

## 2019-20 Risk Assessments: Available Data

Last updated: February 4, 2020

### FACTOR: ENTANGLEMENTS

*Data provided by: Lauren Saez and Dan Lawson (NMFS)*

- There have been no confirmed entanglements with California commercial Dungeness crab gear during the 2019-20 fishing season.
- During the current calendar year (2020), there has been 1 confirmed Grey Whale entanglement and 1 unconfirmed Grey Whale entanglement.
  - Confirmed entanglement: Southbound Grey Whale entangled with monofilament gillnet. Reported January 20, 2020 off Oceanside/San Diego and confirmed via photo documentation.
  - Unconfirmed entanglement: Grey Whale trailing a single buoy. Reported January 12, 2020 off Oxnard.
- Late winter is typically a period with low entanglement reports, and most entanglement reports received during this period are for Grey Whales.

### FACTOR: MARINE LIFE CONCENTRATIONS

*Data provided by: Monterey Bay Whale Watch and Karin Forney*

#### Monterey Bay Whale Watch

- Humpback Whale numbers have continued to drop since late December, as most whales have migrated south to their breeding grounds (see Figure 1). The average number of Humpback Whales per half-day trip during the last two weeks is 1.5, with none observed most days.
- No Blue Whales have been observed since mid-December, consistent with their southward winter migration (see Figure 2).
- The number of Gray Whales migrating southward past Monterey has continued to increase as the population heads south to their breeding grounds in Baja California, Mexico (see Figure 3). During the past two weeks, the average number of Gray Whales seen per half-day trip is 20.6.

Monterey Bay Whale Watch: Humpback whales per 1/2-day trip  
(Nov 15, 2013 - Feb 1, 2020)

