), especially if there is a measure that allows for the population to continue to recover* (e.g., uninterrupted spawning).

    2. Data indicate a negative relationship between annual BSB juvenile recruitment and catch (i.e., higher catches lead to lower recruitment) [7].

## *III. As stewards of our CA resources, we have a responsibility to learn from the results of previous management measures in CA, as well as from other spawning aggregation fisheries worldwide*

- Around the world, spawning aggregation fisheries have failed to recover following collapse, but there are management-driven success stories [9]: the Nassau Grouper population in the Cayman Islands has recovered due to spawning season closures and adaptive management [5,10], the Red Hind in the Caribbean has recovered after 30 years of spatial spawning protection [11], and the same for Mutton Snapper in the Florida Keys [12].

- Although California adopted a network of Marine Protected Areas (MPAs) in 2012, none of them are in areas that protect BSB spawning aggregations.

- In California, by the 1970s, Giant Sea Bass spawning aggregations were decimated by fishing. The population has only recently shown signs of recovery that is likely due to the fishing ban on Giant Sea Bass implemented in the 1980s, as well as the Nearshore Gillnet Ban in the 1990s that reduced incidental take of the species [13].

- In addition to many commercial fisheries, there are several California recreational fisheries that have some form of temporal closure or reduced bag limit during spawning season, including

    - **California Spiny Lobster**[6] - *seasonal closure*
    - **California Grunion**[7] - *seasonal closure*
    - **Rockfishes, Cabezon, Greenlings, Lingcod**[8] - *seasonal closure*
    - **Pismo Clam**[9] - *seasonal closure in select areas*
    - **White Sea Bass (another aggregate spawner)**[10] – *seasonal bag limit reduction*

[6] Cal. Code Regs. Tit. 14, § 29.90
[7] Cal. Code Regs. Tit. 14, § 28.00
[8] Cal. Code Regs. Tit. 14, § 27.20
[9] Cal. Code Regs. Tit. 14, § 29.40
[10] Cal. Code Regs. Tit. 14, § 28.35

- In 2012, the Department's recommendation for the Saltwater Basses was intended to benefit all three basses, and it was noted that a proposed partial spawning season option for BSB was included as added protection for BSB during this vulnerable time because unlike for KB and Spotted Sand Bass, the recommended 1 inch increase to the MSL and 5 fish reduction in the individual species bag limit would not offer similar protection or savings. The Commission's decision to implement a 2-inch increase in the MSL and a 5 fish reduction in the combined species bag limit was an attempt to increase savings by avoiding a spawning season closure for BSB, in the hopes it would be enough to prevent further population declines. It was not.
- ***Action going forward will decide whether we have a BSB fishery that is reliable for many decades (like KB) or for just a few years.*** BSB data point to a history of multidecadal windows of fishing opportunity largely driven by sporadic, warm-water recruitment events followed by rapid fishing-induced collapse [7].

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- ***An alternative management strategy that would allow the BSB population to rebuild while also sustainably increasing fishing opportunities for KB***

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***A 0-fish bag limit for BSB during spawning season, in combination with a reduction in the MSL for KB by one inch to 13 inches.***

- You have heard comment that a spawning season closure or reduction of the bag limit by more than one fish would be a rash management decision resulting in additional financial hardship to the sportfishing fleet. You have also heard comment that a Management Strategy Evaluation (MSE) or formal stock assessment for BSB should be undertaken by the Department prior to the Commission considering such regulation change.
    - Under current regulations, incipient population recovery, and with no promise of another strong fishery recruitment pulse in sight, the current, emerging BSB cohort is extremely vulnerable to being rapidly overfished (i.e., recovery failure and another fishery collapse).
    - ***A 0-fish bag limit for BSB during spawning season would provide protection for BSB now, during a time of incipient popular recovery, and also allow the time required for an MSE to be conducted for BSB (and potentially KB too).***

- ***A recent publication shows that a 13 inch MSL for KB would increase KB yield while still maintaining a healthy KB spawning stock [14].***
- Requiring an MSE before implementing necessary management action shifts focus away from taking a prudent precautionary approach based on the best available science.

