



The Commercial Kelp Harvester's Monthly Report DFW 113 (REV. 11/01/21) is further modified to reflect the following:

- Page 1 and 2 header
  - The revision date "REV. 11/01/21" is updated to "REV. 01/06/22" to accurately reflect the date of the most recent revisions.
- Page 2
  - First paragraph, three occurrences of "Sections" are replaced with "sections" to reflect Fish and Game Commission (Commission) standard rules for capitalization.
  - General Instructions, bullet C, the comma between "CA" and the zip code is removed to correct a typographical error.
  - Log Instructions, bullet 2, "an marine protected area" is replaced with "a marine protected area" to correct a typographical error.
  - Log Instructions, bullet 6, "advance" is replaced with "advanced" to correct a typographical error.

The following modifications have been made to the Commercial Edible Seaweed/Agarweed Aquatic Plant Harvester's Monthly Report DFW 113A (NEW 11/01/21):

- Page 1 and 2 header
  - The creation date "NEW 11/01/21" is modified to "NEW 01/06/22" to accurately reflect the date of the most recent version.
- Page 2, first paragraph
  - Three occurrences of "Sections" are replaced with "sections" to reflect Commission standard rules for capitalization.
  - Second sentence, "Chapther" is changed to "Chapter" to correct a misspelling.
  - The phrase "number of tons" is replaced with "weight" to accurately reflect the weighing reporting options.
- Page 2, General Instructions, bullet C
  - The address "715 P Street, Sacramento" is changed to "715 P Street, 16<sup>th</sup> Floor, Sacramento" which is the correct address.
  - The comma between "CA" and the zip code is removed to correct a typographical error.

Due to the modifications to DFW 658, 113, and 113A, new Section 705.1 is modified as follows to accurately reflect the dates of forms incorporated by reference:

- Subsection (a)(1) Revision date of the 2022 Kelp Harvesting License and Drying Application DFW 658 is modified from "(REV. 11/01/21)" to "(REV. 01/06/22)"
- Subsection (b)(1) Revision date of the Commercial Kelp Harvester's Monthly Report DFW 113 is modified from "(REV. 11/01/21)" to "(REV. 01/06/22)"
- Subsection (b)(2) date of the Commercial Edible Seaweed/Agarweed Aquatic Plant Harvesters Monthly Report DFW 113A is modified from "(NEW 11/01/21)" to "(NEW 01/06/22)"

Additionally, subsection (a)(1) of Section 705.1 is further modified to include "(does not include the fees specified in subsection 700.4(e))" to clarify the base license fee provided in 705.1(a)(1) does not include all processing fees. In subsection (b)(3) of Section 705.1 the word "NEW" is added before the date of form DFW 1108 for consistency with the form itself.

## V. Reasons for Modification of Originally Proposed Language of Initial Statement of Reasons

Changes were made to the forms noted above, and to Section 705.1 for clarity and consistency, and to correct typographical or other errors. No other changes to the regulatory language are proposed; updates with monitoring data are described under VII. below.

## VI. Summary of Primary Considerations Raised in Opposition and in Support

No oral or written comments have been received from the public since the start of the formal comment period on December 31, 2021, in opposition to or support of, the proposed regulatory action through January 10, 2022.

## VII. Statement of Specific Purpose of Regulatory Action and Factual Basis for Determining that Regulation Change is Reasonably Necessary

Section III(a) of the ISOR summarized the Santa Barbara Coastal Long Term Ecological Research (SBC LTER) program's satellite imagery data by providing graphs depicting the maximum annual kelp canopy area through the fourth quarter of 2020 for Sonoma, Mendocino, Humboldt, and Del Norte counties and the combined counties. This section of the ISOR also summarized the amount of kelp canopy decline in 2014 - 2020 compared to the 1984 - 2013 period preceding the severe canopy loss for the counties combined.