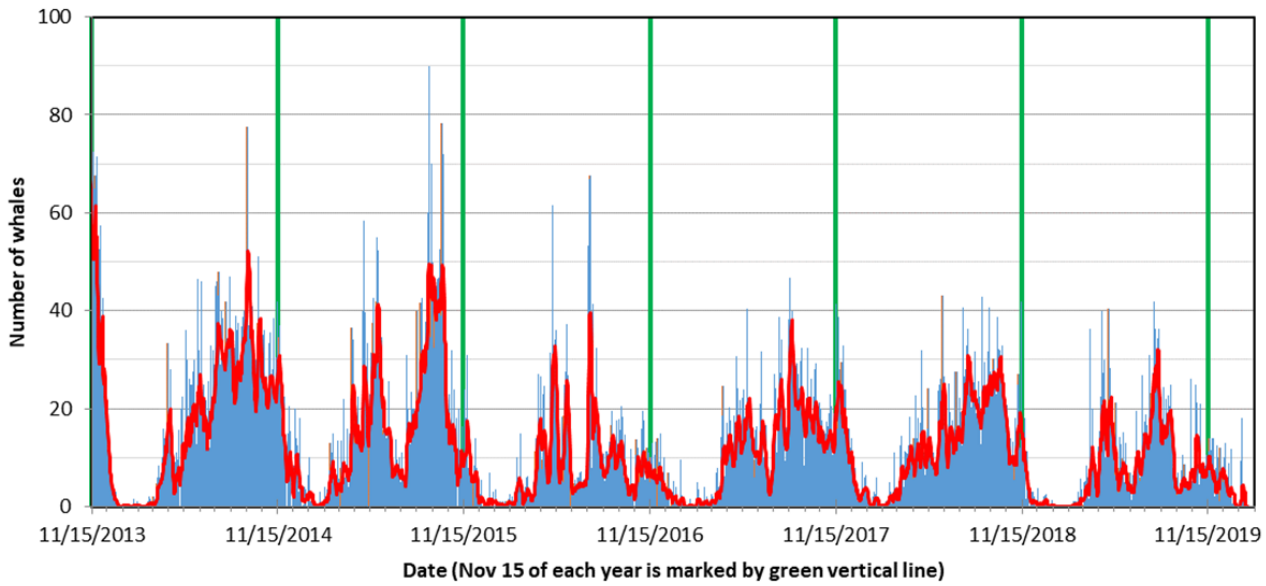


Figure 1. Number of Humpback Whale sightings from 15 November 2013 – 1 Feb 2020 for Monterey Bay Whale Watch. The y-axis is the number of whales; the thin blue bars are the average daily whale numbers, and the red line is a 7-day running average to make the pattern easier to see. A vertical line has been added at November 15 of each year for reference. Each tick mark is one month.

Monterey Bay Whale Watch: Blue whales per 1/2-day trip  
(Nov 15, 2013 - Feb 1, 2020)

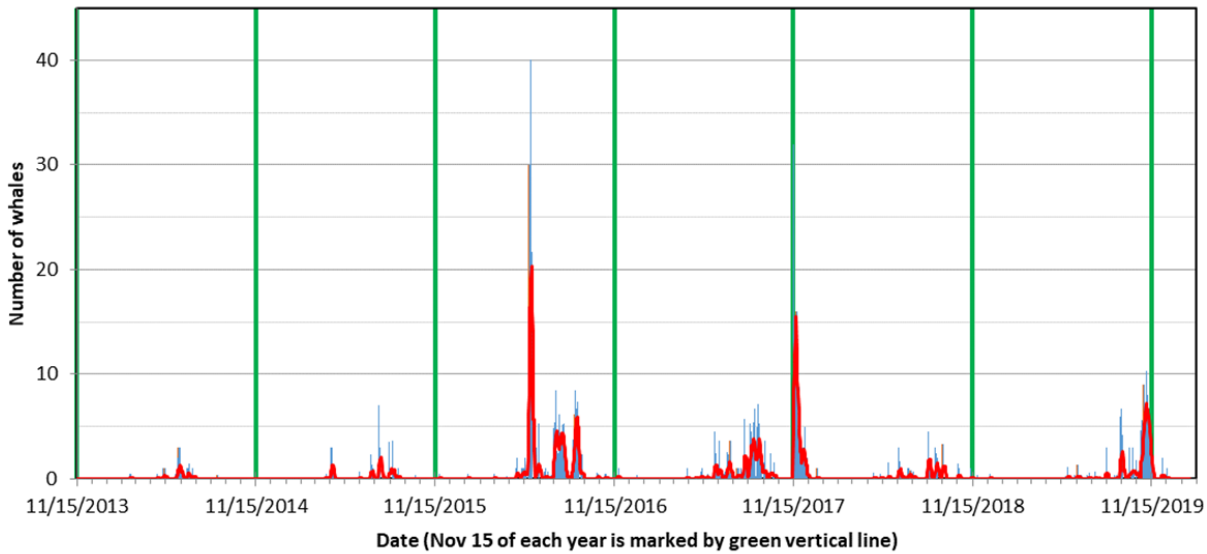


Figure 2. Number of Blue Whale sightings from 15 November 2013 – 1 Feb 2020 for Monterey Bay Whale Watch. The y-axis is the number of whales; the thin blue bars are the average daily whale numbers, and the red line is a 7-day running average to make the pattern easier to see. A vertical line has been added at November 15 of each year for reference. Each tick mark is one month.

