FINAL

Regulatory Impact Review

Regulatory Amendment to Require the Use of tLandings for Tender Vessels Receiving Federal Groundfish

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Abstract: This Regulatory Impact Review/Initial Regulatory Flexibility Analysis analyzes proposed management measures that would apply exclusively to the directed groundfish fisheries in the Gulf of Alaska and Bering Sea/Aleutian Islands Management Areas. The preferred alternative (Alternative 2) would require the operators of tenders taking deliveries of groundfish in the federally managed fisheries off Alaska and the processors that take deliveries from these tenders to use the NMFS-developed applications software "tLandings" to prepare electronic landing reports that are submitted to NMFS (National Marine Fisheries Service). The purpose of the proposed action is to improve the timeliness and reliability of landing reports for catcher vessels delivering to tenders. More timely and reliable landing reports would improve the data used in catch accounting and in-season management of the groundfish fisheries off Alaska. In addition, the use of tLandings would improve NMFS's ability to identify landings by catcher vessels delivering to tenders for preparation of the annual deployment plan and annual report for the North Pacific Groundfish and Halibut Observer Program.

List of Acronyms and Abbreviations

ADF&G	Alaska Department of Fish and Game
AKFIN	Alaska Fisheries Information Network
BSAI	Bering Sea/Aleutian Islands
CFEC	Alaska Commercial Fisheries Entry Commission (CFEC)
Council	North Pacific Fishery Management Council
CV	catcher vessel
eLandings	Electronic landing report program for processors
E.O.	Executive Order
FFP	Federal Fisheries Permit
FMP	Fishery Management Plan
FPP	Federal Processing Permit
GOA	Gulf of Alaska
IERS	Interagency Electronic Reporting System
IT	Information Technology
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act
NMFS	National Marine Fisheries Service
NMFS AKR	National Marine Fisheries Service, Alaska Region
NOAA	National Oceanic and Atmospheric Administration
NPFMC	North Pacific Fishery Management Council
Observer Program	North Pacific Groundfish and Halibut Observer Program
OLE	Office of Law Enforcement
R&R	recordkeeping and reporting
RFA	Regulatory Flexibility Act
RIR	Regulatory Impact Review
SBA	Small Business Act
Secretary	Secretary of Commerce
SFP	stationary floating processor
State	State of Alaska
tLandings	Electronic fish ticket program for tender vessels

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1 Regulatory Impact Review

This Regulatory Impact Review (RIR)[1] examines the benefits and costs of a proposed regulatory amendment to require that tender vessels enter landing reports into tLandings when receiving Federal groundfish catch.

The preparation of an RIR is required under Presidential Executive Order (E.O.) 12866 (58 FR 51735, October 4, 1993). The requirements for all regulatory actions specified in E.O. 12866 are summarized in the following Statement from the E.O.:

> *In deciding whether and how to regulate, agencies should assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating. Costs and Benefits shall be understood to include both quantifiable measures (to the fullest extent that these can be usefully estimated) and qualitative measures of costs and benefits that are difficult to quantify, but nonetheless essential to consider. Further, in choosing among alternative regulatory approaches agencies should select those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires another regulatory approach.*

E.O. 12866 requires that the Office of Management and Budget review proposed regulatory programs that are considered to be "significant." A "significant regulatory action" is one that is likely to:

- Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, local or tribal governments or communities;
- Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
- Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order.

1.1 Statutory Authority

Under the Magnuson-Stevens Fishery and Conservation Act (Magnuson-Stevens Act) (16 U.S.C. 1801, *et seq*.), the United States has exclusive fishery management authority over all marine fishery resources found within the exclusive economic zone. The management of these marine resources is vested in the Secretary of Commerce (Secretary) and in the regional fishery management councils. In the Alaska Region, the North Pacific Fishery Management Council (Council or NPFMC) has the responsibility for preparing fishery management plans (FMPs) and FMP amendments for the marine fisheries that require conservation and management, and for submitting its recommendations to the Secretary. Upon approval by the Secretary, the National Marine Fisheries Service (NMFS) is charged with carrying out the Federal mandates of the Department of Commerce with regard to marine and anadromous fish.

[1] The proposed action has no potential to effect individually or cumulatively the human environment (as defined in NAO 216-6). The only effects of the action are economic, as analyzed in this RIR. As such, it is categorically excluded from the need to prepare an Environmental Assessment.

1.1.1 Recordkeeping and Reporting Authority

NMFS is authorized under both groundfish FMPs to implement recordkeeping and reporting (R&R) requirements that are necessary to provide the information needed to conserve and manage the groundfish fisheries off Alaska. The authority for NMFS to implement R&R regulations is in Section 3.9.1 of both FMPs (NPFMC 2015a, 2015b) and reads as follows:

> *The need for the Council and NMFS to consider the best available information is explicit in the goals and objectives as established by the Council and contained in the FMP. They are also explicit in the Magnuson-Stevens Act, Executive Order 12866, the Regulatory Flexibility Act, the National Environmental Policy Act, and other applicable law. The Secretary, therefore, will require segments of the fishing industry to keep and report certain records as necessary to provide the Council and NMFS with the needed information to accomplish these goals and objectives. The Secretary may implement and amend regulations at times to carry out these requirements after receiving Council recommendations to do so, or at other times as necessary to accomplish these goals and objectives. Regulations will be proposed and implemented in accordance with the Administrative Procedure Act, the Magnuson-Stevens Act, and other applicable law.*

NMFS may implement these R&R requirements upon the recommendation of the Council or at its own initiative. Generally, when NMFS determines that revisions are needed to R&R requirements, it consults with the Council about these proposed regulatory amendments. As described below in Section 1.3, NMFS recommended the preferred alternative described in this RIR/IRFA at the Council's February 2016 meeting, and the Council concurred with this recommendation.

1.2 Purpose and Need for Action

There are two primary motivations for requiring the use of tLandings on tender vessels receiving Federal groundfish: 1) extending the benefits of electronic reporting identified by NMFS for inseason management and catch accounting to tender vessels, and 2) providing reliable tender activity data to inform analysis of observer data for the North Pacific Groundfish and Halibut Observer Program's (Observer Program's) Annual Report and Annual Deployment Plan.

