

Appendix E: Gear Loss

This appendix contains additional information on how CDFW estimates gear loss in the California Commercial Dungeness crab fishery, including an explanation of gear loss estimation both before and after the implementation of Cal. Code Regs., Tit. 14 § 132.8.

G.1 Buoy Tag Replacement:

Prior to implementation of Cal. Code Regs., Tit. 14 § 132.8, CDFW had no specific mechanism to assess gear loss, however requests for replacement buoy tags allow CDFW to estimate gear loss for the 2013-14 to 2018-19 fishing seasons. Replacement tag requests can be submitted both in-season and between the two seasons of each biennial period and are assumed to reflect gear loss, other than instances where the request form included sufficient details to determine that only tags (and no gear) were lost or that the loss occurred on land rather than at sea. Inferred gear loss is contextualized by calculating maximum potential traps, which reflects the cumulative total trap allotments for all vessels participating in the fishery as determined by landing receipts or (beginning with the 2020-21 season) both landing receipts and bi-weekly reports. Dividing replacement tag requests by maximum potential traps estimates the percentage of deployed gear which was lost each season. While there are a variety of limitations with this approach (e.g., lost tags do not necessarily equate to lost traps at sea), it is a particularly inadequate mechanism for assessing lost gear for the second season of each biennial period, since each permit holder will receive a complete set of tags prior to the start of the next biennial period and therefore would not submit a between season replacement request.

G.2 Biweekly Reports:

Cal. Code Regs., Tit. 14 § 132.8 requires fishers to submit a bi-weekly report detailing the number of traps lost and the Fishing Zone in which they were lost. Beginning in the 2020-21 season, gear loss has been assessed by comparing these lost trap numbers against maximum potential traps.

For the 2020-21 season, a total of 358 permits operated within the Plan Area. Of these, 324 permits provided at least one bi-weekly report ($324/358 = 91\%$ compliance) and 34 permits did not submit any reports. After correcting for non-compliance, CDFW estimates a total of 105,327 traps were deployed within the Plan Area that season. 296 permits provided a lost trap number ($296/358 = 83\%$ compliance), and 62 permits did not. After correcting for non-compliance, CDFW estimates a total of 1,772 traps were lost within the Plan Area that season.

For the 2021-22 season, a total of 374 permits operated within the Plan Area. Of these, 363 permits provided at least one bi-weekly report ($363/374 = 97\%$ compliance) and 11 permits did not submit any reports. After correcting for non-compliance, CDFW estimates a total of 112,540 traps were deployed within the Plan Area that season. 320 permits provided a lost trap number ($320/374 = 86\%$ compliance), and 54 permits did

not. After correcting for non-compliance, CDFW estimates a total of 3,923 traps were lost within the Plan Area that season.

For the 2022-23 season, a total of 359 permits operated within the Plan Area. Of these, 348 permits provided at least one bi-weekly report ($344/359 = 97\%$ compliance) and 15 permits did not submit any reports. After correcting for non-compliance, CDFW estimates that a total of 106,006 traps were deployed within the Plan Area that season. 278 permits provided a lost trap number ($278/359 = 77\%$ compliance), and 54 permits did not. After correcting for non-compliance, CDFW estimates a total of 3,438 traps were lost within the Plan Area that season.

Table G-1. Estimates of gear deployment and loss for the 2013-14 through 2022-23 commercial Dungeness crab seasons. Percent loss values for the 2013-14 through 2018-19 fishing seasons are calculated by dividing *Tag Replacement Requests* by *Maximum Potential Traps*, as described above. Asterisks indicate years when only the In Season process was in effect. Percent loss values for the 2019-20 through 2022-23 fishing seasons are calculated by dividing corrected values of *Bi-Weekly Lost Traps* by *Maximum Reported Traps*, as described above.

Season	Tag Replacement Requests	Maximum Potential Traps	Bi-Weekly Lost Traps	Maximum Reported Traps	% Loss
2013-14	10,207	148,325	NA	NA	6.9%
2014-15	1,280*	149,250	NA	NA	0.9%*
2015-16	5,432	134,000	NA	NA	4.1%
2016-17	1,599*	150,375	NA	NA	1.1%*
2017-18	8,176	147,900	NA	NA	5.5%
2018-19	671*	142,375	NA	NA	0.5%*
2019-20	Not tabulated	139,450	NA	NA	Not tabulated
2020-21	Not tabulated	117,250	1,772	105,327	1.7%
2021-22	Not tabulated	123,100	3,923	112,540	3.5%
2022-23	Not tabulated	120,600	3,438	106,006	3.2%