Monterey Bay Whale Watch: Gray whales per 1/2-day trip  
(Nov 15, 2013 - Feb 1, 2020)

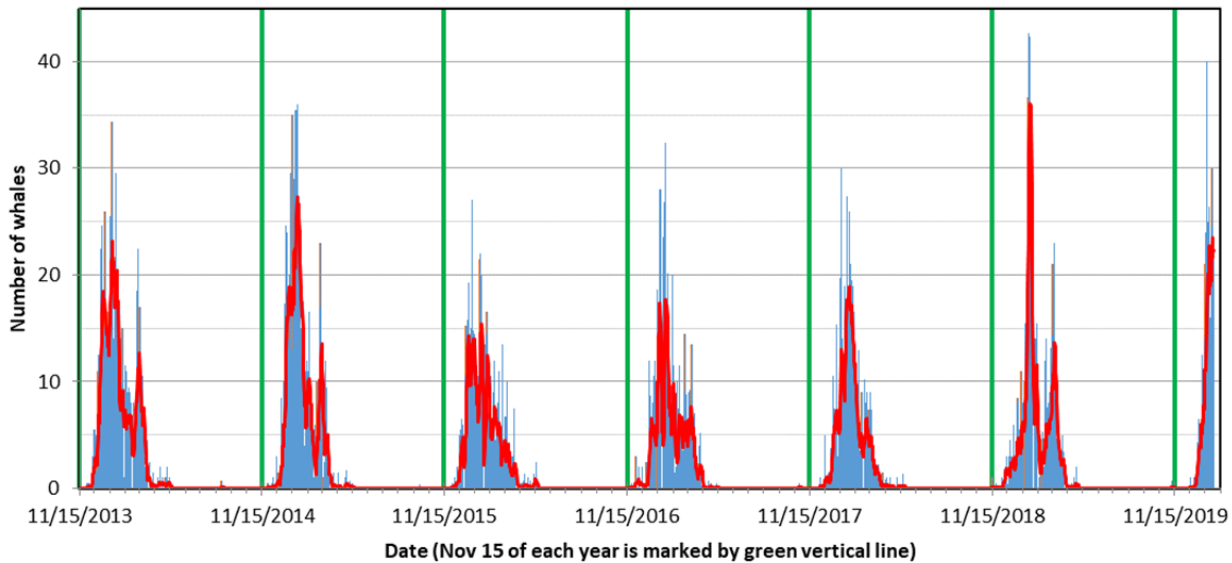


Figure 3. Number of Grey Whale sightings from 15 November 2013 – 1 Feb 2020 for Monterey Bay Whale Watch. The y-axis is the number of whales; the thin blue bars are the average daily whale numbers, and the red line is a 7-day running average to make the pattern easier to see. A vertical line has been added at November 15 of each year for reference. Each tick mark is one month.

## FACTOR: OCEAN AND FORAGE CONDITIONS

Data provided by: Jarrod Santora and Isaac Schroeder (NMFS)

- The North Pacific High is at the highest levels since 2013. High productivity/cool upwelling conditions throughout California waters over the next few months are likely. Continued monitoring in February and March is still needed.
- ENSO and the Oceanic Niño Index are neutral and forecasted to remain neutral and upwelling time series indicate average upwelling.

## FACTOR: FISHING DYNAMICS

Data provided by: California Department of Fish and Wildlife

### Marine Landings Data System

- As of February 4, there have been 3,616 landings of Dungeness crab by 423 vessels during the 2019-20 season.
- CDFW MacroBlocks (aggregated CDFW Fishing Blocks used to report catch location) are shown in Figure 4.

- Total landings to date: 10,510,530 lbs (see Figure 5) and \$34,405,652 in Ex-Vessel Value. Average price to date is \$3.45.
- Active vessels (compared to issued permits) for the 2019-20 season are as follows:
  - Tier 1 = 51/58 vessels
  - Tier 2 = 49/53 vessels
  - Tier 3 = 49/57 vessels
  - Tier 4 = 41/55 vessels
  - Tier 5 = 43/55 vessels
  - Tier 6 = 111/164 vessels
  - Tier 7 = 60/112 vessels
- Recent landings suggest ~ 80,000 traps are being fished statewide (see Figure 6) and the majority of harvest is occurring in MacroBlocks 1038, 1041 and 1042 (see Figures 6-7).