NMFS has identified electronic reporting through eLandings, seaLandings, or other NMFS-approved software as a way to improve data quality, automate processing of data, improve the process for correcting or updating information, and allow for availability of more timely data for fishery managers and reduction of duplicative reporting of similar information to multiple agencies.

Data reliability and timeliness concerns were raised during analyses describing tender activity, specifically in attempting to identify potential bias in the Observer Program and in tracking tender activity in the Gulf of Alaska (GOA) pollock and Pacific cod fisheries. Because identifying the tender vessel delivering the catch to the processor is optional, there is no way NMFS to know the accuracy of reported tender activity. The rationale behind this action is to improve tender delivery data to identify tender deliveries, better understand observed versus unobserved delivery patterns to tender vessels, and to provide more timely and reliable data for catch accounting and inseason fisheries management with tender deliveries.

Under current R&R regulations for eLandings at 50 CFR 679.5(e)(5), there is no requirement for tender vessels to be identified in the landing report submitted by a processor. There is an optional field in the landing report for the tender vessel Alaska Department of Fish and Game (ADF&G) number, but no requirement to identify whether the catch delivered to a processor was via tender vessel. In this case, the

landing report would appear as if the catcher vessel (CV) delivered catch directly to the processor, instead of to a tender vessel. The Council has identified a tLandings reporting requirement as essential to further refine data identifying CV deliveries to tender vessels in Federal fisheries for inseason management, catch accounting, and to analyze observer data.

1.3 History of Action

In 2013, the preliminary 2013 Observer Annual Report, which reported on data from the first 4 months of the year, reported that the trip length of observed CVs delivering to tender vessels was typically shorter than that of unobserved CVs, implying unrepresentative fishing behavior. This result highlighted a potential bias in the data, as fishing activity on observed CVs may not be representative of fishing activity on unobserved CVs, and may indicate a potential incentive for CVs to stay at sea delivering to tenders when unobserved. However, in the final 2013 Observer Annual Report, which analyzed data from the entire 2013 year, the trip length analysis did not show a systematic difference in trip length between observed and unobserved CVs. The small number of observed trips for CVs delivering to tender vessels may have been insufficient to clearly capture any difference in trip length, and there may also have been seasonal differences that were not apparent in evaluating data for the entire year.

Analysis conducted in the 2014 annual report did not find any indication that observed vessels delivering to tenders were making shorter trips or fishing in different areas than unobserved vessels delivering to tenders (NMFS 2015). These findings are consistent with the findings in the 2013 annual report. However, small sample sizes and the difficulty in identifying all deliveries to tenders in the landings data may have limited the data available for this analysis.

Concurrent with the interest in tender activity presented in the Observer Annual Report, the Council has also been tracking tender activity in the GOA pollock and Pacific cod fisheries and a shift in processor delivery patterns because of a reported increase in tender activity in these fisheries. Starting in June 2013, the Council has reviewed three reports on GOA tender activity: June 2013 (NPFMC 2013), February 2014 (NPFMC 2014), and February 2016 (NPFMC 2016). In addition to providing information on the amount of tender activity, the reports have highlighted several data and inseason management issues associated with tender activity.

One of the reasons that analysts have difficulty tracking the amount of tender activity and evaluating observer coverage on CVs delivering to tenders is that there is no reliable reporting mechanism to track when CVs are delivering to tenders. Currently, the field to identify a tender delivery to a processor is an optional field in eLandings. This has resulted in uncertainty regarding tender delivery data. From the management perspective, the lack of electronic data from tenders in the pollock and Pacific cod fisheries makes it difficult to project catch rates and also creates a time lag before data can be used for inseason management of the fisheries.

At its February 2016 meeting, the Council reviewed a discussion paper in which NMFS recommended that the Council consider requiring tender vessel operators to enter landings data into tLandings (NPFMC 2016). The Council concurred with this recommendation and approved the following motion:

> *Move forward now with a proposed rule to require tender vessel operators to create landing reports using tLandings (described as Alternative 4 in the discussion paper). The Council requests that NMFS update the Council on the progress of this rulemaking and notify the Council if any further Council action is necessary to implement this requirement.*

1.4 Background

The Interagency Electronic Reporting System (IERS) is a collaborative program for reporting commercial fishery landings administered by NMFS, ADF&G, and International Pacific Halibut Commission. IERS consists of three main reporting components: eLandings—a web-based application for immediate harvest data upload from internet-capable vessels or processors; seaLandings—a desktop application for vessels at sea without internet capability; and tLandings—a thumb drive application for tenders or buying stations. Currently, landing reports submitted via eLandings—or seaLandings when no internet connection is available—are required in halibut, sablefish, and crab fisheries per 50 CFR 679.5(e)(5). In the groundfish fisheries, NMFS requires all shoreside or floating processors with a Federal Processor Permit (FPP) to use eLandings or other NMFS-approved software to submit landing reports for all groundfish species. All motherships with a Federal Fisheries Permit (FFP) are required to enter landing information in eLandings or seaLandings. Motherships and catcher/processors with an FFP are required to use eLandings, or seaLandings, to submit Daily Production Reports. In addition, catcher/processors and motherships that are required to carry flow scales are required to submit an electronic logbook using eLandings or seaLandings.

Since tender vessels transport harvested fish to a processor and do not process the fish themselves, they are currently not required to participate in IERS. A tender vessel is defined in regulations as a vessel that is used to transport unprocessed fish or shellfish received from another vessel to an associated processor (50 CFR 679.2). A tender, like a land-based entity, is also defined as a buying station, which receives unprocessed groundfish from a vessel for delivery to a shoreside processor, stationary floating processor, or mothership, but does not process fish (50 CFR 679.2).

The term "tendering" refers to the fishing practice where a tender vessel takes the unprocessed catch from a second fishing vessel—usually a CV—and transports the catch to port. This practice allows the fishing vessel to resume fishing without the delay associated with traveling to port and returning to the fishing area. One tender vessel can receive catch from multiple fishing vessels, depending on its capacity and the contractual arrangement with the associated processor. The tender requires the CV's Alaska Commercial Fisheries Entry Commission (CFEC) permit at the landing and issues the CV a fish ticket.