The California Department of Fish and Wildlife (Department) received updated satellite imagery data which was presented to the Commission during the notice hearing on December 16, 2021, including updated graphs depicting mean annual maximum kelp canopy area through the third quarter of 2021 for Sonoma, Mendocino, Humboldt, and Del Norte counties and tables depicting the percent change of kelp canopy in each of the four counties compared to the 1984 - 2013 mean for 2014 - 2020 and 2014 through the third quarter of 2021. The updated 2021 data indicates an increase in kelp canopy in Mendocino and Sonoma counties; however kelp canopy in each of those counties is still experiencing a 90% or more reduction in area compared to the mean annual canopy maximum for 1984 - 2013 (Figure 1, Table 1). Kelp canopy data from 2014 through the third quarter of 2021 for Del Norte and Humboldt counties represents a 5% decline and 20% increase in kelp canopy, respectively, compared to the mean annual maximum canopy area for 1984 - 2013 (Figure 2, Table 2).

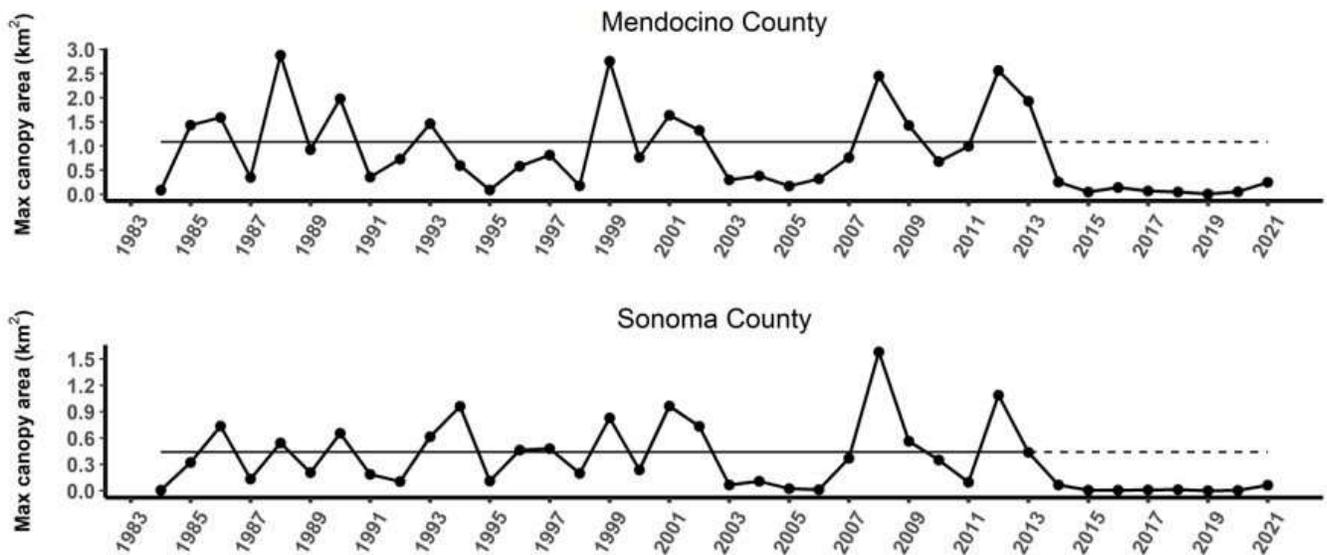


Figure 1. Annual Mendocino and Sonoma counties' kelp canopy area maximum (measured quarterly) in square kilometers estimated from Landsat satellites (SBC LTER et al. 2021). Data is updated through the third quarter of 2021. The horizontal line is the mean maximum kelp canopy area from 1984 through 2013. The dashed line extends this mean through 2021 as a reference.

Table 1. Percent change of the mean annual maximum kelp canopy area in Mendocino and Sonoma counties.

