9110-04-P

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

46 CFR Parts 401 and 404

[Docket No. USCG-2017-0903]

RIN 1625-AC40

Great Lakes Pilotage Rates - 2018 Annual Review and Revisions to Methodology

AGENCY: Coast Guard, DHS.

ACTION: Final rule.

SUMMARY: In accordance with the Great Lakes Pilotage Act of 1960, the Coast Guard is establishing new base pilotage rates and surcharges for the 2018 shipping season. Additionally, the Coast Guard is making several changes to the Great Lakes pilotage ratemaking methodology. These additional changes include creating clear delineation between the Coast Guard's annual rate adjustments and the Coast Guard's requirement to conduct a full ratemaking every 5 years; the adoption of a revised compensation benchmark; reorganization of the text regarding the staffing model for calculating the number of pilots needed; and certain editorial changes.

DATES: This rule will be effective **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

FOR FURTHER INFORMATION CONTACT: For information about this document, call or email Mr. Todd Haviland, Director, Great Lakes Pilotage, Commandant (CG-

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SUPPLEMENTARY INFORMATION:

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I. Abbreviations

AMO	American Maritime Officers Union
CATEX	Unique Categorical Exclusions for the U.S. Coast Guard
CFR	Code of Federal Regulations
CPA	Certified public accountant
CPI	Consumer Price Index
DHS	Department of Homeland Security
ECI	Employment Cost Index
FOMC	Federal Open Market Committee
FR	**Federal Register**
GLPA	Great Lakes Pilotage Authority (Canadian)
GLPAC	Great Lakes Pilotage Advisory Committee
GLPMS	Great Lakes Pilotage Management System
NAICS	North American Industry Classification System
NPRM	Notice of proposed rulemaking
OMB	Office of Management and Budget
PCE	Personal Consumption Expenditures
RA	Regulatory analysis
SBA	Small Business Administration
§	Section symbol
The Act	Great Lakes Pilotage Act of 1960
U.S.C.	United States Code

II. Executive Summary

Pursuant to the Great Lakes Pilotage Act of 1960 ("the Act"),[1] the Coast Guard regulates pilotage for oceangoing vessels on the Great Lakes–including setting the rates for pilotage services and adjusting them on an annual basis. The rates, which in the 2017 shipping year ranged from $218 to $601 per pilot hour (depending on the specific area

[1] 46 U.S.C. Chapter 93; Public Law 86-555, 74 Stat. 259, as amended.

where pilotage service is provided), are paid by shippers to pilot associations. The three pilot associations that are the exclusive source of United States registered pilots on the Great Lakes use this revenue to cover operating expenses, maintain infrastructure, compensate working pilots, and train new pilots. We have developed a ratemaking methodology in accordance with our statutory requirements and regulations. Our ratemaking methodology calculates the revenue needed for each pilotage association (including operating expenses, compensation, and infrastructure needs), and then divides that amount by the expected shipping traffic over the course of the year to produce an hourly rate. This process is currently effected through a 10-step methodology and supplemented with surcharges, which are explained in detail in the notice of proposed rulemaking (NPRM) published on January 18, 2018.[2]

In this final rule, the Coast Guard is modifying the ratemaking methodology and establishing new pilotage rates for 2018 based on the new methodology. The modifications to the ratemaking methodology consist of a new compensation benchmark, updates and revisions to annually adjusted figures such as inflation rates and traffic volumes, organizational changes, and clarifications. In this final rule, we are establishing a new compensation benchmark based on input from the American Maritime Officers Union (AMO) 2015 contracts. Also, based on comments to the proposed rule that the Coast Guard received, we are changing the inflation adjustment index from the Consumer Price Index (CPI) to the Employment Cost Index (ECI). Additionally, from an organizational standpoint, we are moving, but not changing, the requirements of the staffing model from their current location in title 46 of the Code of Federal Regulations

[2] Great Lakes Pilotage Rates – 2018 Annual Review and Revisions to Methodology, 83 FR 2581, January 18, 2018.

(CFR) 404.103 (as part of "Step 3" of the ratemaking process), to the general regulations governing pilotage in 46 CFR 401.220(a). For clarification purposes, we are setting forth separate regulatory paragraphs detailing the differences between how we undertake an annual adjustment of the pilotage rates, and a full reassessment of the rates, which must be undertaken once every 5 years.