- ***A 13 inch MSL would also immediately provide an increase in the numbers of KB available for harvest, allowing KB anglers to more easily attain the current 5-fish in-combination bag limit.***
- ***KB has been the bread and butter of the Saltwater Bass Fishery for decades.***
- ***Attributes of the KB population point to a population that is more resilient to environmental and fishing impacts.***
  - KB is a locally-sourced population, and over the past 60 years, average annual KB larval recruitment has been ~6-7x higher than BSB [8].
  - Unlike BSB, KB have both island and mainland populations.
  - Unlike BSB, essential KB habitat is protected within several southern California MPAs.
  - Unlike BSB, KB spawning behavior (e.g., smaller, more broadly dispersed aggregations in time and space) does not result in the exposure of the bulk of the spawning stock biomass to sustained, high CPUE harvest, which is attainable even in the face of a steep population decline. That is, declines in KB CPUE coincident with a population decline have naturally and effectively "pumped the breaks" on harvest through corresponding, effective management, and no such mechanism exists for BSB in which fishing has predominantly taken place on mass spawning aggregations occurring at just six primary locations in southern California.
- ***During the previous Saltwater Bass rulemaking, the Department determined the fillet and alternate lengths that would correspond with a 13 inch MSL, and these could be incorporated into proposed regulatory language to go along with this alternative management strategy, if you decide to move it forward as an option for consideration.***

I am providing this written comment as a private citizen, on a matter of public concern, and outside my official capacity as a federal stock assessment scientist.

Thank you very much for your time.

Sincerely,

Erica Jarvis Mason, Ph.D.

## *Links to cited research*

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Outlook

**Public comment re: Barred Sand Bass**

**From** Bellquist, Lyall [redacted]
**Date** Tue 11/26/2024 08:24 PM
**To** FGC <FGC@fgc.ca.gov>

Dear California Fish and Game Commission,

Please find the attached letter for public comment regarding the potential rulemaking in the California recreational Barred Sand Bass fishery.

Sincerely,
Lyall Bellquist, PhD

Public comment on proposed regulation changes to the recreational Barred Sand Bass (BSB) fishery

November 26, 2024

Dear California Fish and Game Commission,

This letter is submitted in reference to the Notice for new regulations in the Barred Sand Bass fishery.

I am a lifelong recreational fisherman and diver, deriving decades of enjoyment, inspiration, as well as my entire professional career from our unique, dynamic, and healthy marine ecosystems in California. I hold a B.S. in aquatic biology from UC Santa Barbara (2002), M.S. in marine biology from CSU Long Beach (2006), and Ph.D. in marine biology from Scripps Institution of Oceanography (2015). Throughout my career, I have worked collaboratively in industry, academic, federal agency, small NGO, and global NGO landscapes, most recently as a former Senior Fisheries Scientist with The Nature Conservancy, California Oceans Program and Visiting Scientist at Scripps Institution of Oceanography. My background has given me a diverse portfolio of expertise and stakeholder lenses to draw from, particularly regarding marine recreational fisheries management.

In the context of the proposed Barred Sand Bass (BSB) rulemaking, I have been involved in multiple collaborative fisheries research projects that have contributed data related to the BSB fishery, and I participated in the CDFW-led collaborative BSB working group that began in early 2024. For historical context, I fished for BSB here in the 1990s and early 2000s, when over 1M fish were caught annually by the CPFVs and private vessels combined; I was here during the BSB fishery decline from 2007-2012; I watched the BSB spawning aggregations disappear from 2012-2014, remaining absent from 2014-2023; and I saw the nascent emergence of the first new cohort in the last decade during this year's summer spawning season, which was heavily fished under status quo regulations.

In consideration of a potential rulemaking for BSB, there are several data-driven points that we did not necessarily have during the previous rulemaking in 2013:

1. **Today, the BSB recreational fishery in southern California is not data-limited** – There are approximately 30 peer-reviewed publications focusing directly or indirectly on this species since 2000; CDFW manages an extensive time series of reliable and widely-used fishery-dependent data for the two primary modes of BSB fishing mortality, i.e. private vessels and Commercial Passenger Fishing Vessels; there are several sources of fishery-independent datasets and time series from well-established data collection programs (e.g., CalCOFI, CCFRP, hydroacoustic surveys, and multiple subtidal survey programs); and oceanographic monitoring datasets have successfully been integrated with analyses on the BSB fishery to understand the relative importance of both fishing and the environment on population dynamics for this species. **Our understanding of the health of the BSB fishery comes from numerous sources of rigorous and collaborative science, all of which are in agreement about the decline of the fishery from 2007-2012 and the sustained collapse from 2012-2023.**

2. **We did not do enough in 2013 to rebuild the BSB fishery** – In 2013, the California F&G Commission recognized two primary concerns raised by CDFW in the recreational coastal bass fisheries: 1) gradual, long-term decline in Kelp Bass populations over the previous decades, and

2) a precipitous decline in BSB populations from 2007-2012. The Commission expressed particular concern about BSB due to their high vulnerability to overfishing during spawning aggregations. During the management process, CDFW provided a range of potential regulatory options (including a partial spawning season closure). The Commission instead chose to adjust bag and size limits, reducing the recreational daily bag limit in half from 10 to 5 fish per person per day, and increased the minimum size limit from 12 to 14 inches for all three bass species.