All tenders operate under a charter contract with an *associated processor* that specifically describes the responsibilities of the tender vessel while under contract, as well as how the tender vessel will be compensated and compensation rates. Typically, tender vessels are compensated at a set per-day rate or by the pound of catch delivered to the processor, whichever is more.

Under § 679.2, an *associated processor* is defined as:

> *"(1) … A mothership or catcher/processor issued an FFP, or a shoreside processor or SFP issued an FPP, with a contractual relationship with a buying station to conduct groundfish buying station activities for that processor."*

Tender vessels provide a written fish ticket for groundfish received from a CV, which are provided to the associated processor upon delivery. The processor then prepares all of the landing reports in eLandings individually, which involves an employee at the processor entering the written data provided by the tender vessels into eLandings. eLandings is an internet-based program that uploads the following information gathered by the tender vessel directly to an agency server:

1) delivery information, which includes number of observers, crew size, management program name and identifying number if applicable, ADF&G statistical area of harvest, date, gear type, and whether the delivery was from a buying station;

2) landed scale weight; and
3) discard or disposition information.

Although there is an optional field in the eLandings landing report for tender identification number, there is currently no regulation requiring that tender deliveries be identified. If the tender vessel is not identified, there is no way to distinguish a CV delivery to a tender from a CV delivery to a processor. The landing report is associated with the CV and the processor as if the CV delivered to the processor directly.

A CV's landings to a tender may take 5 to 7 days before electronically transmitted to NMFS. After a CV makes a landing to a tender, the shoreside processor has 7 days to get the fish ticket data entered in eLandings[2]. Tenders do not have eLandings and the shoreside processors cannot enter data into eLandings without the CV's CFEC permit. Currently the tenders issue paper fish tickets to vessels, which are then entered by the processor in eLandings once the tender is offloaded at port.

The tLandings application is used locally on the tender and does not require web access. The tLandings application is loaded onto a thumb drive with a list of the authorized users, the processor's vessel list, and a species list, and includes the option for the processor to add a price list. Landings reports are created and stored on the thumb drive. The application creates a printable fish ticket, which is printed on board the tender vessel and signed by the delivering CV operator. Once the tender trip is completed, the thumb drive is provided to the shoreside processor for upload into the eLandings repository database. The processor then uploads the eLandings report to a central agency server. Validation protocols and business rules are imbedded in the tLandings application code to provide immediate validation at the point of reporting. All basic mathematical sums are automated as well. This system enables one-time data entry on the tender vessel and the information is transferred to the processor, and then to the agency via eLandings. This process is more streamlined than the paper-based reporting and also increases timeliness (Northern Economics, Inc., 2015).

In November 2015, the ADF&G adopted a regulation to require the use of tLandings for tender vessels that have submitted 2,000 salmon fish tickets or bought over 20 million pounds of salmon in 2012, 2013, or 2014, and for all groundfish delivered to tender vessels in State of Alaska (State) waters. ADF&G estimated that roughly 55 tender vessels would meet the threshold for the new regulation, but many already used the tLandings system for salmon and groundfish reporting in State fisheries. The State's tLandings requirement was effective January 2016. Though the use of tLandings in the Federal fisheries is currently voluntary, the program is being used by a growing number of tender vessels and processors.

1.5 Tender Vessel and Processor Activity in the BSAI and GOA Groundfish Fisheries

This section provides an overview of tender vessel and processor activity in Federal Bering Sea/Aleutian Islands (BSAI) and GOA groundfish fisheries from 2009 through 2015. Given the State tLandings requirement for all tender vessels receiving State groundfish and processors requiring contracted tender vessels, as described in Section 1.4, the data separate tender vessels based on whether they received only Federal or both Federal and State groundfish during the years analyzed. The large volume of State Pacific cod deliveries to tender vessels indicates that a significant number of tender vessels may already be equipped with tLandings to meet State regulations, resulting in minimal cost to extend the tLandings requirement to tender vessels also receiving Federal groundfish harvest. This is meant to provide a realistic estimate of the number of tender vessels and processors affected by this action. However, because NMFS does not have authority over State implementation of tLandings, this analysis considers

[2] ***eLandings*** is the Interagency Electronic Reporting System for reporting commercial fishery landings in Alaska.

all tender vessels receiving Federal groundfish affected by this action, regardless of whether they also receive State groundfish.

1.5.1 Tender Vessel Activity in the BSAI and GOA

The practice of tendering is most prevalent in the GOA Pacific cod fishery, particularly in the trawl and pot gear sectors in reporting areas 610 and 620. The prevalence of tender activity within the fishery is determined by the proportion of overall sector harvest delivered to tender vessels. However, as mentioned in the purpose and need for this action (Section 1.2), the reliability of data available describing tender vessel activity is questionable due to voluntary tender vessel identification in the eLandings application. This does not entirely discount the available data, especially to inform general behavioral patterns. The available data describing tender vessel activity is provided in an appendix to "Deployment of Observers on Catcher Vessels Delivering to Tender Vessels Discussion Paper," which was presented to the Council in February 2016 (NPFMC 2016).[3]

Table 1 shows that in 2015, 30 tender vessels received Federal groundfish. The table shows that 21 of the 30 tender vessels received both Federal and State groundfish in 2015. It is likely that the tender vessels receiving both State and Federal groundfish will be equipped to use the tLandings application to meet State requirements. Additionally, a representative of the Alaska Independent Tenderman's Association stated that many members of that organization have been using the tLandings application voluntarily since it was first introduced (Lisa Terry, personal communication).[4]

Table 1 Overview of the number of tender vessels that received only Federal groundfish or both Federal and State groundfish in the BSAI and GOA management areas in a given year

Year	Only Federal	Federal and State	Total Tender Vessels
2009	4	10	**14**
2010	3	13	**16**
2011	15	16	**31**
2012	23	19	**42**
2013	19	21	**40**
2014	15	20	**35**
2015	9	21	**30**

Source: ADF&G/NMFS AKR Fish Tickets, data compiled by AKFIN

1.5.2 Processors Receiving Tendered Groundfish

Table 2 shows the number of processors that received Federal groundfish tender vessel deliveries from 2009 through 2015. This table can be used in combination with Table 1 to determine the annual ratio of tender vessels to processors. From 2009 through 2015, the average ratio of tender vessels to processors receiving deliveries from tender vessels was about 3:1.

