



EasyGrantsID: 62040

National Fish and Wildlife Foundation – Electronic Monitoring and Reporting Grant Program
2018, Full Proposal

Title: Implementing EM in the Western Gulf of Alaska Trawl Catcher Boat Fleet and Associated
Tenders

Organization: Aleutians East Borough

Grant Information

Title of Project

Implementing EM in the Western Gulf of Alaska Trawl Catcher Boat Fleet and Associated Tenders

Total Amount Requested	\$ 433,772.62
Matching Contributions Proposed	\$765,500.00
Proposed Grant Period	11/01/ 2018 - 12/31/ 2019

Project Description

This project will catalyze the adoption of electronic monitoring (EM) for the Western Gulf of Alaska pollock trawl fleet and associated tenders as prioritized in the Alaska Region’s Electronic Technology Implementation Plan in 2015, and reaffirmed by the North Pacific Fishery Management Council (NPFMC) in June 2018. Adoption of EM in this fishery will increase monitoring and provide improved bycatch reporting to support fisheries conservation and management. Funds will support skipper engagement, implementation plan development, installation of EM systems on catch vessels and tender vessels, on-going technical support, data review, and the development of tools to increase the efficiency of the review process.

Project Abstract

Accurate discard data is essential for fishery managers to administer catch limits, including a “hard cap” for salmon in the Western Gulf of Alaska (WGOA). Trawlers that fish in the WGOA are some of the smallest in Alaska, fishing with small crews in remote areas. Under the current monitoring plan, under 60’ pollock trawlers are monitored by observers on selected trips. Industry, NMFS, and the NPFMC are interested in improved monitoring of this fishery due to concerns over salmon accounting, observer safety, and the cost of onboard observers. In June 2018 the NPFMC identified EM for compliance monitoring in the WGOA pollock fishery as one of their top five priorities. This project will place EM systems on catcher boats and tenders so that unsorted catch can be tracked from the net to the shoreside plant where full counts of discards and biological samples will be taken. Catch handling protocols will be defined with NMFS to ensure quality data capture. Data will be collected on 100% of the trips, and system performance will be tracked. Review protocols will be established, and software tools tested to decrease review time. Data transmission tools will provide early warning of system issues, increasing data quality and potentially lessening the cost of field services. Findings from this initial trial will be shared with all stakeholders, and will support further development of EM implementation in Gulf of Alaska fisheries.

Organization and Primary Contact Information

Organization	Aleutians East Borough
Organization Type	State or Local Government
City, State, Country	Anchorage, Alaska, North America - United States

Region (if international)

Primary Contact	Mr. Ernie Weiss
Position/Title	Natural Resources Director



NFWF

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Organization: Aleutians East Borough

Phone and E-mail

907-274-7557 x ; eweiss@aeboro.org

Additional Contacts

Role	Name



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Project Location Information

Project Location Description	NMFS reporting Area 610: the waters of the Western Gulf of Alaska, south of the Alaska Peninsula and the Aleutian Islands between 170° 00' W long and 159° 00' W long extending to the southern limits of the US EEZ.
Project Country(ies)	North America - United States
Project State(s)	Alaska
Project Congressional District(s)	District 1 (AK)

Permits and Approvals

Permits/Approvals Description:

Permits/Approvals Status:

Permits/Approvals Agency-Contact Person:

Permits/Approvals Submittal-Approval Date:



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Activities and Outcomes

Funding Strategy: Capacity, Outreach, Incentives

Metric: FIF - Outreach/Education/Technical Assistance - # gov't entities participating

Required: Recommended

Description: Number of specific government entities targeted or engaged. Describe the entities engaged in the Notes section.

Starting Value 0.00 # gov't entities participating
Target value 4.00 # gov't entities participating

Note: The project will work with NMFS, the NPFMC, the NPFMC's EM work group, and the NPFMC's observer advisory committee to develop an EM implementation plan for the WGOA trawl fleet and associated tenders.

Funding Strategy: Planning, Research, Monitoring

Metric: FIF - Management or Governance Planning - # plans developed

Required: Optional

Description: Number of plans developed with input from multiple stakeholders and that identify monitoring objectives. Examples of types of plans may include an implementation plan, operations plan, data management plan, software design document, etc.

Starting Value 0.00 # plans developed
Target value 1.00 # plans developed

Note: The project will help develop an EM implementation plan for the WGOA trawl fleet for approval by NMFS, the NPFMC's EM work group, and the NPFMC.

Funding Strategy: Planning, Research, Monitoring

Metric: FIF - Monitoring - # of trips monitored

Required: Optional

Description: Number of fishing trips monitored using EM/ER technology over the grant period. In the notes, please specify total number of trips taken.

Starting Value 50.00 # of trips monitored
Target value 200.00 # of trips monitored



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Note: We do not know how many trips of the WGOA pollock trawl fleet were monitored in 2017, but we know the goal was approximately 25% of trips. This proposal aims to monitor 100% of trips.

Funding Strategy: Planning, Research, Monitoring

Metric: FIF - Monitoring - # vessels in monitoring program

Required: Optional

Description: Number of vessels directly engaged/participating in monitoring program(s)

Starting Value	0.00 # vessels in monitoring program
Target value	16.00 # vessels in monitoring program

Note: Currently, no vessels in the WGOA use EM. This project aims to equip 14 vessels and 2 tender vessels with EM systems.



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I. PERSONNEL \$0.00

Staff Name	Position	Annual Salary	Project Hours	Hourly Rate	LOE (%)	Project Salary	% Fringe	\$ Fringe	Total Personnel
Totals						\$0.00		\$0.00	\$0.00

II. TRAVEL \$2,500.00

Domestic Airfare – Per Flight

Purpose/Destination	Unit Cost	Quantity	Total Cost
Seattle	\$800.00	2	\$1,600.00
SubTotal			\$1,600.00

International Airfare – Per Flight

Purpose/Destination	Unit Cost	Quantity	Total Cost
SubTotal			\$0.00

Train – Per Ticket

Purpose/Destination	Unit Cost	Quantity	Total Cost
SubTotal			\$0.00



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Rental Car – Per Day

Purpose/Destination	Days/Duration	Unit Cost	Quantity	Total Cost
SubTotal				\$0.00

Taxis – Per Trip

Purpose/Destination	Unit Cost	Quantity	Total Cost
SubTotal			\$0.00

Mileage – Per Mile

Purpose/Destination	Unit Cost	Quantity	Total Cost
SubTotal			\$0.00

Gasoline – Per Gallon

Purpose/Destination	Unit Cost	Quantity	Total Cost
SubTotal			\$0.00

Per Diem (M&IE) – Per Day

Purpose/Destination	Days/Duration	Unit Cost	Quantity	Total Cost
SubTotal				\$0.00



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Lodging – Per Night

Purpose/Destination	Days/Duration	Unit Cost	Quantity	Total Cost
Seattle	3	\$150.00	2	\$900.00
SubTotal				\$900.00

Meals (no M&IE) – Per Meal

Purpose/Destination	Days/Duration	Unit Cost	Quantity	Total Cost
SubTotal				\$0.00

III. EQUIPMENT \$160,000.00

Item Name	Description	Unit Cost	Quantity	Total Cost
Systems	Hardware purchase	\$10,000.00	16	\$160,000.00