We now know that these bag/size limit regulations resulted in:

1. Strong success with Kelp Bass recovery, illustrated by catches and sizes recovering approximately 4 years later (as predicted), which is supported in the scientific literature and by the recreational fishing community
2. Failure for BSB recovery, illustrated by the continued BSB decline, disappearance of all known spawning aggregations, and effective fishery collapse from 2013-2023 (this is supported by several recent scientific publications authored by researchers from numerous academic research institutions and management agencies)

3. **We have a new opportunity in 2024** – In recognition of the Kelp Bass success story but the BSB failure, the renewed focus on BSB is especially timely for two reasons: 1) the last decade of BSB fishery collapse indicates that stronger management intervention is necessary to rebuild and sustain the spawning stock, and 2) a small recruitment pulse was observed (and heavily fished) this last summer during spawning season, indicating that we have a window of opportunity to conserve the incoming spawning potential, which could accelerate the rebuilding timeline. This pulse is comprised primarily of fish that were born during the 2014-2017 marine heatwave and subsequent El Niño. In other words, **this species is trying to rebuild itself under the recent favorable environmental conditions, but the fishery continues to target the spawning aggregations under status quo regulations with highly predictable consequences.** This is especially problematic given that the best available science shows that this recruitment pulse has no additional cohorts coming behind it, so our opportunity to conserve the nascent spawning stock biomass is now.

4. **A June-August spawning season closure would allow the fishery to rebuild** – In recognition of the fishery conservation opportunity before us, CDFW has been leading a collaborative working group with academics and recreational industry representatives. This discussion started with a science-based proposal by CDFW to implement a spawning season closure combined with a non-spawning season bag limit reduction, but after industry input, this evolved into an evaluation of bag limit reduction scenarios. An important question to ask ourselves: **If a 5-fish reduction (plus a 2-inch size limit increase) didn't work for BSB in 2013, then why would we expect another partial reduction to have any effect today?** We can evaluate the nuances of catch savings under 1-5 fish scenarios, but we already know that extreme catch savings in the short-term are necessary for the BSB fishery to rebuild.

5. **Spawning season closures are common, both globally and in California, for conserving spawning stocks** – Based on the best available science as well as lessons that we now have from other spawning aggregations around the world (e.g., Nassau Grouper in the Caribbean),

spawning season closures are common for a variety of reasons, particularly the conservation of the spawning stock for aggregating species. **Even for non-aggregating species, California already has spawning season closures/regulations in place for multiple fisheries** (e.g., spawning season closures are already successfully used in CA for rockfishes, lingcod, cabezon, spiny lobster, grunion; and a reduced bag limit exists for white seabass during spawning season). Implementing a spawning season closure would not represent a new type of regulation among California state-managed fisheries.

6. **A seasonal closure will not cause significant hardship to the recreational fishing industry** – Past hardship to the fleet was likely incurred predominantly during the 2007-2012 period when BSB landings declined precipitously. At that point, the loss of BSB spawning aggregations forced the subset of CPFVs that target BSB (i.e. half- and three-quarter day CPFVs operating between Ventura and San Diego) to shift toward other species, such as rockfishes. This shift allowed the vessels to continue operating successfully in the virtual absence of BSB landings from 2013-2023. We thus already have a decade of fishery evidence that the fleet can successfully navigate a June-August spawning season closure because **these vessels already operated successfully from 2013-2023 when BSB aggregations were absent after the fishery closed itself under status quo regulations. A seasonal closure would thus not add any hardship that hasn't already been successfully navigated by the fleet for the last decade.**

In summary, the best available science and our past lessons learned indicate:

1. Based on the Kelp Bass success story, management measures that appropriately account for the life history of the focal species can rebuild popular nearshore fisheries in southern California within relatively short time frames (e.g., 5 years for Kelp Bass).
2. Stronger measures are needed to recover BSB spawning aggregations and rebuild the fishery, and the best available science suggests a Jun-Aug spawning season closure is the best option.
3. There is no industry impact associated with a summer closure for BSB that the fleet hasn't already successfully navigated during the last ten years of fishery collapse.
4. Development of a stock assessment for BSB while interim conservation measures are implemented over a three-year period would be extremely helpful for clarification of stock status, streamlining decision-making, minimizing debates and mistrust between fishery stakeholders, and reducing current management decision lags in this highly important fishery.
5. **With this new fishery rebuilding opportunity, we can choose to spend down the principal like we did in the past, or we can conserve it and live off the dividends.**

