
D3 – CREW DATA COLLECTION DISCUSSION PAPER



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INTRODUCTION – BRIEF HISTORY OF ECONOMIC DATA REPORT CHANGES

Discussion Paper Requested - April 2018

The Council requests that NMFS prepare a discussion paper that describes the Economic Data Report requirements for all programs, explains how the data are used, and provides estimates of the costs of complying with the EDR requirements.

May/November 2019 – SSPT received a presentation on the EDR Discussion

Paper, highlighted issues with data coverage and consistency, suggested a day-long workshop and recommended conceptual changes.

April 2019 – EDR Amendments Discussion Paper Reviewed by SSC, AP and Council

Motion to change EDRs with Purpose and Need to improve the usability, efficiency, and consistency of the data collection programs and to minimize cost to industry and the Federal government

February 2020 EDR – Initial Review of Economic Data Report regulatory changes by SSC, AP and Council

Added alternative to remove EDR requirements



INTRODUCTION - BRIEF HISTORY OF ECONOMIC DATA REPORT CHANGES

August and November
2020 - EDR Stakeholder
Workshops

April 2021 – SSPT and
Workshops report to SSC,
AP and Council

March 2021- SSPT Discussion of EDR
Revisions

Included mapping exercise of all EDRs,
reviewed national EDR efforts and
stakeholder workshop summary

Recommended comprehensive data
collection for all fleets based on Council
needs with emphasis on crew and/or
template for rationalized fisheries data
collection

February 2022 – Final
Action taken on EDR
Amendments

Removed GOA Trawl EDR
requirement and initiated
Data Collection Discussion
Paper



INTRODUCTION – CURRENT ACTION

- EDR Amendments Motion in February 2022
 - GOA Trawl EDR requirement removed
 - Separate motion for Data Collection discussion paper

The Council tasks Council staff, with support from AKFIN staff, to develop a discussion paper identifying a few (e.g., 2-4) economic data components, including crew data, that 1) are not currently collected across all sectors but that could improve FMP and regulatory impact analyses if collected from all sectors, and/or 2) should continue to be collected from catch share programs and could inform potential revisions to current EDR requirements. The paper should also evaluate the appropriate data collection mechanism and frequency, which could include surveys, annual reports, or other tools that can collect consistent, useable data in a clear format that minimizes submittal burden and collection cost.

- AKFIN - The Alaska Fisheries Information Network (AKFIN) is a collaborative effort among various fisheries management agencies in the state of Alaska. It serves as a centralized information system that supports the collection, management, and analysis of data related to commercial fisheries in Alaska.
- AKFIN was initiated in part by Council Staff in the early 90s and works in collaboration with the Council Staff to improve data uses and streams throughout the Council process. A significant amount of data in Council documents is provided by AKFIN which may enable AKFIN to provide insights into analytical requests.



INTRODUCTION – CURRENT ACTION HISTORY

October 2022 – Universal Data Collection Components Paper Reviewed by SSC, AP and Council

Highlighted four data components; Crew Licenses, Crew Compensation, Lease Costs and Fuel/Lube Costs

June 2023 – Crew Data Collection Paper Review by SSC with request from the Council

February 2023 – Universal Data Collection Paper Reviewed by Council and AP – Focused on crew data collection and ability of NMFS to collect leasing data

Motion to have SSC review mechanism and value of crew data



INTRODUCTION

- Motion in February 2023 after the Universal Data Collection Discussion Paper Presentation

The Council is considering collecting a limited amount of data from vessels in federal fisheries relative to crew licenses/residency, crew compensation, and number of crew positions to support economic and community impact analyses required for Council actions and program reviews. The proposed collection mechanism is intended to remain simple and provide useable data by fishery across all commercial sectors, while minimizing reporting burden and costs to fisheries participants and NMFS. The Council requests the SSC review the staff discussion paper on this issue and provide input to the Council on the proposed mechanism, value of the crew data to be collected, and any additional recommendations that would aid in a simple data collection process.