IV. MATERIALS & SUPPLIES \$10,400.00

Type	Purpose	Unit of Measure	Unit Cost	Quantity	Total Cost
HDDs 1T	Data	5 HDD per boat	\$75.00	80	\$6,000.00
HDD 2T	For PSMFC 2T	(6) 2T HDD	\$100.00	6	\$600.00
Hardware	Data Storage	Each	\$3,800.00	1	\$3,800.00

V. CONTRACTUAL SERVICES \$252,933.62

Subcontract/Contract – Per Agreement

Contractor Name	Description	Total Cost
PFC		\$10,000.00



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Saltwater	Tech services for EM systems and software	\$208,533.62
Chordata	Software Consultant	\$34,400.00

SubTotal **\$252,933.62**

Subgrant – Per Agreement

Subrecipient	Description	Total Cost

SubTotal **\$0.00**

VI. OTHER DIRECT COSTS **\$7,939.00**

Type	Purpose	Unit of Measure	Unit Cost	Quantity	Total Cost
Shipping	Shipping system to King Cove	Each	\$200.00	8	\$1,600.00
Shipping	Shipping system to Sand Point	Each	\$275.00	8	\$2,200.00
Data Retrieval	Shipping HDDs	Each	\$7.25	540	\$3,915.00
Shipping Supplies	(4) envelopes per boat for mailing HDDs	Each	\$3.50	64	\$224.00

VII. TOTAL DIRECT COSTS **\$433,772.62**

VIII. INDIRECT COSTS **\$0.00**

Explanation of Modified Total Direct Cost Base(MTDC)	Rate Type	NICRA Expiration	\$MTDC	Rate(%)	Total Cost
	De Minimis		\$0.00	0.00	\$0.00

IX. TOTAL PROJECT COSTS **\$433,772.62**



NFWF

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Budget Narrative

Budget Narrative: Aleutians East Borough Budget

1. Personnel

Personnel -

2. Travel

Domestic Airfare - Per Flight - Airfare costs are based on current fares as advertised on the internet for the Anchorage to Seattle, for travel to EMWG and Council meetings.

International Airfare - Per Flight -

Train - Per Ticket -

Rental Car - Per Day -

Taxis - Per Trip -

Mileage - Per Mile -

Gasoline - Per Gallon -

Per Diem (M&IE) - Per Day -

Lodging - Per Night - Budget estimates are based on current costs as advertised on the internet for lodging in Seattle. Lodging costs are for TEvich to EMWG or NPFMC meetings in Seattle.

Meals (No M&IE) - Per Meal -



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3. Equipment

Equipment - Budget for equipment is based on current costs of a full EM system

4. Materials and Supplies

Materials and Supplies - Hard drive costs are based on current costs and projected needs for data storage and transfer. Hardware data storage is based on current costs for expanded storage.

5. Contractual Services

Subcontract/Contract - Per Agreement - The PFC subcontract is based on the sub estimate and includes funds for industry outreach, travel support for industry participation in the EMWG and NPFMC, and outreach materials.

The Saltwater subcontract is based on sub estimate and includes current projected costs for project support services including project management, software development, field services, data processing, and data review.

Chordata subcontract is based on sub estimate and includes funds for software development and data integration.

Subgrant - Per Agreement -

6. Other Direct Costs



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Other Direct Costs -

Budget estimates were based on current costs for shipping EM systems in Alaska, and mailing hard drives from within and outside Alaska

7. Indirect Costs

Indirect Costs -

The Aleutians East Borough will contribute the costs of administering this grant.



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Matching Contributions

Matching Contribution Amount:	\$15,500.00
Type:	In-kind
Status:	Pledged
Source:	Aleutians East Borough
Source Type:	Non-Federal
Description:	The Aleutians East Borough will provide grant administration through the Natural Resources Department and Finance Department. In-kind contribution consists of hourly rates of the Directors of those departments and some travel for outreach activities.

Matching Contribution Amount:	\$750,000.00
Type:	In-kind
Status:	Pledged
Source:	Western Gulf of Alaska trawl fishermen
Source Type:	Non-Federal
Description:	Volunteer fishermen will contribute their time, vessels, space, and feedback to the project. Typical charges for research vessels are \$2,000 per day. We conservatively estimate a contribution of 750 sea days at \$1,000/day.

Total Amount of Matching Contributions:	\$765,500.00
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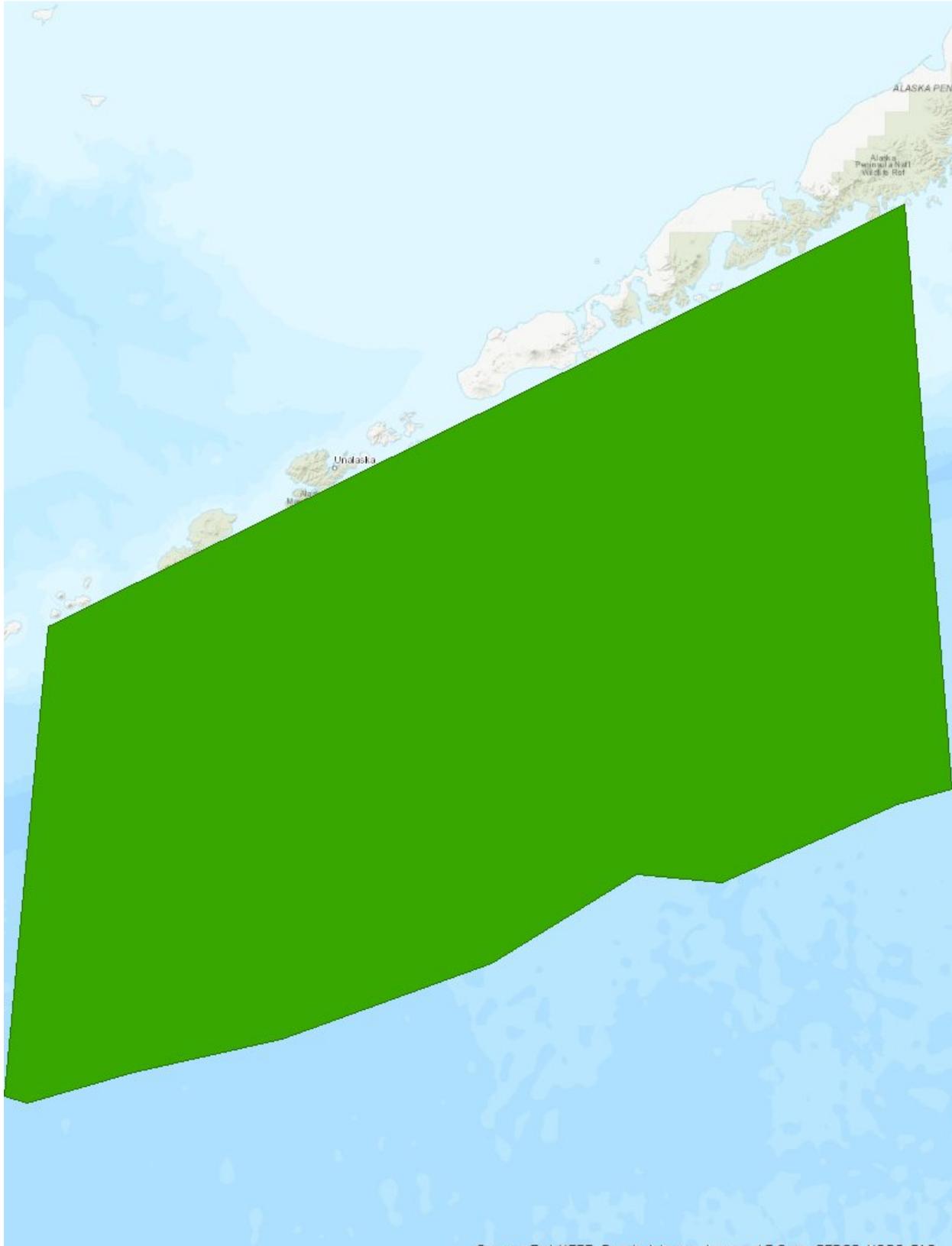
NFWF