As part of our annual review, we are setting new rates for the 2018 shipping season. Based on the ratemaking model discussed in this final rule, we are establishing the rates shown in Table 1.

Table 1—Previous and New Pilotage Rates on the Great Lakes

Area	Name	Final 2017 pilotage rate	Proposed 2018 pilotage rate	Final 2018 pilotage rate
District One: Designated	St. Lawrence River	$601	$622	$653
District One: Undesignated	Lake Ontario	$408	$424	$435
District Two: Undesignated	Lake Erie	$429	$454	$497
District Two: Designated	Navigable waters from Southeast Shoal to Port Huron, MI	$580	$553	$593
District Three: Undesignated	Lakes Huron, Michigan, and Superior	$218	$253	$271
District Three: Designated	St. Mary's River	$514	$517	$600

This final rule is not economically significant under Executive Order 12866. This rule impacts 49 U.S. Great Lakes pilots, 7 applicant pilots, 3 pilot associations, and the owners and operators of approximately 215 oceangoing vessels that transit the Great Lakes annually. The estimated overall annual regulatory economic impact of this rate

change is a net increase of $2,830,061 in payments made by shippers from the 2017 shipping season. Because we must review, and, if necessary, adjust rates each year, we analyze these as single year costs and do not annualize them over 10 years. This rule does not affect the Coast Guard's budget or increase Federal spending. In Section VII of this preamble, we discuss the regulatory impact analyses of this final rule.

III. Basis and Purpose

The legal basis of this final rule is the Great Lakes Pilotage Act of 1960 ("the Act"), which requires U.S. vessels operating "on register" and foreign merchant vessels to use U.S. or Canadian registered pilots while transiting the U.S. waters of the St. Lawrence Seaway and the Great Lakes system.[3] For the U.S. Registered Great Lakes Pilots ("pilots"), the Act requires the Secretary to "prescribe by regulation rates and charges for pilotage services, giving consideration to the public interest and the costs of providing the services."[4] The Act requires that rates be established or reviewed and adjusted each year, not later than March 1. The Act also requires that base rates be established by a full ratemaking at least once every 5 years, and in years when base rates are not established, they must be reviewed and, if necessary, adjusted. The Secretary's duties and authority under the Act have been delegated to the Coast Guard.[5]

This final rule establishes new changes to the methodology in projecting pilotage rates, as well as revised pilotage rates and surcharges. Our goals for this and future rates are to ensure safe, efficient, and reliable pilotage services on the Great Lakes, and to provide adequate funds to maintain infrastructure. Additionally, we believe that the new

[3] See 46 U.S.C. 9301(2) and 9302(a)(1).
[4] See 46 U.S.C. 9303(f).
[5] Department of Homeland Security (DHS) Delegation No. 0170.1, para. II (92.f).

methodology will increase transparency and predictability in the ratemaking process and help complete annual rate adjustments in a timely manner.

IV. Background and Comment Topics

Pursuant to the Act, the Coast Guard, in conjunction with the Canadian Great Lakes Pilotage Authority (GLPA), regulates shipping practices and pilotage rates on the Great Lakes. Under Coast Guard regulations, all U.S. vessels sailing on register, and all non-Canadian, foreign merchant vessels (often referred to as "salties"), are required to engage U.S. or Canadian pilots during their transit through regulated waters. United States and Canadian "lakers," which account for most commercial shipping on the Great Lakes, are not subject to the Act.[6] Generally, vessels are assigned a U.S. or Canadian pilot depending on the order in which they transit a particular area of the Great Lakes, and do not choose the pilot they receive. If a vessel is assigned a U.S. pilot, that pilot will be assigned by the pilotage association responsible for the particular district in which the vessel is operating, and the vessel operator will pay the pilotage association for the pilotage services. For a more thorough summary of the background of Great Lakes Pilotage, see the summary in the 2018 pilotage rate NPRM (2018 NPRM).[7]

The ratemaking methodology, currently outlined in 46 CFR 404.101 through 404.110, consists of 10 steps that are designed to account for the revenues needed and total traffic expected in each district. The result is an hourly rate (determined separately for each of the areas administered by the Coast Guard).

[6] See 46 U.S.C. 9302. A "laker" is a commercial cargo vessel especially designed for, and generally limited to, use on the Great Lakes.
[7] 83 FR 2581, at 2583.