The number of processors provided in Table 2 includes shoreside processors and stationary floating processors.

[3]The data is broken down both by gear sector and target species (Pacific cod and pollock).
[4] Lisa Terry, Executive Director, Alaska Independent Tenderman's Association, personal communication.

Table 2 Number of processors receiving deliveries from tender vessels delivering Federal groundfish

Year	Number of Processors
2009	10
2010	12
2011	13
2012	12
2013	13
2014	11
2015	8

Source: ADF&G/NMFS AKR Fish Tickets, data compiled by AKFIN

1.5.3 Transporter Vessels

Under State regulations, a vessel can act as a transporter vessel for associated CVs, but regulations describing transporter vessels do not currently exist for Federal fisheries. Should the practice of transporting unprocessed fish for associated CVs extend to Federal fisheries, there is the potential for the same data timeliness and reliability problems to occur as currently exist with tenders. Specifically, if a tender vessel is required to use the tLandings application, but a transporter vessel is not (either explicitly or by omission from the regulatory language), there could potentially be the same data reliability issues that prompted the Council to recommend a tLandings requirement in February 2016. In 2015, two vessels inquired with NMFS Office of Law Enforcement (OLE) in Kodiak, Alaska, about the possibility of operating as transporters in the Federal Pacific cod pot fisheries, but there is no indication that either of these vessels actually operated as transporter vessels in the Federal groundfish fisheries.

The distinction between tender vessels and transporter vessels is the entity for which they are transporting unprocessed fish. While tender vessels are defined in Federal regulations as "a vessel that is used to transport unprocessed fish or shellfish received from another vessel to an *associated processor* [emphasis added]," [5] transporter vessels would transport unprocessed fish or shellfish for *associated CVs*. Because of the Federal requirement for a contractual relationship with a processor, a vessel acting as a transporter vessel under the State definition would not be categorized as a tender vessel for the purposes of Federal regulation compliance.

In 2003, the Alaska Legislature created the transporter vessel classification in response to concerns regarding the availability of processor-affiliated tender vessels. CVs introduced transporter vessels as a possible solution, which would give the CVs the ability to directly contract with vessels for the purpose of transporting unprocessed catch from the fishing grounds to a buyer. However, State regulations required the fisherman to be present at the point of sale. This regulation allowed for deliveries to tender vessels as they operated as agents of the processor and took possession of the catch on the fishing grounds, making the tender vessel the point of sale. Without the contract with the processor, a third-party vessel would not be able to take a delivery of fish from the CV and transport it to the processor. To address this, the Alaska Legislature passed a bill that created a transporter vessel classification and modified delivery requirements to accommodate deliveries by transporter vessels.

Vessels acting as transporters for State fisheries must carry a valid Fish Transporter Permit issued by ADF&G, which must be renewed annually. Vessels must also have a valid CFEC vessel license, with the "transporter" option selected under the types of fishing activity. Prior to transporting any fish, transporters must register with the area management biologist or designated department representative. Additionally,

[5] 50 CFR 679.2

transporters must "check out" of the area when they cease operations. Transporters may only transport fish from a person who holds a CFEC commercial fishing permit for the species, area, and gear type used to harvest the fish being transported. Transporters are responsible for writing the fish tickets for all fish received. Transporters are to write their Fish Transporter Permit code number and vessel ADF&G number on top of the fish ticket. The fisherman retains ownership of the fish while the fish are being transported to a buyer. Transporters are liable for any undersized or illegal fish aboard their vessel, and are limited to operating in the State commercial salmon, herring, and Pacific cod fisheries.

Because a vessel acting as a transporter under the State definition would not be categorized as a tender under the Federal regulations, none of the Federal regulations that tenders must comply with would apply to transporter vessels. Although the extent of participation in the Federal groundfish fisheries by transporter vessels is thought to be minimal at this time, the possibility of participation in the future by vessels that perform some of the same functions as tenders but are not subject to the Federal R&R requirements could create the potential for the same type of data reliability issues that currently exist for tenders.

1.6 Alternatives

During the February 2016 Council meeting, staff presented a discussion paper (NPFMC 2016) identifying a suite of alternatives for Council consideration regarding the deployment of observers on CVs delivering to tender vessels. In the discussion paper, analysts identified an optional field in eLandings for processors to enter the tender vessel identification number—thereby identifying the delivery as made by a tender vessel—as a reason for not knowing the reliability of tender vessel delivery data. To address this concern, analysts recommended a tLandings reporting requirement for tender vessels to have reliable data to better understand if there was a bias in observed versus unobserved CV deliveries to tender vessels. As part of the Council motion associated with the discussion paper, the Council recommended NMFS pursue a tLandings R&R requirement to provide more reliable tender vessel delivery data. Alternative 2 is the Council's preferred alternative.

Alternative 1 Status quo, No Action

Alternative 2 Preferred Alternative: Require all tender vessels receiving Federal groundfish catch to enter landings reports into tLandings, and require processors to use tLandings landings reports to enter data into eLandings.

1.6.1 Alternatives Considered but Not Moved Forward

As noted in Section 1.5.3, transporter vessels perform many of the same functions as a tender vessel and may create some of the same problems that currently exist with obtaining timely and reliable landing data. However, transporter vessels have a number of characteristics that differ from tenders, namely the lack of contractual relationship with a processor. Successful use of tLandings relies on the relationship between a processor and a tender, and places responsibilities on the processor for providing tLandings to the tender vessel, for training the tender vessel operators, and for integrating the tLandings data into the processor's landing report. For these reasons, NMFS recommends that further analysis should be completed to assess the level of participation and particular data collection needs for transporter vessels before moving forward with any specific R&R requirements on transporter vessels.