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The following pages contain the uploaded documents, in the order shown below, as provided by the applicant:

Upload Type	File Name	Uploaded By	Uploaded Date
EMR Full Proposal Narrative	_Narrative NP Trawl NFWF 2018_v9.docx	Weiss, Ernie	07/09/2018
Letters of Support	PFC AEB 2018 LOS.pdf	Weiss, Ernie	07/09/2018
Letters of Support	AEB NFWF EMR letter of support 070918signed.pdf	Weiss, Ernie	07/09/2018
Letters of Support	070318_NFWF_Support_EM_final.pdf	Weiss, Ernie	07/08/2018
Letters of Support	PSPA support letter_NFWF_WG trawl EM.docx	Weiss, Ernie	07/08/2018
Letters of Support	Tom Evich letter.docx	Weiss, Ernie	07/08/2018
Photos - Jpeg	trawlers.jpg	Weiss, Ernie	07/09/2018
Photos - Jpeg	King Cove Small Boat Harbor.jpg	Weiss, Ernie	07/09/2018
Photos - Jpeg	Sand Point Harbor.jpg	Weiss, Ernie	07/09/2018
Statement of Litigation	Statement%20of%20Litigation.doc	Weiss, Ernie	07/08/2018
Board of Trustees, Directors, or equivalent	Assembly members.docx	Weiss, Ernie	07/06/2018
Other Documents	WGOAmap2.jpg	Weiss, Ernie	07/09/2018

The following uploads do not have the same headers and footers as the previous sections of this document in order to preserve the integrity of the actual files uploaded.



Implementing EM in the Western Gulf of Alaska Trawl Catcher Boat Fleet and Associated Tenders

Part I –

Priority Addressed:

This project will catalyze the adoption of EM for the Western Gulf of Alaska pollock trawl fleet and associated tenders as prioritized in the Alaska Region’s Electronic Technology Implementation Plan in 2015, and reaffirmed by the North Pacific Fishery Management Council (NPFMC) in June 2018. Adoption of EM in this fishery will increase monitoring and provide improved bycatch reporting to support fisheries conservation and management. The project will also develop tools to increase the efficiency and quality of EM data review.

Fishery: Western Gulf of Alaska trawl fishery

Participants: Approximately 40 fishermen, 14 catcher vessels, two tender vessels, 3 sectors (fishing/tendering/processing) and two fishery-dependent Alaskan communities - Sand Point and King Cove - will be directly involved in this project.

Data Visioning:

Under the current “partial coverage” monitoring plan, under 60’ pollock trawlers are monitored by onboard observers on a randomly selected sample of their fishing trips. The data plan envisioned for this project stipulates monitoring 100% of trips and monitoring the associated trawlers, and would provide a census count of salmon bycatch as opposed to the current extrapolated count. Accurate discard data is essential for conservation and management of salmon, and managers use the data to administer Prohibited Species Catch (PSC) limits including a “hard cap” for salmon in the Western Gulf of Alaska.

Part II –

Activities: Background

The trawlers that fish for pollock and Pacific cod in the Western Gulf of Alaska (WGOA) are some of the smallest trawlers (most are under 60’ in length) fishing in Alaska. These vessels fish with small crews in remote areas, and fish predominantly from the ports of King Cove and Sand Point. Neither community is connected to the road system so all access is by air or sea. Flying to King Cove from Anchorage requires flying to Cold Bay and then taking a small plane (6 seater) from Cold Bay to King Cove. Due to the remote locations, severe weather, and size of the vessels, placing observers onboard is expensive, a hardship for the vessel (bunk space), and safety is a concern.

Due to their small size the WGOA trawlers fall into the “partial coverage” monitoring program for the North Pacific which stipulates observer coverage on a randomly selected sample of trips. Industry pays for the partial coverage program through a fee of 1.25% on the ex-vessel value of landings.

During the fishing season, these trawlers deliver to both shoreside plants and tender vessels. Observers on vessels that deliver to tenders take basket samples of unsorted catch to determine amounts of bycatch. These numbers are extrapolated to the fishery as a whole and provide the basis for determining when the fishery has reached the Prohibited Species Catch limit.

Industry, NMFS, and the NPFMC have expressed interest in improved monitoring of this fishery since 2013 due to concerns over the salmon accounting, observer safety, the logistical difficulties of placing observers on small boats in remote locations, and the cost of onboard observers. The *Alaska Region’s Electronic Technology Implementation Plan*

specified a potential EM application for compliance monitoring of discards in the GOA pollock trawl catcher vessel fleet in 2015. In June 2018 the NPFMC reaffirmed its interest in testing EM for compliance monitoring in the WGOA pollock fishery as one of their top five priorities.

An EM program that provides the necessary data for both NMFS and the industry must address several specific characteristics of the fishery: a) catcher vessels deliver to both tenders and shoreside plants, b) vessels under 60' LOA are not required to fill out log books, and c) the extreme remoteness of the area involved.

This project will address those challenges by engaging both NMFS and industry to develop protocols that will work to improve monitoring. This will include placing EM systems on tenders as well as catcher boats so that unsorted catch can be tracked from the net to the shoreside plant where full counts of discards can be completed and biological samples taken. Catch handling protocols will be defined in Vessel Monitoring Plans to ensure quality data capture. In collaboration with NMFS, video review protocols will be established, and software tools will be developed and tested to decrease the time of video review. Data will be collected on 100% of the trips, and system performance will be tracked. Development of data transmission tools will provide early warnings of system issues, increasing data quality and potentially lessening the cost of field services (see Activity 2). Findings from this initial trial would be shared with all stakeholders, and will support further development of EM implementation in the Gulf of Alaska fisheries as prioritized by NMFS and the NPFMC.

Activity 1. Outreach/Development of Implementation Plan (August, 2018-December, 2019)

The Peninsula Fishermen's Coalition (PFC) will work closely with WGOA fishermen, NMFS, other industry members, and the NPFMC's EM Committee (previously the EM Work Group) to develop an EM implementation plan for pollock trawl vessels. This proposal is based on the outreach work that PFC has already done with West Gulf fishermen and processors. It reflects industry views of what could work in the Western Gulf, and what they would like to see more generally in an EM program for Alaska's trawl fleet. It also reflects the initial implementation goals of the trawl EM Committee as outlined at its May, 2018 meeting: 1) Improve salmon accounting, 2) Reduce monitoring costs, and 3) Improve monitoring data.¹

PFC will continue to work on an implementation plan for the WGOA and the pollock trawl fleet with NMFS and through the EMWG, which will next meet in August 2018. An implementation plan will be refined with the goal of executing the plan in time for the season start of January 20, 2019. PFC will take the lead in recruiting members to volunteer to take EM systems for the 2019 fishing year. Many industry members will attend the December 2018 NPFMC meeting, and PFC will host an evening outreach session to demonstrate EM equipment, how data collection works and the EM data review process, and to recruit participants for the project.