DATA COMPONENTS IDENTIFIED

- Crew Licenses
 - Currently used in Council Analysis when available to show Community participation
 - Collected in A80, GOA Trawl (2021 last year) and Crab EDRs
 - Approximately 5,000-20,000 crew licenses used in federally managed fisheries
 - Difficult to estimate due to crew movement between vessels
- Crew Positions
 - Currently collected by eLandings, Production Reports and FMA however quality can be improved to show hired captains, support crew and/or processing crew
 - Hired captains are high value positions that may be prevalent in some fisheries and not others
 - Approximately 8,655 crew positions in 2021
- Crew Compensation
 - \$563M 2021 estimate of total cost of crew in the North Pacific for federally managed vessels (based on A80 EDR)



CREW DATA USES

- Improve Community Impacts Section of analytical documents
 - Crew data components would connect fishing activity to communities to help analysts understand the status quo and predict impacts
 - Direct tables showing crew residence for impacted fishery – used when available
 - Currently relies solely on vessel owner’s city of residence when crew is unavailable
 - Communities with active crewmembers and without vessel owners are not currently accounted for
 - Vessel Owner Residence, Vessel Homeport and deliveries to communities are currently the only data components to analyze community interactions
 - Vessel Homeport has historically not been a reliable indicator of community interaction
 - Vessel Owner Residence also has shortcomings
 - Seasonal Alaska Residents not accounted for
 - Vessel operations in a community different from ownership not accounted for
 - Crew adds a new component that may be combined with Vessel Homeport and Vessel Owner Residence to create a value added variable
 - Example: Seattle ownership, Kodiak homeport and Kodiak crew



Community	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Annual Average 2006-2021 (number)	Annual Average 2006-2021 (percent)	Unique Vessels 2006-2021 (number)
Homer	3	2	3	4	5	4	5	5	4	4	4	3	3	3	3	3	3.6	5.48%	7
Seldovia	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.42%	1
Homer/Seldovia	4	3	4	4	6	5	6	6	5	5	5	4	4	4	4	4	4.6	6.90%	8
Kodiak	10	8	10	11	9	8	8	8	8	8	8	8	7	7	7	7	8.3	12.48%	18
Anchorage	5	7	9	8	8	9	9	8	8	9	7	7	6	6	6	10	7.6	11.53%	17
Unalaska	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.09%	1
Ketchikan	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.19%	1
Wasilla	0	0	0	1	0	0	0	0	0	1	1	1	1	1	1	1	0.5	0.76%	2
Other AK	6	8	10	9	8	9	9	8	8	10	8	8	7	7	7	11	8.3	12.57%	21
Alaska	20	19	24	24	23	22	23	22	21	23	21	20	18	18	18	22	21.1	31.95%	44
Seattle	39	34	37	38	34	35	36	34	33	33	35	29	31	30	31	27	33.5	50.66%	64
Other WA	4	2	4	3	2	3	3	4	4	4	4	4	4	4	2	3	3.4	5.10%	11
Washington	43	36	41	41	36	38	39	38	37	37	39	33	35	34	33	30	36.9	55.77%	72
Oregon	9	8	8	8	6	6	6	7	8	7	6	7	7	7	6	6	7.0	10.59%	13
Other States	2	1	1	1	1	1	1	1	2	1	1	1	1	0	1	2	1.1	1.70%	4
Oregon/Other States	11	9	9	9	7	7	7	8	10	8	7	8	8	7	7	8	8.1	12.29%	17
Grand Total	74	64	74	74	66	67	69	68	68	68	67	61	61	59	58	60	66.1	100.00%	111

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive_FT

EXAMPLE TABLE. VESSELS HARVESTING BERING SEA SNOW CRAB BY COMMUNITY OF VESSEL HISTORIC OWNERSHIP ADDRESS, 2006-2021 (NUMBER OF VESSELS)