Steps 1 and 2 of the ratemaking methodology concern accounting for the operating expenses of the pilotage associations. In Step 1, "Recognize previous operating expenses" (§ 404.101), the Coast Guard reviews audited operating expenses from each of the three pilotage associations. This number forms the baseline amount that each association is budgeted. In Step 2, "Project operating expenses, adjusting for inflation or deflation" (§ 404.102), we develop the 2018 projected operating expenses. To do this, we apply inflation adjustors for 3 years to the operating expense baseline received in Step 1. The inflation factors used in Step 2 are multiplied by the baseline from Step 1. These inflation factors are from the Bureau of Labor Statistics CPI for the Midwest Region, or, if those factors were not available, from the Federal Open Market Committee (FOMC) median economic projections for Personal Consumption Expenditures (PCE) inflation (See Section V.C. for a policy discussion about inflation adjustments). This step produces the total operating expenses for each area and district. We did not receive comments on the operating expenses portion of the methodology this year.

In Step 3, "Determine number of pilots needed" (§ 404.103), the Coast Guard calculates how many pilots are needed for each district. To do this, we employ a "staffing model," described in § 404.103(a) through (c), to estimate how many pilots would be needed to handle shipping at the start and close of the season. This number is helpful in providing guidance to the Director of the Coast Guard Great Lakes Pilotage Office in approving an appropriate number of credentials for pilots.

For the purpose of the ratemaking calculation, the Coast Guard determines the number of working pilots provided by the pilotage associations (see § 404.103(d)), which is what we use to determine how many pilots need to be compensated via the pilotage

fees collected. We compare that number against the number provided by the staffing model, and we use the lesser of the two as the final result for Step 3.

In Step 4, "Determine target pilot compensation benchmark" (§ 404.104), the Coast Guard determines the revenue needed for pilot compensation in each area and district. This step contains two processes. In the first process, we calculate the total compensation for each pilot using a "compensation benchmark." In the 2018 NPRM, we proposed using a new benchmark based on the AMO-provided daily aggregate rates for first mates. We received numerous comments on the propriety and accuracy of that figure, which are addressed in the discussion below. We also proposed a system for adjusting that benchmark for inflation in future years. With regard to that proposal, we received comments on how to best account for inflation, which we address in Section V.C of this preamble.

Next, the Coast Guard multiplies the individual pilot compensation by the number of working pilots for each area and district (from Step 3), producing a figure for total pilot compensation. Because pilots are paid by the associations, but the costs of pilotage are divided up by area for accounting purposes, we assign a certain number of pilots for the designated areas and a certain number of pilots for the undesignated areas to determine the revenues needed for each area.

In Step 5, "Project working capital fund" (§ 404.105), we calculate a return on investment by adding the total operating expenses (from Step 2) and the total pilot compensation (from Step 4), and multiplying that figure by the preceding year's average annual rate of return for new issues of high-grade corporate securities. This figure constitutes the "working capital fund" for each area and district. We received comments

on the calculation and use of the working capital fund, which we address in Section V.E of this preamble.

In Step 6, "Project needed revenue" (§ 404.106), we add up the totals produced by the preceding steps. For each area and district, we add the projected operating expense (from Step 2), the total pilot compensation (from Step 4), and the working capital fund contribution (from Step 5). The total figure, calculated separately for each area and district, is the "revenue needed."

In Step 7, "Calculate initial base rates" (§ 404.107), we calculate an hourly pilotage rate to cover the revenue needed (from Step 6). We first calculate the 10-year traffic average for each area. Next, we divide the revenue needed in each area (from Step 6) by the 10-year traffic average to produce an initial base rate. We received comments on the propriety of the 10-year average traffic baseline figure, which we address in Section V.F of this preamble.

An additional element, the "weighting factor," is required under § 401.400. Pursuant to that section, ships pay a multiple of the "base rate" as calculated in Step 7 by a factor ranging from 1.0 (for the smallest ships, or "Class I" vessels) to 1.45 (for the largest ships, or "Class IV" vessels). Because this significantly increases the revenue collected, we need to account for the added revenue produced by the weighting factors to ensure that the formula doesn't require shippers to overpay for pilotage services.

In Step 8, "Calculate average weighting factors by area" (§ 404.108), we calculate how much extra revenue, as a percentage of total revenue, has historically been produced by the weighting factors in each area. We do this by using a historical average of applied

weighting factors for each year since 2014 (the first year the current weighting factors were applied).