Percent Change Time Frame (compared to 1984-2013 mean)	Mendocino	Sonoma
2014 – 2020	92% decline	97% decline
2014 – third quarter of 2021	90% decline	95% decline

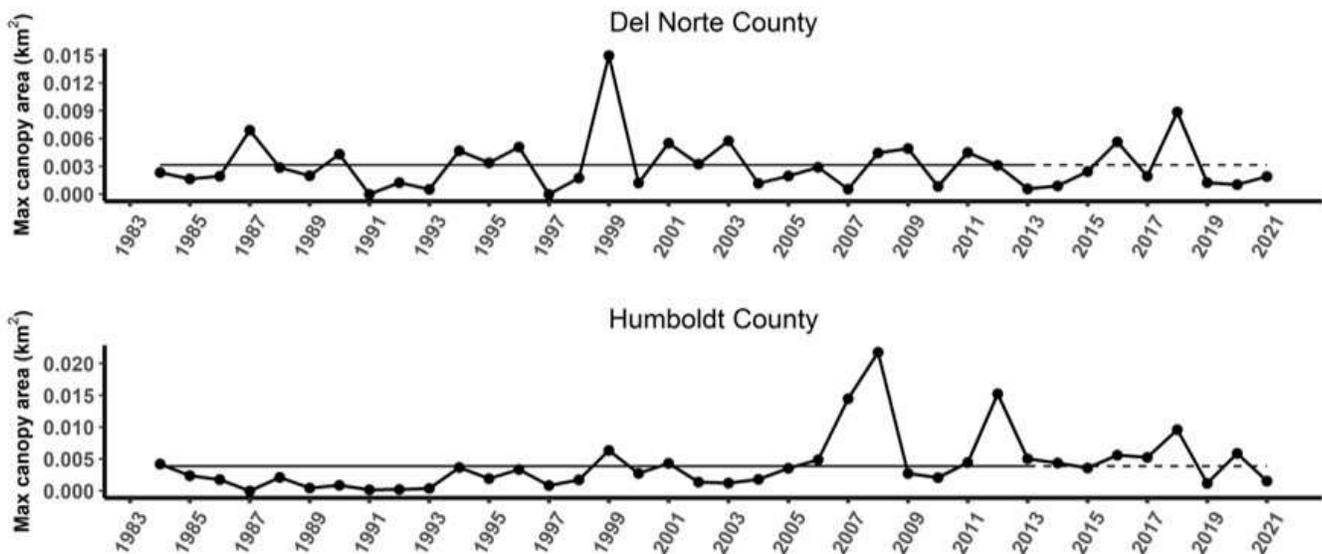


Figure 2. Annual Del Norte and Humboldt counties' kelp canopy area maximum (measured quarterly) in square kilometers estimated from Landsat satellites (SBC LTER et al. 2021). Data is updated through the third quarter of 2021. The horizontal line is the mean maximum kelp canopy area from 1984 through 2013. The dashed line extends this mean through 2021 as a reference.

Table 2. Percent change of the mean annual maximum kelp canopy area in Del Norte and Humboldt counties.

<b>Percent Change Time Frame (compared to 1984-2013 mean)</b>	<b>Del Norte</b>	<b>Humboldt</b>
<b>2014 – 2020</b>	<1% decline	31% increase
<b>2014 – third quarter of 2021</b>	5% decline	20% increase

## Updated Informative Digest/Policy Statement Overview

Bull kelp (*Nereocystis luetkeana*) is a species of marine algae which forms the foundational physical structure of diverse marine habitats that provide a variety of ecosystem services and support numerous fisheries, cultural and ceremonial traditions, and diving and fishing tourism. Bull kelp is an annual species, meaning the individuals live and reproduce within a lifetime of one year, although some individuals may live into a second year. The reproductive material of a bull kelp individual is located on its blades, near the surface of the water.

Historically, bull kelp populations on the north coast have exhibited natural interannual spatial and temporal variability. However, beginning in 2014, bull kelp populations in Mendocino and Sonoma counties declined dramatically outside of the range of normal variability due to elevated sea surface temperature, poor nutrient availability and drastic increases in purple sea urchin (*Strongylocentrotus purpuratus*) populations. Maximum annual bull kelp canopy area has remained below the 1984-2013 average from 2014 through the **third quarter of 2021**.

Current uses for harvested bull kelp are for human consumption and to feed aquacultured abalone. Existing commercial harvest regulations allow those harvesting for human consumption to take the entire individual, and harvesters taking kelp for other purposes are allowed to cut up to four feet below the surface of the water. Because bull kelp reproductive material is on the part of the individual nearest to the surface, all harvest methods result in less available reproductive material. This has the potential to affect the number of future generations of bull kelp.