Fleet "buy-in" will be key to the project's success, and outreach activities will continue throughout 2019 including vessel operators in the project receiving in-season feedback memos for each of their trips. The feedback memos will document the quality of that data, address any problems encountered, (e.g. "wipe your camera lens more often!"), and allow industry members to comment on their experience with the EM system.

Activity 2. Develop and test tools to modernize data management

a) Develop and test tools to reduce the cost of EM data review

The primary goal of monitoring this fishery is to ensure compliance with existing regulations requiring full retention of catch and bycatch, and particularly to account for all salmon bycatch. EM data review will focus on identifying illegal discards, and attempt to quantify any unavoidable discarding of unsorted catch that takes place while bringing the gear onboard. To make the review process more efficient, we will develop and test tools to reduce EM review time

¹ The EM Workgroup was reconstituted in April 2018, to reflect a shift in focus from implementing EM on fixed gear vessels to developing EM on trawl catcher vessels in the Bering Sea and Gulf of Alaska.

using computer vision (CV) software to determine activity levels in key areas of the back deck. This will allow for more rapid identification of gear deployment, retrieval, and catch handling events. More importantly, it will provide a way to automatically detect any possible sorting of catch and/or discarding that might take place after catch is stowed. Previous work indicates that this approach would reduce review time without compromising the quality or thoroughness of the review.

b) Improve data quality by building on a model of remote tech support

Vessels in the Western Gulf of Alaska operate out of remote ports that are hard and expensive to reach. They also experience severe weather conditions that affect travel, making it even more of a challenge to provide field support to correct EM system issues in a timely manner. Saltwater has a proven track record of providing remote trouble-shooting and tech support in multiple fisheries, often working with vessel operators to implement needed repairs. Providing 24/7-telephone support and setting up a local supply of key replacement parts are a key part of this cost-effective strategy. This project proposes to expand this capacity by adding real-time satellite communications capability to monitor system performance. This will increase the speed that system problems affecting data quality can be identified—and addressed. The EM systems will be configured to transmit regular “health status” reports to NMFS and the EM service provider. The periodic or event-determined reports will provide data on camera and sensor performance, power issues, and other important system parameters. If an issue were identified while the vessel was at sea, components and information necessary to fix the problem would be relayed to the vessel operator upon their arrival at port—or at the tender. This would improve overall data quality by solving problems before data is lost or compromised, reduce the cost of providing technical support, and eliminate the need for port coordinators. This development has the potential to significantly improve data quality and completeness.

c) Improve Verity of EM data

Both fishermen and NMFS have expressed some concerns about the confidentiality and verity of EM data. Saltwater’s EM system currently logs the serial number of the HDDs that are inserted and removed from the EM system, and additional measures will provide greater confidence that the data received and reviewed is accurate and has not been tampered with. This project would support the development of tools to allow the EM system to send via satellite digital signatures for each video and sensor data file as it is created. The signatures could be sent to NMFS or a designated third party. These digital signatures would make it possible to prove that the data on the HDD was complete and had not been tampered with during any part of the chain of custody-- on the vessel, in transit, during review, or as it was prepared for storage.

Activity 3: Install and Service EM Systems (November, 2018-December, 2019)

The project proposes to equip 14 catcher vessels and 2 tenders with full EM systems (e.g. video cameras, control box, sensors) provided by Saltwater. This sample size would allow NMFS to compare the census counts of salmon from the project boats with the extrapolated count derived from boats not participating in the project. We anticipate installations of the EM systems in late November/early December 2018 and early January 2019, to be ready for data collection during the pollock A season that begins January 20, 2019. Vessel Monitoring Plans (VMPs) will be developed for each vessel with time for approval by NMFS prior to the season start. Generally, VMPs describe the vessel layout, configuration of the EM system, and operator responsibilities, which may include specific handling practices and allowed discard areas. Importantly, the VMP will define camera views necessary for compliance monitoring for the individual catcher vessels and tenders. The template for the VMP will build on the work on VMPs already done in the fixed gear sector, modifying them as necessary to meet the fishery’s compliance monitoring requirements. Field services by the EM service provider will include installations in King Cove and Sand Point, remote support by phone or email available 24/7, and in port field services as necessary through the duration of the project. All field services will be tracked and documented by the EM service provider and reported to PFC and NMFS.

Activity 4: Review and Integrate EM Data

Initial testing of a model for “local data review” was supported by NMFS and the NPFMC for Alaska’s fixed gear fisheries under NFWF grants # 53890 and #58826. Through these grants, data from both pot and longline boats was reviewed by Saltwater data reviewers using open-source software developed under NFWF grant #47392. Saltwater is based in Anchorage, Alaska and has conducted review for NMFS and industry in multiple EM programs within and outside the U.S. In the North Pacific, Saltwater reviewed pot and longline data throughout the 2017 and 2018 seasons, and has worked closely with NMFS to develop and refine review protocols for those fisheries. With the approval of NMFS, Saltwater employs current and former observers to review the data. These observers have been trained by NMFS in fish identification, sampling protocols, and have experience onboard working fishing vessels.

We propose to continue implementing the third party model and the use of open source software for data review to encourage cost efficiencies (see Activity 2a). For fixed gear data, Saltwater worked closely with NMFS to ensure the reviewed data could be integrated into the database at the Alaska Fisheries Science Center (AFSC) and, ultimately, the Alaska Region’s catch accounting system. In cooperation with NMFS, Saltwater developed a database, “data pipeline”, and protocols that allow the AFSC to upload data to the NMFS database at AFSC. This project will build on that work to develop protocols and infrastructure for compliance monitoring of data from the catcher vessels and tenders to ensure NMFS has the data it needs in a timely and coordinated manner.

EM implementation for the fixed gear fleet indicated that skippers mailing data hard drives (HDDs) to the review center worked well and was cost effective. We would use the same method for this project with video signatures added (see Activity 2c) to provide a more secure chain of custody and additional guards against the possibility of data tampering at the vessel or during the review process. Experienced observers trained by NMFS would review 100% of the trips following protocols approved by NMFS. An independent audit by NMFS or its designee would ensure data quality.

5. Communicate results

Members of the WGOA trawl fleet and Saltwater are represented in the EM Committee. Through this forum, we will communicate findings and progress throughout the project. We will also provide regular progress reports to NMFS, industry members, and the NPFMC. At the end of the project, PFC will prepare a report detailing project accomplishments, challenges encountered, a cost analysis, and Lessons Learned. This will include an accounting of expenditures, and a comparison of costs between onboard observers and EM monitoring for this fishery.

Outcome(s):

Outcome 1. Fishermen and tender operators volunteer to test EM systems during the 2019 fishing year.

- A minimum of 10 (and maximum of 14) catcher vessels volunteer to test EM systems
- At least two tender vessels volunteer to carry EM systems
- Installs are completed and VMPs approved before fishing starts January 20, 2019

Outcome 2. A compliance monitoring plan is developed for WGOA catcher vessels and high quality data is collected in 2019.

- EM systems are installed on catcher vessels that deliver to shoreside processors and those that deliver to tenders
- Catch handling protocols are developed and implemented
- System performance and data quality is good/excellent
- Salmon bycatch counts and biological data is collected at the shoreside plants

Outcome 3. A compliance monitoring plan is developed for tenders and high quality data is collected on tender vessels in 2019.