In Step 9, "Calculate revised base rates" (§ 404.109), we modify the base rates by accounting for the extra revenue generated by the weighting factors. We do this by dividing the initial pilotage rate for each area (from Step 7) by the corresponding average weighting factor (from Step 8), to produce a revised rate.

In Step 10, "Review and finalize rates" (§ 404.110), often referred to informally as "director's discretion," we review the revised base rates (from Step 9) to ensure that they meet the goals set forth in the Act and 46 CFR 404.1(a), which include promoting efficient, safe, and reliable pilotage service on the Great Lakes; generating sufficient revenue for each pilotage association to reimburse necessary and reasonable operating expenses; fairly compensating pilots who are trained and rested; and providing appropriate profit to allow for infrastructure improvements. Because we want to be as transparent as possible in our ratemaking procedure, we use this step sparingly to adjust rates. The Coast Guard is not using this discretion in this final rule.

Finally, after the base rates are set, under § 401.401 the Coast Guard considers whether surcharges are necessary this year. Currently, we use surcharges to allow the pilotage associations to collect extra money to pay for the training of new pilots, rather than incorporating training costs into the overall "revenue needed" that is used in the calculation of the base rates. In recent years, the Coast Guard has allocated $150,000 per applicant pilot to be collected via surcharges. This amount is calculated as a percentage of total revenue for each district, and that percentage is applied to each bill. When the total amount of the surcharge has been collected, the pilot associations are prohibited

from collecting further surcharges. Thus, in years where traffic is heavier than expected, shippers that employ pilots early in the season could pay more than shippers that employ pilots later in the season, after the surcharge cap has been met. We received comments on the method by which surcharges are collected and on the amounts collected, which we address in Section V.G of this preamble.

V. Discussion of Comments and Changes to Methodology

In response to the January 18, 2018, NPRM, we received five substantive comment letters. We received three comment letters from organizations representing pilot associations on the Great Lakes: one comment from the president of the Western Great Lakes Pilots Association,[8] one comment from the president of the St. Lawrence Seaway Pilots' Association,[9] and one comment from the law firm K&L Gates, which represents the interests of the three Great Lakes pilot associations.[10] We received one comment from the law firm Thompson Coburn, which represents the interests of the Shipping Federation of Canada, the American Great Lakes Ports Association, and the United States Great Lakes Shipping Association (hereinafter "Industry commenters").[11] Additionally, we received one comment from the AMO.[12] Each of these commenters touched on numerous issues, and so for each response below, we note which commenters raised the specific points being addressed. In situations where multiple commenters raised similar issues, we attempt to provide one response to those issues.

Overall, the issues raised by the commenters fell into eight categories. The most substantive comments were in regard to the issue of the proposed interim compensation

[8] Docket number USCG-2017-0903-0004, available at *www.regulations.gov*.
[9] Docket number USCG-2017-0903-0007, available at *www.regulations.gov*.
[10] Docket number USCG-2017-0903-0006, available at *www.regulations.gov*.
[11] Docket number USCG-2017-0903-0008, available at *www.regulations.gov*.
[12] Docket number USCG-2017-0903-0005, available at *www.regulations.gov*.

benchmark, which we address in Sections V.A and B of this preamble. We also received comments on the proper measure of inflation by which to adjust compensation figures annually. Other parts of the ratemaking methodology were raised by commenters as well, including questions regarding the placement and application of the staffing model used to calculate the needed number of pilots, the amount and application of the working capital fund charges, the use of a 10-year average to calculate expected vessel traffic, and the collection and calculation of surcharges. Finally, commenters raised a variety of pilotage issues not directly related to calculating the 2018 shipping rates. We address each of these items in the subsections that follow.

A. Rationale for Change in Compensation Benchmark

The most substantive change proposed in the 2018 NPRM was the change in the benchmark compensation model, with the proposed switch from using the GLPA as a baseline to the "interim benchmark," which uses the AMO[13] 2015 aggregated wage and benefit information. In the NPRM, we stated that we proposed this change because, pursuant to litigation[14] filed by the industry, a court had found that the Coast Guard "failed to justify"[15] its decision to apply a 10-percent addition to the Canadian GLPA benchmark, and thus was arbitrary and capricious.[16] As this opinion was handed down in November 2017, the Coast Guard noted that "there is a need for an interim benchmark