On a separate note, in the developmental stages of the analysis for a tLandings R&R requirement, an alternative was suggested to make the field identifying the tender vessel identification number in the eLandings system mandatory for the processor completing the eLandings report. This would have addressed part of the purpose and need identified by the Council at the February 2016 meeting, but would

not have contributed to improving tender vessel data reliability and timeliness for inseason fisheries management and catch accounting. Therefore, the alternative to only change the field identifying tender vessels on the eLandings landing report from optional to mandatory would not have fulfilled the purpose and need of this action.

1.7 Methodology for Analysis of Impacts

The evaluation of impacts in this analysis is designed to meet the requirement of E.O. 12866, which dictates that an RIR evaluate the costs and benefits of the alternatives, to include both quantifiable and qualitative considerations. Additionally, the analysis should provide information for decision makers "to maximize net benefits (including potential economic, environment, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires another regulatory approach." The costs and benefits of this action with respect to these attributes are described in the sections that follow, comparing the No Action Alternative 1 with the preferred alternative, Alternative 2.

The cost range estimates in Table 3 were compiled from various retailers for the products. No specification criterion (e.g., system performance standards, storage space, RAM) were set for the cost range, and all cost ranges provided represent products available for purchase through general retailers. These cost ranges were compared to cost estimates provided by Northern Economics, Inc., in their analysis that analyzed the cost and benefits of IERS on the Alaska groundfish and salmon industries (Northern Economics, Inc., 2015). The comparison to the Northern Economics analysis is based on the fact that the same cost categories apply in both analyses. However, the Northern Economics analysis evaluated a number of fisheries with a wider range of variables, including number of communities affected, which contributes to the slight difference in cost estimates. The Northern Economics analysis also differs from this RIR as it included requiring eLandings and the associated costs and benefits, which are already required in 50 CFR 679.5(e).

The cost ranges provided in this analysis are based on three main assumptions: 1) the availability and cost for each item are the same regardless of location; 2) each tender vessel would have to purchase all the equipment required for tLandings; and 3) operating costs after implementation would be relatively minor, so this analysis primarily focuses on the initial investment of tLandings.

Based on the 2015 data, there would be at most 30 vessels affected by this R&R requirement as shown in Table 1. However, the State tLandings reporting requirement for tender vessels receiving State-waters groundfish already requires 21 of the 30 tender vessels to be equipped to use tLandings. Additionally, as mentioned in Section 1.5, some tender vessel operators receiving groundfish from Federal waters use the tLandings program voluntarily. Therefore, it is likely that fewer than 30 tender vessels will have to make the initial investment to equip their vessel to use tLandings.

Given that tender vessels operate under a charter contract with a processor, there may be cases where the processor provides some of the equipment necessary to operate the tLandings application, or the negotiated contract takes the cost of equipment into account. While the cumulative cost is presented in this section, it is not meant to imply that any one entity would be responsible for the total cost. There are a number of potential combinations of which entity is responsible for purchasing a specific equipment item. Therefore, the cost of equipment has been presented under general costs. Table 3 shows the costs associated with this action, but does not specify the entity that would bear the cost for a specific equipment item.

Additionally, under State regulations (5 AAC 39.130), when a tender vessel takes delivery of Federal groundfish in State waters, the tender vessel is required to print out a fish ticket, even if the tender vessel operator is recording the information in tLandings and will submit the tLandings application to the

processor, rather than submitting the paper fish ticket. While this is not a Federal requirement, analysts have included costs for tender vessels associated with printing fish tickets, because it is a cost of doing business for a tender vessel related to recordkeeping and reporting.

As previously noted, most tender vessels likely have one or more of the items aboard their vessel as a routine equipment item for their current operations. As such, the costs presented represent the maximum cost per tender vessel as a result of implementation; the actual cost per tender vessel is likely to be less.

Projecting depreciation for consumer electronics used aboard tender vessels is difficult given the absence of empirical data. Typically, consumer electronics have the highest depreciation rates (up to 50 percent). Factoring in the operating conditions while at sea, those rates could be even higher. Because this analysis focuses on the initial capital investment made by tender vessel owners to comply with the regulation, depreciation was not factored into the cost projection. Similarly, the assumption for training costs is that the greatest investment would be the initial training, but that subsequent refresher courses could be done as necessary. As such, training for tLandings is analyzed as a cost of implementation, but not as a regular operating cost.

1.8 Analysis of Impacts: Alternative 1, No Action

1.8.1 Tender Vessel Operations

Selecting the no action alternative would continue the practices described in Section 1.4. While this alternative would not require tender vessels to enter landings data into tLandings, there are a growing number of instances where tender vessel operators use the program voluntarily. Additionally, the State's recent tLandings requirement will result in more tender vessels being equipped to operate the tLandings application; but there would be no requirement for them to use it when accepting Federal groundfish. However, with more vessels equipped to use tLandings, it is possible that a greater number of them would start using the application voluntarily when accepting Federal groundfish, if it proves more efficient for their operation. Regardless, the voluntary use of tLandings would not address the purpose and need for this action, described in Section 1.2.

1.8.2 Processors

The selection of the no action alternative would relieve processors of having to incur the additional costs associated with tLandings relative to this action that are described in Section 1.9.3. However, given that a growing number of tender vessels are currently using the tLandings application voluntarily, and all processors receiving Federal groundfish also receive State groundfish, processors are likely already incurring the cost associated with tLandings. Additionally, there is a possibility that with the State requiring the use of tLandings, processors may transition to requiring all contracted tender vessels to use the tLandings application to standardize reporting for their staff; it may be more efficient for the processor to establish a uniform reporting procedure that meets the State's reporting requirement instead of having a reporting procedure for State groundfish and a separate procedure for Federal groundfish. Should the processors impose this requirement on tenders with which they contract, those costs would be a private-sector decision, not attributable to the public sector action (or no action). However, this analysis focuses solely on the cost of implementing this Federal action.

1.8.3 NMFS

Under status quo, the processor is responsible for the information provided by the tender vessel on the fish ticket, as described in Section 1.4. The fish tickets are issued to associated tender vessels and have

the processor identification number printed on them. Should the tender vessel provide an errant fish ticket, the processor is responsible for tracking down the tender vessel to correct the information. If an infraction is identified by NMFS OLE, the processor is the point of contact and citations are issued to them, if necessary. If OLE needs to make contact with the tender vessel, the processor is responsible for recalling the tender vessel to meet with OLE.