Due to the dramatic reduction in the north coast bull kelp population and the lack of scientific data to explain whether commercial harvest does or does not have an impact on the current kelp population, the California Department of Fish and Wildlife (Department) has determined that a precautionary management approach is warranted and is recommending amendments to harvest regulations in the interest of maintaining the bull kelp population that remains. The Department recommends temporarily amending commercial harvest regulations to limit bull kelp take on the north coast. These harvest limits would sunset in three to five years, as determined by the **Fish and Game Commission (Commission)**, to allow for the drafting and potential adoption of a comprehensive, statewide Kelp Restoration and Management Plan (KRMP).

Additionally, the Department recommends regulations which apply to all commercial marine algae harvesters regardless of the species harvested, to update harvest logs, improve enforceability, and overhaul existing regulatory language to make corrections and better describe specific harvesting requirements. These regulations will not have a sunset date.

### Current commercial harvest regulations

California Code of Regulations (CCR), Title 14, Section 165 outlines the licensing and harvesting provisions for the commercial harvest of kelp and other aquatic plants. Relevant to this rulemaking, Section 165 includes the Kelp Harvesting License and associated fee, harvest royalty fee requirements, requirements for harvest reporting, geographical limitations for giant and bull kelp harvest, and prohibitions on the disturbance of certain aquatic plants.

Current regulations in CCR, Title 14, Section 165.5 define the procedures to lease administrative kelp beds for the exclusive right to harvest kelp. Section 165.5 also spatially describes the 87 administrative kelp beds under the following management categories: open, closed, leasable, and

lease only. The designations were designed for optimal harvest while ensuring sustainable management of the resource and the species that depend upon kelp.

### **Proposed temporary commercial harvest regulations**

The Department is recommending temporary prohibitions or limits to kelp harvest in four north coast counties: Sonoma, Mendocino, Humboldt, and Del Norte. The interim management measures are intended to protect the bull kelp resource while allowing for the Department, Tribes, industry, and interested stakeholders to collaboratively work towards developing the KRMP, a comprehensive management framework for giant and bull kelp.

The proposed regulations for Del Norte, Humboldt, Mendocino, and Sonoma counties would have a sunset date of three to five years, as determined by the Commission. The following summarize the Department-proposed options for Commission consideration:

Subsection 165(c)(9)(A):

Subsection 165(c)(9)(A) Option 1: Bull kelp harvest closure in Sonoma and Mendocino counties regardless of intended use of harvested kelp.

Subsection 165(c)(9)(A) Option 2: Annual overall bull kelp harvest quota from 1 pound to 2,000 pounds (1 ton) wet weight for Sonoma and Mendocino counties, combined, between January 1 – December 31. Harvest is limited for human consumption only.

Subsection 165(c)(9)(B): The proposed regulations include an annual overall bull kelp harvest not to exceed an annual quota of 4 tons (8,000 lbs.) wet weight for Del Norte and Humboldt counties combined.

To allow the Department to monitor the harvest and avoid exceeding the annual harvest quota, in addition to the currently required monthly harvest reports, subsection (c)(9)(C) lists options for weekly reporting via email of bull kelp harvest.

Subsection 165(c)(9)(C) Option 1: *If subsection (c)(9)(A) Option 1 is adopted by the Commission, weekly reporting of bull kelp harvest for Del Norte and Humboldt counties.*

Subsection 165(c)(9)(C) Option 2: *If subsection (c)(9)(A) Option 2 is adopted by the Commission, weekly reporting of bull kelp harvest in Del Norte, Humboldt, Mendocino, and Sonoma counties.*

Subsection 165.5(c) specifies an option for the Commission decision:

Option: Temporarily closes the three lease only administrative kelp beds 308, 309, and 312 in Mendocino, Humboldt, and Del Norte counties.

As an alternative to the temporary closure, the Department is also proposing an option for a temporary hiatus on accepting lease applications for the lease only administrative kelp beds. The hiatus would be an administrative action and as such, would not be written into regulation. The Department recommends that the temporary hiatus also have a sunset date of three to five years, to be determined by the Commission.