- Catch handling protocols are developed and implemented

- System performance and data quality is good/excellent
- Salmon bycatch counts and biological data is collected at the shoreside plants

Outcome 4. Cost-effective infrastructure for remote technical support and maintenance is tested

- Satellite transmission of health status speeds problem identification and resolution
- The majority of service issues are able to be resolved with remote support

Outcome 5. A cost effective, third party data management model is implemented.

- Open source software is used for data review
- Trained observers carry out EM review
- Tools to reduce review time are developed, tested, and adopted
- EM infrastructure in Alaska is broadened and data review capacity strengthened with both Saltwater and PSFMC and/or AFSC reviewing data
- Data verity is confirmed using digital signatures
- Collected data is integrated with existing Federal data collection programs

Tracking Metrics:

Metric 1. Number of Management Plans Developed. WGOA representatives will work with NMFS, processors, and the EM work group to develop a compliance monitoring plan for both catcher vessels and tenders. This plan will include onboard handling procedures, data standards, and data review protocols.

Metric 2: Number of vessels participating in the monitoring program. PFC will track the names and locations of all vessels contacted, those responding with interest, those volunteering to carry an EM system, and those ultimately admitted to the selection pool. PFC will keep an updated list of all vessels volunteering for EM, and track those that switch gear to other fisheries.

Metric 3: Number of trips monitored using EM. Saltwater will track the number of fishing trips that are monitored using EM.

Project Team:

The Peninsula Fishermen's Coalition (PFC) was incorporated in 2012. The coalition was created in response to concerns about salmon and halibut bycatch in the Western Gulf of Alaska small boat trawl fisheries for pollock and Pacific cod. This organization is comprised of 16 under 60' vessels based in King Cove and Sand Point, Alaska. Commercial fisheries are the backbone of these communities. Virtually every resident depends directly or indirectly on the revenues generated by fishing. This has been true since the mid 1800s. Our membership is vitally interested in maintaining these communities and continuing to develop the technology and skills to ensure healthy fisheries. PFC provides a forum for fishing vessel owners and skippers to develop and comment on regulatory and policy alternatives to the Council and the Alaska Board of Fisheries.

Kiley Thompson has been President of the Peninsula Fishermen's Coalition since it was incorporated. Mr. Thompson attended Sheldon Jackson University where he met his wife who is from Sand Point. The couple moved to her hometown, Sand Point, where Mr. Thompson began fishing in 1993. In 1997 he began trawling, and is now skipper of the F/V Decision. He will oversee the grant and represent the PFC at statewide meetings.

Beth Stewart has been Executive Director of Peninsula Fishermen's Coalition since its inception. Ms. Stewart previously served as Aleutians East Borough's Director of Natural Resources, Executive Director of the Alaska Boards of Fisheries and Game, Special Assistant to the Commissioner at Alaska's Commercial Fisheries Entry Commission, and Technical

Editor at the NMFS, Auke Bay Fisheries Laboratory. Ms. Stewart has also served on the Council's Advisory Panel, and various related committees. She will represent PFC during NPFMC meetings and will work closely with the company that provides EM to the PFC fleet and with the fleet to insure that communication is fluid and consistent.

Tom Evich has fished in the WGOA for over 25 years. He understands the practicalities of fishing in the WGOA and the issues for the less than 60' trawlers as well as those that are slightly larger. Tom is an active member of the NPFMC's EM Committee and will represent the WGOA trawlers in that forum.

Ernie Weiss is the Natural Resources Director for the *Aleutians East Borough*. He is an active member of the NPFMC's industry Advisory Panel, and would oversee the administration of this grant. The Aleutians East Borough is the local government for a large area stretching from the Alaska Peninsula out to Akutan in the Aleutian Islands. The Borough is bordered to the north by the Bering Sea and to the south by the Gulf of Alaska. Commercial fishing is key to the economy of the Borough and the 6 communities it encompasses: the cities of Akutan, Cold Bay, False Pass, King Cove, Sand Point and the village of Nelson Lagoon.

Saltwater Inc. is a small business headquartered in Anchorage, Alaska with 30 years experience collecting fisheries data via onboard observers or EM. Since 1988 Saltwater has focused on collecting accurate, reliable scientific data to answer a variety of research questions for government agencies, research organizations, and fishermen. Since 2009, Saltwater Inc. has been working to develop EM solutions in a variety of fisheries with a special interest in small boat fisheries in Alaska—our home! Saltwater is currently working on EM projects in the Gulf of Mexico, the East Coast, Hawaii, and Alaska, including implementation of EM for over 100 vessels working in the Atlantic pelagic longline fishery. With the support of NFWF, Saltwater has also developed open-source EM review software, and is an advocate of open-standards in EM. Saltwater is a member of the Council's EM Committee, and participates in monthly AK EM Program meetings.

Nancy Munro, Saltwater Inc., Project Lead

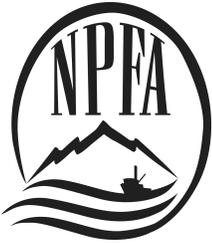
Nancy is the Founder and President of Saltwater Inc. and has 30+ years business and project management experience. She has an in-depth understanding of the commercial fishing industry and fisheries management, and a deep commitment to preserving healthy oceans and sustainable fisheries. Nancy will provide general project oversight and serve as a project liaison with PFC, AEB, NMFS, and the Council.

Jared Fuller, Saltwater Inc., Technical Project Officer.

Jared graduated from Texas A&M University with a B.S. in Biology, a minor in Business and a strong background in computer science. He spent two years collecting fisheries data as an observer in Saltwater's North Pacific Observer Program. Fascinated by the potential of electronic monitoring, Jared joined Saltwater's EM team and has installing EM systems on a variety of boats throughout Alaska, the Gulf of Mexico, and the Northeast. Jared has also worked closely with our software developers linking his understanding of fisheries data and EM hardware and software with direct exposure to industry member insights and concerns about EM implementation. He is an active member of the Council's EM Work Group. Jared will oversee the EM installations, field services, and software developments of the project.

Eric Torgerson, Chordata LLC, Data & Software Manager, Juneau, AK

Eric has over 15 years of experience solving real-world problems with computer systems. Eric is a principal in Chordata LLC, a start-up company focused on developing software for analysis and reporting of fisheries data. Saltwater and Chordata collaborated to develop the open source platform for EM data review. Eric will oversee software development to increase efficiencies in the review process. He will also continue to work closely with NMFS on data management and database development to ensure the collected data is integrated with existing Federal data collection programs.



North Pacific Fisheries Association
P.O. Box 796 · Homer, AK · 99603

National Fish and Wildlife Foundation
Fisheries Innovation Fund
1133 Fifteenth St NW Ste. 1100
Washington, DC. 20005

RE: Aleutians East Borough & Peninsula Fishermen's Coalition Proposal

To Whom It May Concern:

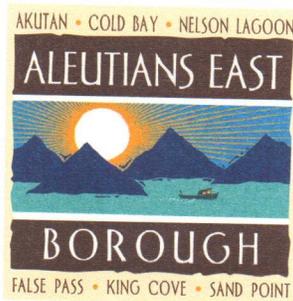
North Pacific Fisheries Association (NPFA) is a multi-gear, multi-species organization participating in fisheries all across Alaska and the North Pacific. Since 2013 we have actively participated in developing effective electronic monitoring tools for use in the North Pacific Observer Program. We have also actively participated in the North Pacific Fishery Management Council's Electronic Monitoring Workgroup when its primary focus was fixed-gear fisheries, fully support the transition into trawl priorities and continue to actively participate in the Fishery Monitoring Advisory Committee. NPFA strives to support, in whatever way possible, responsible and sustainable fisheries management. NPFA sees the monitoring of salmon discards at-sea as responsible management and a useful tool for the Observer Program and the Western Gulf trawl fleet. It would provide cost savings to the Observer Program through minimizing the cost of observer travel and housing in the remote locations these vessels are fishing out of. Additionally, many of these vessels have limited space on board for an extra person and carrying an observer for the long periods of time they are at sea is a burden.