Community	2012	2013	2014	2015	2016	2017	2018	2019	2020	Annual	Annual
										Average 2012-2020 (number)	Average 2012-2021 (percent)
Akutan	1	2	2	2	3	0	1	0	0	1.2	0.18%
Anchorage/Palmer/Wasilla	45	49	46	55	41	35	37	44	33	42.8	6.41%
Dutch Harbor/Unalaska	23	22	22	28	20	12	18	19	3	18.6	2.78%
Homer/Seldovia	37	29	31	39	27	22	24	26	18	28.1	4.21%
King Cove	4	2	4	8	9	6	9	6	3	5.7	0.85%
Kodiak	70	70	76	83	60	62	54	50	24	61.0	9.14%
Other Ak	52	42	45	50	39	40	32	35	151	54.0	8.09%
Saint Paul	0	0	3	2	1	1	2	1	0	1.1	0.17%
Alaska	232	216	229	267	200	178	177	181	232	211.2	31.64%
Seattle	57	49	47	185	43	145	121	107	48	89.1	13.35%
Other Washington	224	214	208	120	219	84	92	88	96	149.4	22.39%
Washington	281	263	255	305	262	229	213	195	144	238.6	35.74%
Oregon	63	61	65	80	71	52	53	55	21	57.9	8.67%
Other States	143	136	134	196	201	148	139	167	175	159.9	23.95%
Grand Total	719	676	683	848	734	607	582	598	572	667.6	100.00%

Source: Economic Data Reports, data compiled by AKFIN

EXAMPLE TABLE. CREW LICENSES HARVESTING BERING SEA SNOW CRAB BY COMMUNITY ,
2012-2020 (CREW LICENSE)



CREW DATA USES

- Improve other analytical tools
 - ACEPO
 - Economic SAFE
 - Fleet Profiles Community Profiles
- Potential research initiatives
 - How rationalized fisheries affect crew compensation?
 - How community processors affect crew participation?
- Crew compensation potentially included in Council documents



DATA COLLECTION MECHANISM – ANNUAL SURVEY

- Annual Survey, managed by PSMFC
 - Form made available electronically
 - PSMFC acts as the independent third-party data collection agent (DCA) for current EDR
 - Able to leverage EDR efforts
 - Internal Audit, Staff, Database
 - One time cost of \$23,000 to build forms and data spaces
 - Re-occurring cost of \$113,000 for PSMFC staff, mailings and data maintenance
 - \$102 cost per survey
 - Potential funding through NMFS Data Collection Grant
 - Costs of EDR collection has decreased over time and would be below 2007-2021 nominal average of \$355,000 included new Crew Data Collection (\$326,000)
 - Removal of GOA Trawl EDR (\$73,000)
 - Addition of Crew Data Collection (\$113,000)



HISTORICAL EDR COSTS

Costs of the EDR Programs

Year	Crab ¹	A80	AFA ²	GOA Trawl ³	Total EDR cost	EDR cost in 2021 dollars
2005	\$150,000				\$150,000	\$203,342
2006	\$150,000				\$150,000	\$197,321
2007	\$259,938				\$259,938	\$332,982
2008	\$338,276				\$338,276	\$425,216
2009	\$314,303				\$314,303	\$392,023
2010	\$352,508				\$352,508	\$434,598
2011	\$323,588				\$323,588	\$390,800
2012	\$373,316				\$373,316	\$442,342
2013	\$318,278				\$318,278	\$370,559
2014	\$342,703				\$342,703	\$391,628
2015	\$269,583			\$53,771	\$323,354	\$365,743
2016	\$345,509	\$88,254	\$62,114	\$73,221	\$569,098	\$636,765
2017	\$180,168	\$91,482	\$66,929	\$91,879	\$430,458	\$472,567
2018	\$202,012	\$92,462	\$40,631	\$61,765	\$396,870	\$426,220
2019	\$180,224	\$87,644	\$56,989	\$57,486	\$382,343	\$403,357
2020	\$91,620	\$72,976	\$48,194	\$107,459	\$320,250	\$333,968
2021	\$72,927	\$85,123	\$52,735	\$73,240	\$284,026	\$284,026

Source: EDR Amendment Final Action (February 2022)

¹ The year listed in this table reflects the first year of the crab fishing season.