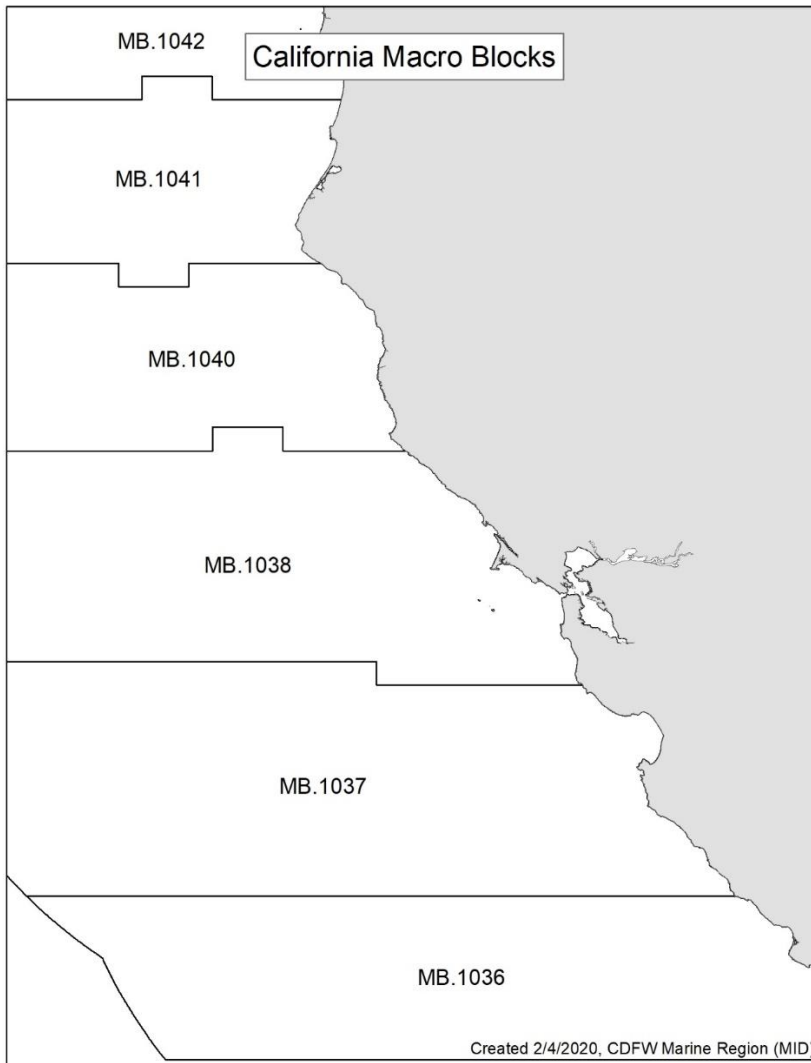


Figure 4. Map showing spatial extent of MacroBlocks used for summarizing landings analysis.