Electronic monitoring can improve at-sea monitoring and the development of EM in other fisheries in the region is of great benefit. We sincerely ask that you consider this proposal favorably.

With respect,

Abigail Turner-Franke

Abigail Turner-Franke
Project Coordinator, North Pacific Fisheries Association



July 9, 2018

National Fish and Wildlife Foundation
1133 15th Street NW Suite 1000
Washington, D.C. 20005

RE: Electronic Monitoring and Reporting Grant Program 2018

To Whom It May Concern,

The Aleutians East Borough (AEB) enthusiastically supports the *Implementing EM in the Western Gulf of Alaska Trawl Catcher Boat Fleet and Associated Tenders* proposal submission for the NFWF EMR grant opportunity. The AEB is a 2nd class borough in the State of Alaska which encompasses six communities along the Eastern Aleutian archipelago including Sand Point, King Cove, Akutan, False Pass, Cold Bay and Nelson Lagoon. The AEB collects a 2% tax on all fish processed at the plants onshore from fisheries in the Bering Sea and Gulf of Alaska, which is then used to support the communities through various infrastructure and improvement projects.

The under 60' Western Gulf of Alaska (WGOA) pollock trawl fishery is an important industry, which provides increased tax revenue for the AEB and currently employs fishermen and women in two of our largest communities, Sand Point and King Cove, who rely on this industry to support their families and sustain their livelihoods. Currently, this fleet is monitored using human observers which can be costly, unsafe for observers, and are a hindrance to efficient fishing. The AEB concurs with NMFS and NPFMC decision to prioritize EM in the WGOA pollock trawl fishery. The EM strategy outlined in the proposal addresses the challenges proposed by NMFS by increasing monitoring from partial coverage using basket samples, to 100% coverage using a census count, thereby providing more accurate and precise data for salmon accountability and bycatch for both vessels and tenders. We believe in the long-term, this will be immensely beneficial to our fishermen and the sustainability of our fish.

The Aleutians East Borough anticipates serving an administrative role in this grant if funded, and as the local government entity for our region, we believe we have the staffing and resources to do so successfully. In addition to the AEB, the project team for this proposal is comprised of several organizations and members who are highly experienced in the fishery, and have the technical expertise to oversee EM implementation. Therefore, I urge you to strongly consider the *Implementing EM in the Western Gulf of Alaska Trawl Catcher Boat Fleet and Associated Tenders* proposal submission for the EMR grant.

Sincerely,


Alvin D. Osterback, Mayor

North Pacific Fishery Management Council

Dan Hull, Chairman
David Witherell, Executive Director



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Visit our website: <http://www.npfmc.org>

July 3, 2018

National Fish & Wildlife Foundation
1133 Fifteenth Street, NW
Washington, DC 20005

Dear Sir or Madam:

On behalf of the North Pacific Fishery Management Council (Council), I am writing in support of proposals for the Alaska fisheries that have been submitted in response to the Electronic Monitoring (EM) and Electronic Reporting Request for Proposals:

- Proposal from United Catcher Boats, Alaska Groundfish Databank, and Alaska Whitefish Trawlers Association for implementing EM onboard pollock mid-water trawl catcher vessels in the Bering Sea and Gulf of Alaska
- Proposal from the Aleutians East Borough and Peninsula Fishermen's Coalition for implementing EM on western Gulf of Alaska trawl catcher vessels and the tender vessels to which they deliver
- Proposals from the Alaska Longline Fishermen's Association (ALFA) and North Pacific Fisheries Association (NPFA) for purchasing additional EM systems to bring the fixed gear EM program to scale

As you know, the Council has been active in pursuing the development of EM technology for several years. Between 2014 and 2017, the Council's priority was to integrate the use of camera systems on fixed gear vessels with the observer program, for the purpose of obtaining estimates of at-sea discards. Through the Council's fixed gear EM Workgroup (which brought together representatives from the fishing industry, management and enforcement agency representatives, and EM service providers), the Council and NMFS actively engaged in cooperative research, field testing different design configurations, working with different fixed gear vessel types, and groundtruthing the ability of an EM system integrated with the Observer Program to provide precise catch estimation data for fishery management. This development has been supported in the past through a number of NFWF grants. In particular, external funding has been essential for the initial purchase the EM system hardware that can then be used over multiple years to support our fixed gear EM fleet.

Thanks in large part to support from NFWF, the Council was able to achieve a major milestone in 2017, with implementation of a regulatory framework to allow EM as an alternative to carrying an observer to meet the monitoring requirements for the fixed gear groundfish and halibut fisheries off Alaska. Throughout 2018, that fixed gear EM program has been operational. With the implementation of this change, the fact that data from EM systems are now being used directly in catch accounting, and the initial investment in EM hardware that was financed in large part from NFWF grants, we will now be able to fund the core annual costs of the fixed gear EM program through the industry-assessed observer fee beginning in 2019, and transition to full support from industry fees in 2020.

With a fixed gear EM program operational, the Council has turned its attention to other sectors of the Alaska fisheries. The Council has great need for more precise estimates of bycatch in trawl fisheries, and has seen demonstrated value in the ability of EM systems to improve cost efficiency, and improve precise

accounting for vessels that are delivering to tender vessels. As such, the Council has reconstituted its EM Workgroup to focus on the Bering Sea and Gulf of Alaska trawl catcher vessels. The Council has adopted the following preliminary objectives for trawl EM development:

- improve salmon bycatch accounting;
- reduce monitoring costs; and,
- improve the overall quality of monitoring data.

The Council intends for the preliminary application of EM on trawl vessels to be as compliance monitoring for a full retention requirement, with discards to be accounted shoreside. Once this application has been developed, the Council may consider developing a hybrid compliance and catch estimation approach for certain trawl target fisheries.

The Council's Trawl EM Workgroup has laid out a rigorous schedule for developing an operational EM program for trawl vessels over the course of the next two to three years, following the same cooperative approach that worked so well for the development of the fixed gear EM program. The first milestone is to develop a robust cooperative research plan for 2019, which the Council will review in December. Progress will be dependent, however, on securing external funding for the earliest stages of trawl EM development. As with fixed gear EM development, revenue from the partial coverage observer fee (used to fund monitoring costs throughout Alaska) can only be used to support EM once a program is implemented in regulation. The Council has encouraged Trawl EM Workgroup members to apply for grants to support field work in 2019, because without such funding, some or all areas (e.g., the Bering Sea and Gulf of Alaska) may be delayed in EM implementation. The two trawl catcher vessel proposals that have been submitted are responsive to the Council objectives.

Additionally, we also support the two proposals from ALFA and NPFA. These proposals focus on a final investment in EM hardware for the fixed gear fleet. In 2018, 141 vessels opted into the EM selection pool for its first year of implementation. The Council is already aware of other vessel owners that either missed the opt-in deadline, or who have since expressed interest in entering the EM pool. The Council has authorized expanding the fixed gear EM pool up to 165 vessels, but the implemented program cannot afford the hardware and installation costs associated with adding additional vessels. Support for these proposals would fund the final adjustments to EM selection pool to ensure that those vessels for which EM is the best solution are able to participate in the program.