1.9 Analysis of Impacts: Alternative 2, Require all tender vessels receiving Federal groundfish catch to enter landing reports into tLandings, and require processors to use tLandings landing reports to enter data into eLandings (preferred alternative)

The purpose of this alternative is to extend the benefits of IERS to tender deliveries, to address management concerns caused by lack of information regarding CVs delivering to tender vessels. The goal of this alternative is to address timeliness of data and to provide more reliable identification of tender deliveries. By requiring tender vessels operating in Federal groundfish fisheries to use tLandings, reporting requirements would be consistent with State groundfish and salmon fishery tender R&R requirements.

The Northern Economics report discussed costs and benefits associated with tLandings (Northern Economics, Inc., 2015). Much of the information presented under Alternative 2 is provided by this analysis.

According to the outreach work done as part of the Northern Economics analysis, implementation of the tLandings system was generally viewed as a substantial improvement by all stakeholders. The only group that appeared to be generally opposed to the tLandings system was some tender operators with limited computer skills. All other tender operators, processors, and agency staff indicated the tLandings system was generally beneficial. Processors noted that the implementation of the tLandings system improved the efficiency of their tender operations. Those efficiencies resulted in decreased costs. Tender operators with no more than a minimal level of computer knowledge were reported to like the new system (Northern Economics, Inc., 2015).

1.9.1 General Costs

The general costs associated with the regulatory requirement for tender vessels to enter landing reports into the tLandings application are mainly attributable to equipment and training. The entities that would bear the cost of equipment are described in greater detail in Section 1.9.1.1.

The training costs would likely be paid by agencies and the processor. NMFS and ADF&G would provide initial training for processors on the use of tLandings; it would be the processors' responsibility to provide training for their contracted tender vessels. This is described in Section 1.9.1.2.

1.9.1.1 Cost of Equipment

Table 3 provides a cost breakdown of the equipment necessary to use the tLandings application. The second column, titled "Cost Rang," shows the cost range for the item for the individual tender vessel. The "total" row, therefore, shows the expected cost range to equip a single tender vessel with the requisite equipment. This total assumes that all of the items would have to be purchased as a result of this action, which would be unlikely as many tender vessels use some of the listed equipment routinely.

Table 3 Equipment required for tLandings and the cost range

Equipment	Cost Range
Laptop (with numeric keypad or separate numeric keypad)	$500 – $1,500
Separate Numeric Keypad*	$20 – $50
Thumb-drive or External Hard drive	$25 – $150
Printer	$25 – $200
Ink cartridges	$35 – $60
Paper (per ream)	$10 – $15
Magstripe Reader	$50 – $100
Shipping**	$0 – $50
Total	**$665 – $2,125**

*Tender vessels would have the option to purchase a separate, external numeric keypad if the laptop does not have one built in.
** Shipping is a highly variable cost, and may not apply to every situation, especially if the entity purchasing the equipment is able to acquire it in-store.

To meet the goal of electronic reporting on board a tender vessel, each vessel needs a laptop computer with a numeric key pad, a basic laser printer, a magstripe reader, and thumb drives that contain the tLandings application. The initial setup costs could be as little as $500 for a laptop and printer, but less expensive equipment may need to be replaced more often. Similar to the cost range identified in Table 3, the Northern Economics analysis found that using the tLandings system was estimated to increase the annual cost to outfit and operate a tender by about $1,000 to $2,300. The slight variability in the cost ranges provided can be explained by the specific products analysts used to estimate cost. Given the great degree of overlap and the large cost range associated with each product, the variation in cost range estimates is reasonable. Since tender vessels operate under a charter contract with processors, annual compensation for tendering services are not available to compare the equipment cost to the net profit of tender vessels.

Note, the shipping cost range provided is highly variable and would not be a factor if the equipment was purchased in-store, or if the retailer offered free shipping. However, even in those scenarios, there are likely to be costs associated with transporting the equipment to the processor and/or the tender vessel.

The average lifespan of a laptop computer is three to five years. This timespan would likely be shorter aboard a tender vessel, given the environmental conditions the computer would be subject to; one processor noted that tenders are not an equipment-friendly environment. This would be the case for any electronic device aboard the vessel, but certain steps could be taken to ensure relative longevity of a certain product. For example, proper storage of the thumb drive or external hard drive would ensure both product reliability and longevity. As such, thumb-drives/external hard drives, an external numeric keypad, and a magstripe reader would likely need to be replaced less frequently. While these practices would ensure less frequent replacement of laptops, hardware obsolescence is unavoidable. Regular maintenance of laptops and other computers would lengthen the amount of time the machine can be used effectively.

Tender vessels would not have to purchase an additional laptop to use tLandings if they already use a laptop aboard the vessel. There are no performance standards for laptops using the tLandings application, so the tLandings application could be used on an existing laptop aboard the tender vessel.

Thumb drives and external hard drives would serve the same function for the tLandings application. Currently, the tLandings application is loaded onto thumb drives and distributed. Cost estimates for external hard drives have been included as an alternative mode of storage. There are advantages and

disadvantages to both. Thumb drives are smaller, but have less storage space (options for less than $50 could have as much as 128GB of storage). Conversely, hard drives are larger (roughly the size of a wallet), but have more storage space (as much as 3TB). Larger hard drives (in both size and storage) are available.

In summary, the annual cost of equipment to be used aboard a tender is estimated to range from about $665 to $2,125. The cost depends on the types of computers and printers purchased. Costs also vary depending on how often the equipment needs to be replaced because of damage, failure, or simply being obsolete. In most cases, the primary costs for tender operators are associated with installing, learning, and operating the tLandings system. In the context of overall equipment costs on a tender, the equipment costs associated with tLandings are likely to be relatively limited (Northern Economics, Inc., 2015).

1.9.1.2 Cost of Training

As mentioned in Section 1.9.1, NMFS would shoulder the responsibility for training processor staff, and the processors' staff would then train contracted tender vessels on the proper use of tLandings. However, given the use of the program in the State groundfish fishery, it is unlikely that many tender vessel operators will need to be trained for the first time.