Volume of Landings (Pounds), by Week and Port Complex, 2019-20 Season

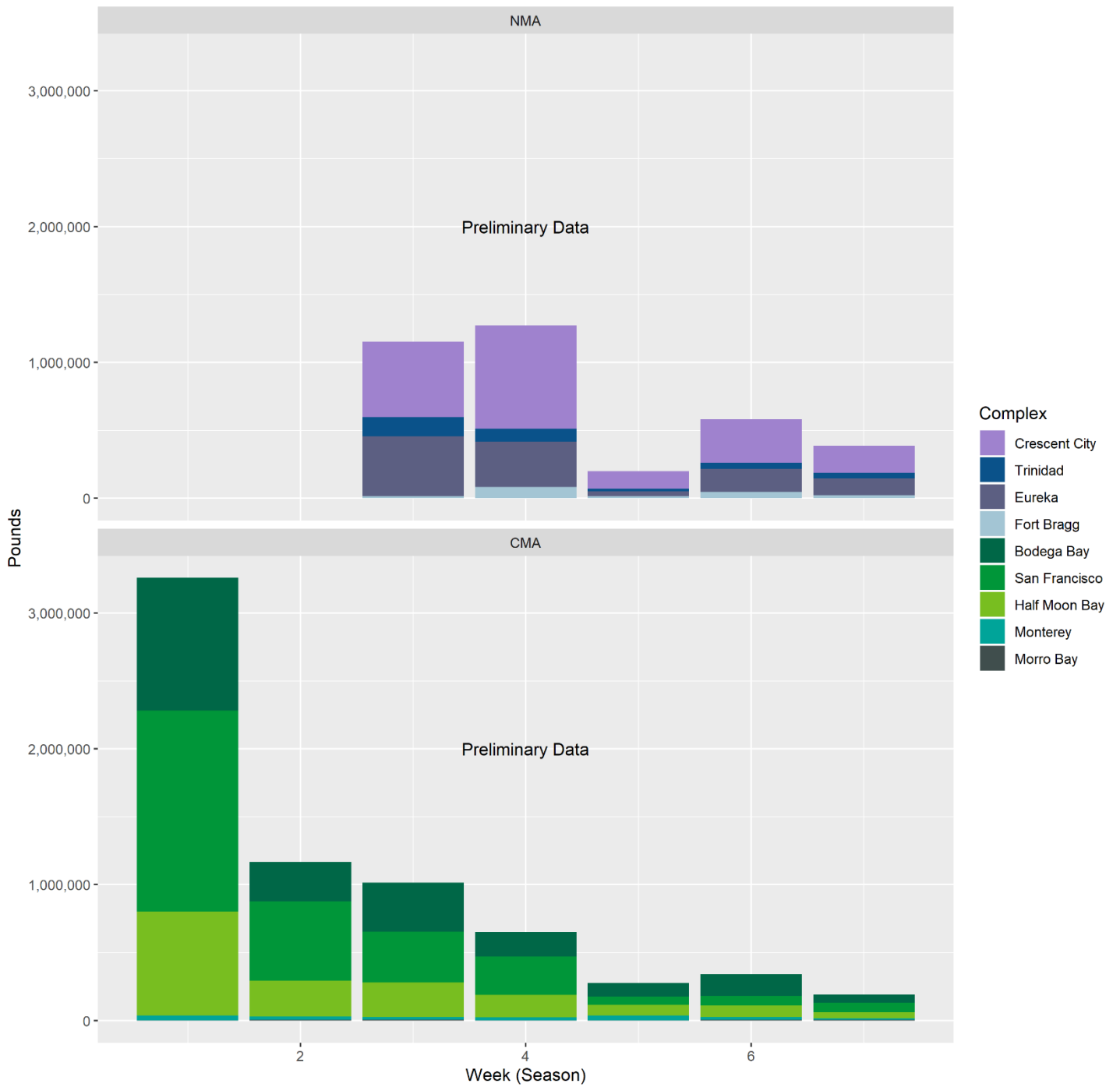


Figure 5. Dungeness crab landings (pounds) by week and port complex. Accessed from CDFW's Marine Landings Data System on February 4, 2020. All data is preliminary and subject to change.