In summary, the Council recognizes the value of the proposals submitted by the Alaska regional stakeholders for developing EM as a compliance and catch accounting tool in Bering Sea and Gulf of Alaska trawl fisheries, and continued scaling of our successful fixed gear EM program to meet Council goals. On behalf of the Council, I hope that you will consider the proposals submitted from these stakeholders favorably.

Sincerely,



Dan Hull
Chairman

PSPA
PACIFIC SEAFOOD PROCESSORS ASSOCIATION
Est. 1914

July 6, 2018

National Fish and Wildlife Foundation (NFWF)
1133 15th Street, NW Suite 1100
Washington DC 20005

Re: Support for two grant applications: 1) *Implementing Electronic Monitoring in the Western Gulf of Alaska Trawl Catcher Boat Fleet and Associated Tenders* and 2) *Implementing Electronic Monitoring Aboard Pollock Mid-water Trawl Catcher Vessels in the Bering Sea and Gulf of Alaska*

Dear National Fish and Wildlife Foundation,

The Pacific Seafood Processors Association (PSPA) strongly supports the following two trawl catcher vessel electronic monitoring (EM) projects submitted for the January 2019 – December 2020 NFWF grant period:

Implementing Electronic Monitoring in the Western Gulf of Alaska Trawl Catcher Boat Fleet and Associated Tenders (submitted by Aleutians East Borough)

Implementing Electronic Monitoring Aboard Pollock Mid-water Trawl Catcher Vessels in the Bering Sea and Gulf of Alaska (submitted by United Catcher Boats)

PSPA is a nonprofit seafood trade association comprised of 9 seafood processing companies that purchase fish from harvesters and provide markets in remote locations around Alaska. These companies operate 31 facilities in 18 coastal communities across Alaska and 3 motherships. Our members depend on all fisheries, gear types, and regions of Alaska, including the trawl catcher vessel fleets in the Bering Sea, Central Gulf, and Western Gulf of Alaska. Our members are also highly supportive of robust, scientifically-driven fisheries monitoring programs, and have had certified observers stationed in our plants for years to provide the high-quality data on which our federal fisheries rely for long-term sustainability and optimum yield. PSPA also has a member on the North Pacific Fishery Management Council's Fishery Monitoring Advisory Committee, formerly known as the Observer Advisory Committee, and is fully engaged in monitoring issues through that process.

For the past several years, the North Pacific Fishery Management Council (Council) and the fishing industry have worked to develop an electronic monitoring program for Alaska's small boat, fixed gear fleets as the first priority for EM. This was in response to the need to include all vessels in the federal

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206.281.1667

222 Seward St.
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Juneau, AK 99801
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601 West 5th Avenue
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Anchorage, AK 99501
907.223.1648

20 F St NW, 7th Floor
Washington, DC 20001
202.431.7220

www.pspafish.net

North Pacific fisheries in an at-sea monitoring program, to ensure comprehensive data collection, compliance, and to improve NMFS' ability to manage these fisheries in near-real time. These projects were testing the efficacy and cost of using EM to determine catch composition on fixed gear vessels.

As the fixed gear fleets' program is close to full implementation, the Council recently shifted its EM priorities to the trawl catcher vessel fleets that deliver directly to a shoreside processor and to tender vessels that eventually deliver the harvest shoreside. The Council has indicated that development of EM for compliance purposes (for full or maximized retention requirements) on Bering Sea pollock trawl catcher vessels and Gulf pollock trawl catcher vessels is among its top priorities and approved the following monitoring objectives in June 2018: 1) improve salmon accounting; 2) reduce monitoring costs; and 3) improve the quality of monitoring data. The benefit of the use of EM for compliance purposes is potentially higher coverage levels on these fleets and lower costs, with the intent to allow for a full census of salmon bycatch at the processing plant. To this end, these two projects are proposed to test both the feasibility and cost of using EM on the various pollock trawl fleets, including the Western Gulf tender fleet.

The two applications mentioned above are critical to the efforts to improve monitoring of the trawl catcher vessel fleets in the North Pacific, and combined, represent a comprehensive approach to the differing pollock trawl catcher vessel fleets in the Bering Sea, Central Gulf (delivering to Kodiak), and Western Gulf (delivering to Sand Point and King Cove). This work will result in the needed pilot work to move toward a regulated program for the trawl catcher vessel fleets, which may be less complicated than the fixed gear program which had a different monitoring objective (catch composition).

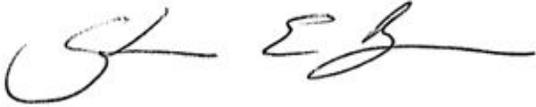
The Council, NFMS, and North Pacific fishing and shoreside processing sectors have all been working toward an improved program for those Gulf catcher vessels that are not required to have an observer 100% of the time, due to the sector-level management of specific fisheries. The Western Gulf trawl fleet that traditionally operates by delivering to tenders also creates a different case in which EM would need to be tested for efficacy of use on both the catcher vessel, during the offload to a tender, and potentially on the tender itself. In addition, the Bering Sea pollock trawl catcher vessel fleet (currently required to have 100% observer coverage) sees the ability for more comprehensive monitoring and at a lower cost. PSPA cannot adequately convey the amount of time and resources the North Pacific region spends on monitoring issues, in both making continued improvements to an observer program that was restructured in 2013 to reduce bias and increase coverage across all fleets, and in developing EM to supplement and enhance the current program.

The North Pacific has implemented an industry ex-vessel fee for monitoring, authorized through the Magnuson-Stevens Act, that can be used to fund both observers and EM. However, in establishing its goal of developing and implementing EM on trawl catcher vessels, the Council noted that "rapid progress is dependent on securing external funding for the earliest stages of trawl EM development, as revenue from the partial coverage observer fee can only be used to support EM once a program is implemented". NFWF funding is needed at this time for EM hardware costs, field service costs for installation and support, and EM data review costs.

Thank you for your consideration of two projects that will go a long way toward both the Council's EM Strategic Plan, NMFS' Alaska Region Electronic Technologies Implementation Plan, and NOAA's overall policy of facilitating the use of EM where appropriate. We think the approval of these projects will be a

significant step toward the application of EM in these fisheries, with the potential for more comprehensive coverage, improved bycatch data, and potentially lower costs.

Sincerely,

A handwritten signature in black ink, appearing to read 'G. Reed', written in a cursive style.

Glenn E. Reed
President

To Whom it may concern,

I am writing in support of implementing electronic monitoring in the Western Gulf of Alaska catcher boat fleet and associated tenders. I have owned and operated a 58 foot trawler that fishes for both pollock and cod in the Western Gulf of Alaska for over 25 years. In January I sold the business, which gave me more free time and I was asked to be on the Observer Advisory Committee and the Electronic Monitoring Committee (E.M.W.G.). My hope is that my experience owning and operating a trawler will help improve how observer data is collected in the Western Gulf.

In 2013 when the O.D.D.s system was put into place, one of the goals was to observe what the under 60 foot vessels were catching which, by virtue of their size, had not been previously observed. What I don't believe was fully understood at the time, was how much fish was traditionally being delivered to tenders and the importance of tenders to the smaller vessels. The smaller vessels for the most part are owned by residents of Sand Point and King Cove. The continued use of tenders is imperative for the local fleet to continue to catch what they have traditionally caught.