In the Northern Economics analysis, the cost of training was described by salmon tender operators. Though it is a different fishery, the cost of training would likely be similar for groundfish fisheries. Under the tLandings system, one firm operating in Bristol Bay indicated that it spent approximately $2,500 to train its 18 tender operators and crew. This cost included the time of one administrative staff person (about five days), two hours of training for each tender operator before the season, and about one hour of additional training for each tender operator during the fishing season. Another operation did not indicate the costs, but did note that all tender operator crew were paid for training. They were compensated by the plant at their normal daily rate for approximately one day.

While training tender operators to use tLandings has a demonstrable associated cost, the three partner agencies associated with IERS have developed user manuals for all components of IERS, which are available online.[6] These manuals have streamlined the training associated with components of IERS and provide a reference for questions that may arise during day-to-day operations. Additionally, training modules have been developed for processors and tender vessel operators to familiarize themselves with the programs before having to submit a landing report. Recently, tLandings training videos have been produced with great success. Training materials developed by NMFS and the State demonstrate steps the partner agencies have taken to mitigate IERS training costs to processors and tender vessels.

Operating tLandings requires some training and practice for both the tender vessel operators and the fish ticket clerk at the processor. Tender vessel operators that are proficient using a computer typically complete the tLandings reports themselves. Captains that do not have the necessary computer skills either get additional computer training or hire someone to complete the tLandings reports. It is reported that processing plant staff may go on each tender for about one hour to train the tLandings operator. After the initial training, the plant staff field radio and cell calls throughout the season to address questions as they arise. One company noted that no tender operator has ever declined the opportunity to work for their plant because of the tLandings system (Northern Economics, Inc., 2015).

[6] https://elandings.atlassian.net/wiki/display/doc/eLandings+User+Documentation

1.9.2 Cost and Benefits to Tender Vessels

The primary benefit to tender vessels entering landing reports into tLandings is reliability. Compared to manually completing fish tickets under status quo, electronic fish tickets would reduce the likelihood of being called by a processor to explain issues such as illegible handwriting. With a hard copy as the sole catch accounting documentation, there is a risk, however slight, of that information being lost or damaged to the point that it is illegible. While there are no data suggesting this is a regular occurrence, it is a risk associated with having a single hard copy. tLandings would accumulate all the fish ticket data onto a thumb-drive. This would decrease the chance of misplacing or damaging individual fish tickets. If the tender vessel leaves the processor and a staff member entering data is unable to read the fish ticket, the processor must contact the tender vessel and the tender operator has to spend time answering questions and clarifying the data. Using tLandings would reduce that likelihood.

The costs to tender vessels would be primarily equipment and training, described above in Sections 1.9.1.1 and 1.9.1.2, respectively.

1.9.3 Cost and Benefit to Processors

The costs to processors of implementing a tLandings requirement primarily involve training tender vessel operators, which is described in Section 1.9.1.2. Additionally, processors may be responsible for certain equipment items, developing and maintaining third party software, and will need to invest staff time and resources to the implementation of tLandings into their regular business operations. These elements are discussed in Sections 1.9.1.1, 1.9.3.2, and, 1.9.3.1, respectively.

A third cost for processors is information technology (IT) and the development and maintenance of third-part software. Processors contract with technology firms to update and maintain internal R&R software they use. Updates to the tLandings application may require processors to modify their existing software (which is usually a cost of a contractor updating third party software). Processors would also be required to update the software annually to comply with regularly scheduled updates to the tLandings application, which would result in an annual cost to the processor to update their own system. This is explained in greater detail in Section 1.9.3.2.

1.9.3.1 Staff Time and Resources

Processor staff time will be needed to configure the tLandings thumb drives and upload tLandings data to the eLandings server. But there is likely to be an overall cost efficiency associated with the use of tLandings for processors. In particular, there will be considerably less staff time devoted to data entry. There is already an eLandings reporting requirement, so processors likely already have staff proficient with the IERS software. Although staff would need to learn how to configure the tLandings thumb drives and become familiar with uploading landing reports from the tender, these components should not much additional staff training for processor catch reporting personnel.

Additionally, the business rules built into IERS are an important factor in reducing data entry errors. Many of the data fields are subject to these business rules. The information entered and submitted in tLandings and eLandings is validated against database tables and programmed business rules. If the information submitted passes validation, the program will accept the information. If the information entered in a field fails validation, the eLandings System will send a message to the user that identifies the specific problem. Examples of fields that use these validation systems include the statistical areas, vessel numbers, permit numbers, species codes, and product codes. As a result, there is a much smaller chance of misreported data or transposed data entries. Fixing these problems at the time they are entered into the

system greatly reduces the time required to find and correct these errors later. It also reduces the possibility that incorrect data will be used to make future management decisions.

1.9.3.2 IT Contracting

Most processors contract with IT firms to provide technology services. These firms often provide third party software that the processors use during their regular business operations, and also provide third party proprietary software to meet Federal reporting requirements. While this is efficient for processors, as they do not have to directly manage their software or make sure it is current, there are additional costs associated with contractor services. These costs are contractually agreed upon rates between the contractor and the processor and are independent of Federal or State agencies. This means that even if the updates are provided by the agency, the contractors may charge the processor to update the third party software to bring it up to date. However, for the purposes of this analysis, the cost to the processor is unknown.

The initial implementation of tLandings would require processors to update their existing software package to include the tLandings application, if it is not already included. This likely requires contracted IT providers to update the processor's third party software. The cost of this service is unknown as it is a contractual arrangement between the processor and the IT provider.

Additionally, NMFS would require the tLandings application be updated annually to ensure participants have the most up to date version. If the processor is charged by the IT contractor to perform regular maintenance and updates, this would translate into an annual cost to the processor to ensure the software meets NMFS specifications.

1.9.4 Cost and Benefit to Agencies

A number of benefits were identified through the implementation of the IERS eLandings reporting mechanism, and those benefits would extend to the use of tLandings. The main benefit for NMFS would be improved data timeliness and reliability for CVs delivering to tender vessels. Improved data would benefit a number of NMFS programs, including catch accounting and inseason management and the Observer Program (described in Section 1.9.4).