### **Additional proposed commercial harvest regulations**

Additional amendments are proposed that apply to all commercial algae harvesters and will not have a sunset date. Non-substantive and structural changes are proposed throughout sections 165 and

165.5 to improve specificity of language and correct typographical errors. Additional substantive proposed amendments include:

Modifications to the Kelp Harvesting Application form (DFW 658). The application form will be modified to include a Drying Permit option to comply with subdivision 6653.5(b) of the Fish and Game Code and renamed the Kelp Harvesting License and Drying Application. Further edits to DFW 658 will include standard language used on other licenses. **Additional minor edits are made to ensure consistency with the license sales process.**

The Kelp Harvester's Monthly Report will be consolidated from two separate forms, FG 113 (January 1, 1997), and FG 114 (Rev. 1/07), into a single double-sided form Commercial Kelp Harvester's Monthly Report DFW 113 (**REV. 01/06/22**). The new form will add reporting requirements including the number of individuals harvesting, separate weights for bull and giant kelp harvest, the central latitude/longitude coordinates of bull kelp harvest locations, and listing the business name and individual harvester name to distinguish between the business and business contact. In addition, the new form will have Department contact information so that harvesters **can reach Department** personnel with harvest report questions. Additional minor editorial changes are being made to remove redundancy, update Department information, and ensure consistency with regulatory text.

The regulation amendment will introduce the Commercial Edible Seaweed/Agarweed Aquatic Plant Harvester's Monthly Report as form DFW 113A (**NEW 01/06/22**). This will provide a uniform way to report information already stipulated in current regulations, as well as new information similar to that required in the new version of DFW 113 (**REV. 01/06/22**) including the central latitude/longitude coordinates of bull kelp harvest locations.

The Release of Property form DFW 1108 (**NEW 11/01/21**) is introduced in this regulation amendment. The Release of Property form ensures that any inadvertent excess bull kelp harvested in the counties with annual quotas is not wasted.

Finally, Title 14 Section 705.1 is proposed to be added. This section will incorporate by reference the Commercial Kelp Harvesting License and Drying Application **DFW 658 (REV. 01/06/22)**, the Commercial Kelp Harvesters Monthly Report DFW 113 (**REV. 01/06/22**), the Commercial Edible Seaweed/Agarweed Aquatic Plant Harvester's Monthly Report DFW 113A (**NEW 01/06/22**) and the Release of Property form DFW 1108 (**NEW 11/01/21**). The current Commercial Kelp Harvester License fee, which was established in Fish Game Code Section 6651 and is annually updated pursuant to Section 713 of the Fish and Game Code, will be listed in this section.

### **Benefits of the proposed regulations**

The goal of the regulation change is to protect and maintain the remaining bull kelp along the north coast to the maximum extent possible, and to support ongoing restoration efforts to improve the resource in future years. This will benefit the State of California by ensuring the **continuance of ecosystem** services, fisheries, cultural and ceremonial traditions, and diving and fishing tourism supported by bull kelp. In addition, the sunset date will provide time to draft and potentially adopt the KRMP that will provide a comprehensive management framework for giant and bull kelp.

Additional benefits of the proposed regulations include providing Drying Permit compliance with Fish and Game Code, providing harvesters with better defined and more precise reporting tools, and improving the Department's ability to manage this resource.

## **Evaluation of incompatibility with existing regulations**

The proposed regulations are neither inconsistent nor incompatible with existing state regulations. The Commission has reviewed its own regulations and finds that the proposed regulations are neither inconsistent nor incompatible with existing state regulations. The Commission has searched the California Code of Regulations and finds no other State agency regulations pertaining to the commercial take of kelp and other marine algae, lease of kelp beds for exclusive harvest of *Macrocystis* and *Nereocystis*, Kelp Harvester's license, and monthly harvest reports. Furthermore, the proposed addition to refer harvesters for human consumption to the California Department of Public Health will ensure harvesters are aware of the regulatory agency for food manufactured and processed food for human consumption.