Very rarely do you come across a situation where you have a complex problem that can be solved by a simple "silver bullet" I am convinced that this is the case by simply replacing human observers with electronic monitoring. I strongly believe that electronic monitoring can build more efficiencies for less money than a human observer.

The first goal of the E.M.W.G. was better salmon accountability in the Western Gulf of Alaska. There are three problems with tendered fish. First, N.M.F.S. and the observer providers were not comfortable with an observer crossing from the fishing vessel to the tender while the fish is being delivered to the tender, so the observer was not able to "follow the fish". Instead of doing a census count, like the vessels delivering observed fish to the shore plant, the observer took basket samples and those numbers were extrapolated for the whole fleet. One thing everyone seems to agree upon is we do not like basket samples. More times than I like to remember one boat would have a bad basket sample that would create a rate that was not sustainable to stay under the salmon cap and still catch the pollock quota. Our only recourse was to stop fishing long enough to begin a new bycatch rate. This method has cost the entire industry a lot of money. We feel an actual salmon count, in real time, will result in a more accurate number of salmon bycatch.

The second problem, of an observer not being able to transfer from a fishing vessel to a tender, is that a trip delivered to a tender does not end until the fishing vessel returns to a port. I personally have never had a problem with being observed, but I did have a problem having an extra person on the boat for sometimes 30 to 40 days during the cod season. Observers are a fact of life and we have all accepted that we will be observed. What we do have a problem with is an unfamiliar person on the boat adding to the already cramped conditions. This problem exists, at this point, with cod, but the hope is that cod will eventually be electronically monitored also. If I needed a new crew member I, more times than not, would leave it up to the remaining people who continue to work for me. I wanted someone that I knew that they liked and could work with. These are small boats and personality makes a big difference. We have had observers that we have really liked and with whom my crew became

friends. We have also had observers that we couldn't wait to get off the boat. Had those observers been on the boat for an extended time there would have been morale issues. In a long season that is just one more thing an operator does not want to have to deal with. These are small boats. The crew has one common sleeping area, the forecastle, that is already crowded. My crews were always all male, that is industry standard, but I would guess observers are female 40% of the time? For extended times that is just not fair for anyone.

Another problem with vessels delivering to tenders over an extended time is that observer data is not in real time. Again, using the example of cod being delivered to a tender, the observer may be there for an extended long trip, but the observer data is not reported in real time. Human observers always have to go to town to download their observed data. Electronic data could be passed off every delivery to a tender and back into a town in less than 12 hours. To be honest, vessels are legally manipulating the system so they can start an unobserved trip to a tender, "camping out" to avoid having an extra human on the boat for an extended period of time, but N.M.F.S. is missing out on data that could be valuable in reducing bycatch numbers. In my experience there are large gaps of information from areas where most of the fish is being caught. There have been times where I have cancelled an unobserved trip, logged an observed trip, to get an observer on board in order to improve bycatch rates.

One point that I do not think has been stressed enough is safety of the human observers. I have described what we do as "little boats doing a big job". We are fishing in open ocean in the North Pacific in the fall and winter months. The fishery is not rationalized and we are "racing for fish" so truth be told, these boats fish in conditions that perhaps they shouldn't. When hauling gear in rough weather, I always would have enough going on that I was focused on my job. I did not have to pay attention to where my crew was because I was confident that they knew how to do their job safely. Not so with an observer. In their defense they are given a task and in my experience they are serious about doing it well, but for the most part they lack basic boat sense that for the rest of us is second nature. You cannot teach years of experience in a 7 minute safety check.

Last fall I was still running the boat and we were dumping the fish from the bag in some really miserable seas. As can happen, a line broke. Another line with about a 5 pound hook on the end ricocheted back and hit the back of the house, just missing the observer's head who was out of my sight. It scared both of us. He had done nothing wrong. He was staying out of our way, but he was trying to get a fish sample while we were dumping the bag. He didn't know that in those conditions he was standing in a really dangerous spot and the rest of us had our hands full paying attention to what we were doing to pay attention to what the observer was doing. Again, these are small boats. I know of another example on another boat where a line broke and scared the observer. Not a big deal if you hurt a camera.

The expense of human observers in Western Alaska must be appalling. Doing anything on the Alaska Peninsula is not inexpensive. There are times when the fleet will be weathered-in for 4 or 5 days at a time. In the mean time the observers have to stay somewhere, eat, and be paid. It is not uncommon for the fishing vessels to change areas that they fish and change plants they deliver to. The last 3 years I have left fishing in the Sand Point area and moved west and delivered to Akutan. A number of other boats have done the same. If I make up my mind to move, I arrive at a different area in less than a day.

For an observer to be provided they have to move that person from Sand Point, where I have just left, to Akutan. There is only one flight a day leaving Sand Point in the afternoon. That flight today costs \$573. The flight arrives in Anchorage too late to make the flight to Dutch Harbor so that person has to spend the night in Anchorage. You don't find a very nice place to stay for less than \$120. The flight to Dutch harbor costs \$621. Once you get to Dutch they have to figure out how to get to Akutan. There is a commercial flight that cost about \$180, but more often than not it does not make it's once a day schedule. So in a perfect world, it will take at least two days to restage an observer from Sand Point to Akutan. The weather on the Alaskan peninsula is less than perfect most of the time. There have been times that myself and other boats have had to wait for observers. They do the best that they can, and to be honest, I'm actually kind of impressed how the providers got observers to us, but it can't be easy or inexpensive and there is a better way.

The N.P.F.M.C. is having to listen to more and more dissatisfaction with the perceived gaps in observer data from tendered fish. So far every solution that has been put forward has been rejected by someone. Again, I believe the answer to all these problems can be solved with electronic monitoring. We need to start moving with a research project as soon as possible, because this will take time. I hope you will chose to support us. If you have any questions regarding what I have written please feel free to contact me at tomevich@comcast.net or 360-201-0486. Thank you.

Sincerely,

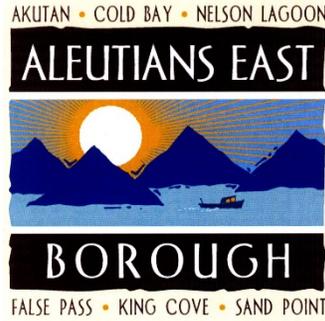
Tom Evich

Former owner/operator F/V Karen Evich









The **Aleutians East Borough** is a municipal government, classified as a 2nd Class Borough of the State of Alaska, encompassing the communities of Akutan, Cold Bay, False Pass, King Cove, Nelson Lagoon and Sand Point, Alaska.

Aleutians East Borough Mayor and Assembly Members

Names	Community	Seat	Elected	Term Ends
<u>Mayor</u>				
Alvin D. Osterback Office: (907) 383-2699 email: aosterback@aeboro.org			10-03-17	2020
<u>Assembly</u>				
Warren Wilson	King Cove	A	10-07-17	2020
Paul Gronholdt	Sand Point	B	11-08-16	2019
Chris Babcock	King Cove	C	10-06-15	2018
Brenda Wilson	King Cove	D	10-06-15	2018
Carol Foster	Sand Point	E	10-04-16	2019
Josephine Shangin	Akutan	F	10-03-17	2020
(Vacant)		G		
<u>Advisory</u>				
Angela Simpson	Cold Bay		Appointed	
Justine Gundersen	Nelson Lagoon		Appointed	