Sincerely,

Lyall Bellquist, PhD

Timeline of BSB fishery-relevant publications beginning in 1996:


1. Love, M.S., Brooks, A., Busatto, D., Stephens, J. and Gregory, P.A., 1996. Aspects of the life histories of the kelp bass, *Paralabrax clathratus*, and barred sand bass, *P. nebulifer*, from the southern California Bight. Fishery Bulletin, 94(3), pp.472-481.
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15. Miller, E.F. and Erisman, B., 2014. Long-term trends of southern California's kelp and barred sand bass populations: a fishery-independent assessment. California Cooperative Oceanic Fisheries Investigations Reports, 55, pp.1-9.

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Outlook

## OC comment letter to FGC, December Item 5 Barred Sand Bass

**From** Greg Helms [redacted]
**Date** Mon 12/02/2024 10:20 AM
**To** FGC <FGC@fgc.ca.gov>

Good morning — please accept the attached comment letter from Ocean Conservancy into the record for Item 5 (Barred sand bass) on the December Commission meeting agenda.

Thanks very much!

Greg Helms
Manager, Fish Conservation Program
Santa Barbara, CA
[redacted]
[redacted]
Web | Facebook | Twitter

725 Front Street
Suite 201
Santa Cruz, CA 95060

Ocean Conservancy

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December 2, 2024

California Fish & Game Commission (FGC)
P.O. Box 944209
Sacramento, CA 94244-2090

*Submitted electronically to* fgc@fgc.ca.gov

Re: Recreational Sand Bass Fishery; December 2024 CA Fish & Game Commission MRC Agenda Item 5

Dear President Murray and Commissioners:

Ocean Conservancy appreciates the opportunity to comment on a rulemaking to address ongoing recreational barred sand bass (BSB) fishery declines. We urge the Commission to issue a notice of rulemaking containing options to protect spawning aggregations of barred sand bass.

In two presentations to the FGC Marine Resource Committee, the California Department of Fish and Wildlife (CDFW) has explained the central role BSB spawning site and times play in the health of this highly depleted and prized fishery.[1] The times and locations of BSB spawning are essential aspects of barred sand bass management for three reasons:

1. aggregating at known spawning locations and times make the species especially vulnerable to overharvest;
2. spawning protection presents the best opportunity to rebuild sustainable populations; and
3. spawning behavior in which many BSB are encountered accounts for continuing misperceptions regarding the health of the stock.[2]

To recover populations targeted in this important recreational fishery and support resumption of sustainable fishing, the Commission should enact measures applicable to the *times and/or places* barred sand bass spawn and replenish their numbers. Therefore, we join with written user and expert testimony in the record in recommending a zero fish bag limit for BSB during the months of June-August. Such measures will not affect extensive BSB fishing opportunities available outside spawning times and locations.

Measures such as year-round bag or size limit adjustments not specifically tied to BSB spawning are unable to recover populations and support sustainable fishing. Recommendations to reduce the year-

[1] CDFW presentation *Staff Summary for July 17-18 Marine Resource Committee – Item 8* at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=224063&inline, and CDFW presentation *Barred Sand Bass Regulation Change Considerations* at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=227132&inline

[2] https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=224063&inline, p13, slide 11.

round bag limit do not afford protection of BSB during the summer spawning aggregations, nor are they predicted by CDFW to result in needed levels of benefit to the stock.[3] In fact, *much* more substantial bag (as well as size) limit regulations were enacted by the Commission in 2014 in response to CDFW and expert concerns. This well-intended Commission action notably did not elect to address spawning aggregations, and did not alter the worsening trajectory of barred sand bass health.

Conservation at these "easily targeted" aggregations which are, according to CDFW, "becoming smaller and harder to find," requires that significant measures be applied to the places and/or the times at which barred sand bass spawn.[4] Therefore, we urge the Commission to include a zero fish bag limit during the months June-August in a Rulemaking Notice, and enact this measure at the decision hearing next year.

Ocean Conservancy welcomes the recommendation to collaboratively develop a long-term conservation strategy and employ management strategy evaluation techniques CDFW is increasingly using to test, compare and engage stakeholders in improved management procedures.

Thank you for your consideration of these comments and your service to California's outstanding natural resources.

Sincerely,

Greg Helms
Manager, Fish Conservation Program
Ocean Conservancy
[redacted]

[3] Staff Summary for November 2024 MRC. Slide #14.
[4] Staff Summary for July 17-18, 2024. Marine Resources Committee- Item 8, CDFW. Page 1.