² Only includes costs associated with the inshore sector



DATA COLLECTION MECHANISM – ANNUAL SURVEY

- Cost to industry estimated at \$265,000
 - \$75 per hour to complete survey
 - 6 hours per catcher processor
 - 3 hours per catcher vessel
 - \$239 average industry cost per survey
- Difficult to estimate due to nature of the survey
 - Small vessels may have very limited burden with few crew
- Total cost to industry would increase from \$425,000 to \$625,000



ANNUAL SURVEY SCOPE

- 1,109 vessels in 2021 had a qualified landing in a federal or jointly managed fishery
 - Excludes charter halibut vessels
 - 1,204 vessels
 - Not required to have crew licenses
 - 1,050 vessels active in federal fishery
 - 775 vessels participated in federal waters
 - 343 vessels were less than 40' in length
- EDR vessels may be excluded
 - 87 vessels submit duplicative EDRs that contain crew information
 - 21 Amendment 80 vessels
 - 66 Crab Rationalization vessels
 - 98 vessels submit EDRs that do not contain crew information
 - Amendment 91/Chinook EDR for AFA vessels



ANNUAL SURVEY SCOPE

Vessels Active by Fleet (2021)

Fleet	Number of Vessels	Duplicative EDR Submission	Management
Amendment 80	21	Y	Federal
AFA Catcher Processor	15	N	Federal
AFA CV Mothership	14	N	Federal
AFA CV Shoresidie	75	N	Federal
Halibut IFQ	744	N	Federal
Halibut CDQ	28	N	Joint
Halibut Charter	1204	N	Joint
Sablefish IFQ	304	N	Federal
Freezer Longliner	20	N	Federal
Pot	98	N	Federal
Central Gulf Trawl	53	N	Federal
Western Gulf Trawl	35	N	Federal
Longline CV	39	N	Federal
Jig	64	N	Federal
Crab Rationalization	66	Y	Joint
Scallop	2	N	Joint



DATA COLLECTION MECHANISM – EXISTING INFRASTRUCTURE, ELANDINGS

- eLandings, managed by ADF&G
 - Ideal instance to collect crew participation data
 - Need to implement scannable crew cards or auto-population with vessel to crew linkages
 - Would not collect compensation or crew position type
 - eLandings operated by State of Alaska for multiple non-federal fisheries
 - Require all crew licenses to be updated even if crew did not participate in Federal Fishery
 - ADF&G issues 16,906 crew licenses in 2022
 - 26,077 in 2014, highest in past 10 years
 - ADF&G cost of durable or scannable crew cards could be substantially higher than annual data collection
 - Industry cost of reporting is likely higher than the 3-6 hours for an annual survey



DATA COLLECTION MECHANISM – EXISTING INFRASTRUCTURE, LOGBOOKS

- Logbooks or eLogbooks, managed by NMFS
 - Not reported for all sectors
 - <60 foot vessels not required to submit logbooks
 - CP and motherships only required to submit eLogbooks
 - Upgrade to eLogbooks needed to be a useable source
 - Crew compensation not valuable at logbook level due to end of season adjustments
 - Monthly subscription for eLogbooks would be approximately \$240,000 (\$60 per month with 4,000 months of federal activity)
 - Hardware would be approximately \$2M (\$2,000 per vessel with 1,000 vessels)
 - Industry cost of reporting likely higher than the 3-6 hours required for an annual survey



DATA COLLECTION MECHANISM – EXISTING INFRASTRUCTURE, FFP APPLICATIONS

- FFP Applications, managed by RAM
 - Submitted every three years
 - May be used to collect and then extrapolate crew compensation
 - Not useful for crew licenses
 - RAM likely doesn't have the capacity to audit crew compensation similar to lease costs



POSSIBLE SOLUTIONS

- In order to collect the data components identified (crew licenses, crew compensation and crew positions) currently an annual survey may be the most cost effective mechanism
 - Current EDR requirements need to be considered
 - Vessel lengths, federal waters or fishery participation may be used to change the scope of the collection
 - Charter vessels currently excluded