Data timeliness and usefulness are paramount to effective inseason management. The primary costs to the agency would be in the training of processors, who would then train crew of contracted tender vessels to use tLandings. However, as described in Section 1.9.1.2, NMFS has developed user manuals for all aspects of IERS that would limit the amount of agency staff time and resources required to successfully train users in the use of tLandings. Furthermore, ongoing tLandings education workshops have been held at Alaska Independent Tenderman's Association meetings in preparation for the State groundfish tLandings requirement.

IERS is an interagency reporting system ("agency" in this section refers to NMFS and ADF&G); therefore, both would likely incur costs associated with this action.

1.9.4.1 Agency Costs

The requirement for tLandings in the Federal fisheries would create additional costs for the IERS partner agencies in staff programming time to support tLandings. However, the primary costs associated with this action would be borne by NMFS and include the training of processors, updating training materials for Federal groundfish, and any application work necessary to maintain tLandings.

Adding a tLandings requirement would likely increase agency costs for enforcement. By requiring the use of tLandings, there may be scenarios where OLE would have to deal directly with the tender vessel instead of the processor, which could result in increased costs to OLE. These costs would include an increase in the staff time and resources necessary to enforce the regulation, transportation costs, and potential logistical challenges.

1.9.4.2 Benefits in Data Timeliness and Usefulness

Data timeliness and usefulness is paramount to effective inseason management. The use of tLandings would enable the agency to identify tender deliveries, which is currently not possible for tender landings where the tender has not been recorded on the landing report. Adoption of tLandings also would add efficiencies in the transfer of reliable data. The use of tLandings would improve inseason management of CV target fisheries, including pollock and Pacific cod, in two ways. First, NMFS would have a consistent data source for catch per unit effort, which is used to project management actions, specifically fishery closures. NMFS uses a shoreside processor's (or stationary floating processor's) daily processing capacity (based on historical data and current vessels delivering to the shoreside processor) to determine the daily catch rates to project a closure. However, when shoreside processors use tenders, NMFS does not know how often nor how much the tenders deliver. The use of tLandings would inform NMFS on the amount of catch delivered to tender vessels by CVs, the incorporation of tender vessels into processors' business model, and the prevalence of tender activity in the Federal groundfish fisheries.

The second improvement from using tLandings is faster reporting of catch data to shoreside processors and then to NMFS, with less potential for errors. After a CV offloads to a shoreside processor, the data can be electronically transferred to NMFS (and ADF&G) within a few hours. A CV's landings to a tender may take 5 to 7 days before electronically transmitted to NMFS. Tenders do not have eLandings and the shoreside processors cannot enter data into eLandings without the CV's CFEC permit. Data from tLandings can be uploaded by the processor (and received by NMFS) as soon as the tender arrives in port, reducing the chances of transcription errors.

1.10 Summation of the Alternatives with Respect to Net Benefit to the Nation

A tLandings R&R requirement for tender vessels receiving Federal groundfish catch is expected to improve the timeliness and reliability of catch data. NMFS has identified electronic reporting through eLandings, seaLandings, or other NMFS-approved software as a way to improve data quality, automate processing of data, improve the process for correcting or updating information, allow for the availability of more timely data for fishery managers, and reduce duplicative reporting of similar information to multiple agencies. Incorporating tLandings into the array of existing electronic reporting mechanisms will help NMFS better understand fishing behavior and activity, and incorporate the best available information into use strategies, yielding a positive net benefit to the Nation.

2 Magnuson-Stevens Act

2.1 Magnuson-Stevens Act National Standards

Below are the 10 National Standards contained in the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), and a brief description of how the tLandings recordkeeping and reporting (R&R) requirement is consistent with the National Standards where applicable.

National Standard 1 – *Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the United States fishing industry.*

As identified in Section 1.9.4.2, a tLandings R&R requirement would increase the timeliness and reliability of catch data provided by tender vessels. Timely and reliable data will help inseason managers prevent overfishing and ensure optimum yield.

National Standard 2 – *Conservation and management measures shall be based upon the best scientific information available.*

As explained above, the tLandings reports would improve inseason catch accounting and provide more timely and reliable information to fishery managers.

National Standard 3 – *To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination.*

This R&R requirement is consistent with the management of individual stocks as a unit or interrelated stocks of fish as a unit or in close coordination.

National Standard 4 – *Conservation and management measures shall not discriminate between residents of different States. If it becomes necessary to allocate or assign fishing privileges among various United States fishermen, such allocation shall be (A) fair and equitable to all such fishermen; (B) reasonably calculated to promote conservation; and (C) carried out in such manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges.*

This action would not discriminate between residents of different states. All tender vessels receiving Federal groundfish will be required to enter fish tickets into tLandings regardless of port or State of origin.

National Standard 5 – *Conservation and management measures shall, where practicable, consider efficiency in the utilization of fishery resources; except that no such measure shall have economic allocation as its sole purpose.*

This action would improve catch accounting and ensure accurate inseason catch accounting, which would result in a more efficient utilization of the resource.

National Standard 6 – *Conservation and management measures shall take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches.*

A tLandings R&R requirement will take into account and allow for variations among, and contingencies in, fisheries and catches. This requirement will help fishery managers to better understand participation in

the fishery and inform future conservation and management measures as to variations in resource utilization.

National Standard 7 - *Conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication.*

The Interagency Electronic Reporting System is a cooperative reporting system between NMFS, Alaska Department of Fish and Game, and International Pacific Halibut Commission. This shared reporting system ensures cost to participants is minimized, and that duplication is avoided.

National Standard 8 – *Conservation and management measures shall, consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities by utilizing economic and social data that meet the requirements of paragraph (2), in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities.*

This action would have little, if any, adverse economic impacts on fishing communities.

National Standard 9 - *Conservation and management measures shall, to the extent practicable, (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.*

A tLandings R&R requirement does not direct fishing behavior, and would therefore not affect bycatch.

National Standard 10 - *Conservation and management measures shall, to the extent practicable, promote the safety of human life at sea.*

This action would not affect the behavior of participants at sea and is therefore not applicable to National Standard 10.

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