Volume of Landings (Pounds), by Week and MacroBlock, 2019-20 Season

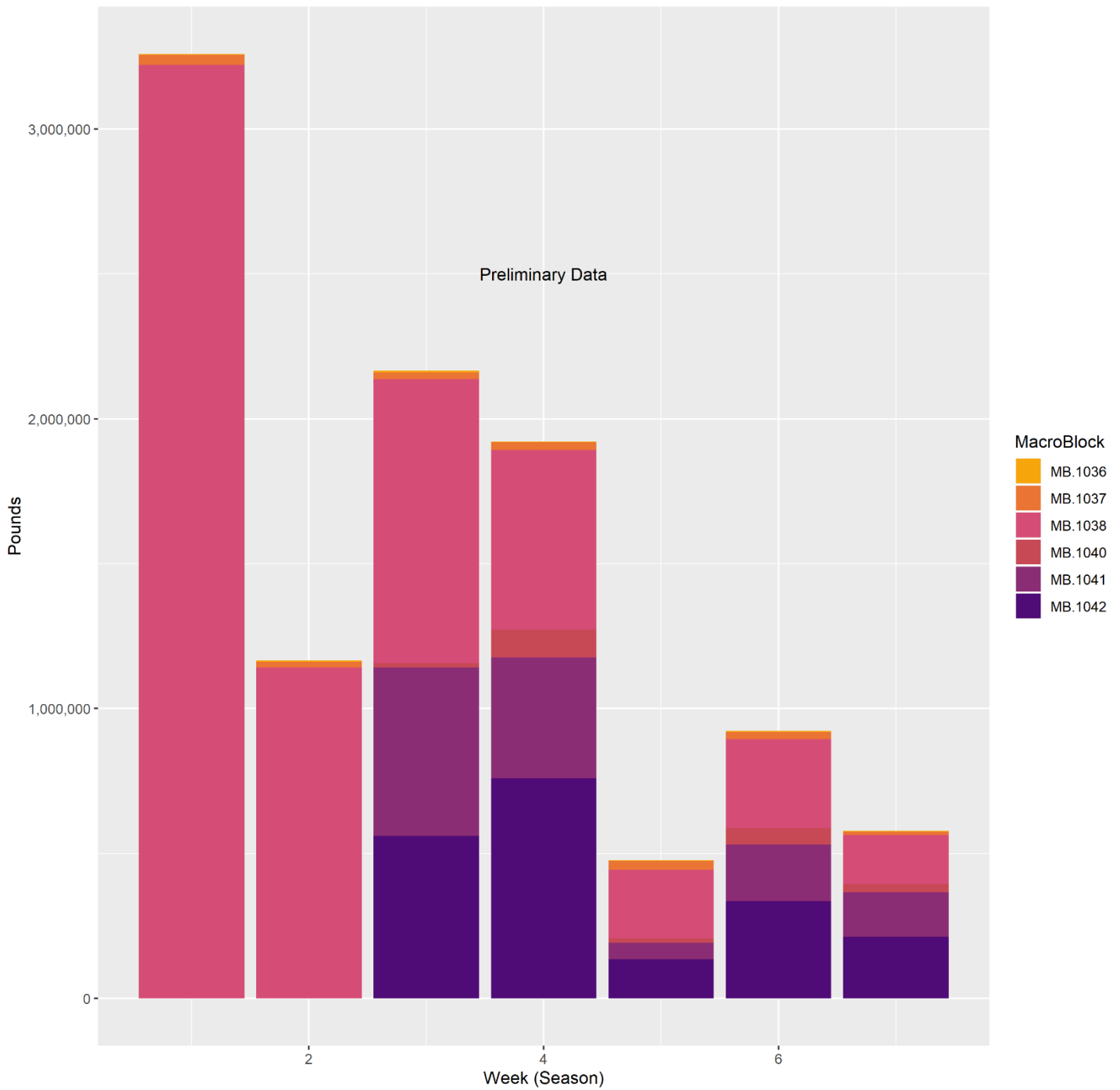


Figure 6. Dungeness crab landings (pounds) by week and MacroBlock. Accessed from CDFW's Marine Landings Data System on February 4, 2020. All data is preliminary and subject to change.

Maximum Potential Traps, by Week and MacroBlock, 2019-20 Season

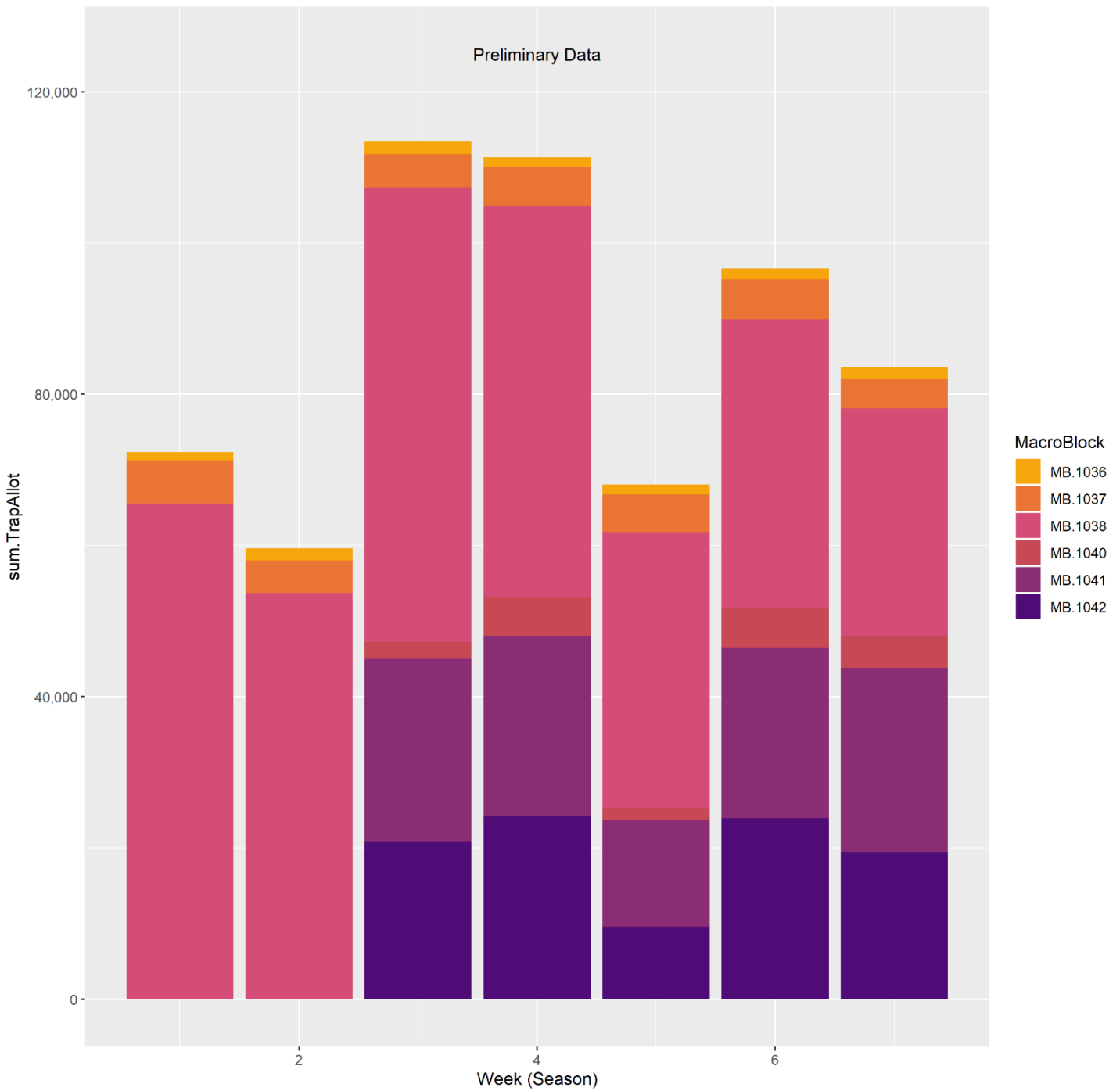


Figure 7. Maximum potential traps by week and MacroBlock, based on landings data and Dungeness Crab Vessel Permit tier information. Accessed from CDFW's Marine Landings Data System on February 4, 2020 and CDFW's Automatic License Data System on November 18, 2019. All data is preliminary and subject to change.