[13] We note that in the NPRM, we referred to the American Maritime Officers Union as the "AMOU", but in their comments, they referred to themselves as "AMO". We use their preferred acronym in this document except when citing direct quotes that use other terminology.
[14] *American Great Lakes Ports Association, et al., v. Admiral Paul F. Zukunft,* Civil Action No. 16-1019, DC District Court, November 3, 2017.
[15] *American Great Lakes Ports Association, et al., v. Admiral Paul F. Zukunft,* Civil Action No. 16-1019, DC District Court, November 3, 2017, p. 5.
[16] 83 FR 2581, at 2587.

level to be developed on short notice and with limited time to gather new data."[17] We based the new benchmark on data provided by the AMO regarding its contract for first mates on the Great Lakes in the 2011 to 2015 period. We used the information from 2015, adjusting it for inflation to an equivalent 2018 rate, because it was the most recent publically-available information to which we had access. We stated that we proposed to use this benchmark to calculate compensation until we identify another suitable standard. We are currently conducting a comprehensive, multi-year analysis of pilot compensation that we hope will inform a new benchmark. This study will not be available before the 2020 ratemaking proceeding.

Nearly all commenters made arguments regarding the proposal to change the compensation benchmark. Many commenters stated that the Coast Guard should not have stopped using the Canadian compensation benchmark, but simply should have reanalyzed and adjusted the ten-percent increase it applied to account for health and pension differences. Alternatively, some commenters suggested that instead of using Canadian GLPA or AMO comparative information to establish a benchmark, the Coast Guard should use the benefit and salary information for other U.S. pilotage associations. We address these issues below.

1. Challenges with Canadian Comparison

In the 2016 ratemaking, the Coast Guard originally established a benchmark for target pilot compensation based on the total compensation of Canadian GLPA.[18] We chose the GLPA because "Canadian GLPA pilots provide service that is almost identical

[17] 83 FR 2581, at 2588.
[18] In this final rule, we refer to the U.S. dollar equivalent of the combined wages and benefits of Canadian Great Lakes pilots, using the conversion methodology described above, as the "Canadian benchmark," although we did not use that terminology in the 2016 ratemaking documents.

to the service provided by U.S. Great Lakes Pilots."[19] To calculate this benchmark, we started with the 2013 Canadian GLPA salaries, which we calculated to be $273,145 in Canadian dollars, or $255,037 U.S.[20] We then inflated that amount using Midwest CPI-U data for 2014 and 2015, and Federal Reserve inflation data for 2016, to arrive at an inflation-adjusted figure of $267,534.[21] Next, to match average annual wage increases of GLPA pilots, we applied an additional 3.5 percent annual real wage increase factor for each of the 3 years, to arrive at $296,467 as the final equivalent compensation figure for 2016.[22] Finally, we increased that figure by an additional 10 percent to address the "difference in status between GLPA employees and independent U.S. pilots,"[23] for a final "GLPA plus 10 percent" benchmark figure of $326,114. While we were not certain that a 10 percent adjustment for these differences was appropriate, we did note that the figure had been cited in a July 2014 Great Lakes Pilotage Advisory Committee (GLPAC) meeting as balancing the different status of the U.S. and GLPA pilots.

This GLPA-plus-10-percent benchmark of $326,114 formed the basis for our target compensation until the 2017 memorandum opinion[24] found it to be arbitrary and capricious and in violation of the Administrative Procedure Act. Specifically, the court found that certain statements made at the 2014 GLPAC meeting did not constitute an

[19] Great Lakes Pilotage Rates – 2016 Annual Review and Changes to Methodology, Notice of Proposed Rulemaking (September 10, 2015), 80 FR 54484, at 54497.
[20] See 81 FR 11908, at 11933 to determine how we arrived at 2013 compensation. We then converted that number to U.S. dollars at the 2013 exchange rate of 1.071 CAD to USD.
[21] See 81 FR 11908, at 11933, Figure 19.
[22] See 81 FR 11908, at 11933, Figure 21.
[23] 80 FR 54484, at 54498. This referred to the fact that "GLPA pilots are Canadian government employees and therefore have guaranteed minimum compensation with increases for high-traffic periods, retirement, healthcare and vacation benefits, and limited professional liability. In addition, GLPA pilots have guaranteed time off while U.S. pilots must be available for service throughout the shipping season and without any guaranteed time off." See 80 FR 54484, at 54497.
[24] *American Great Lakes Ports Association, et al., v. Admiral Paul F. Zukunft,* Civil Action No. 16-1019, DC District Court, November 3, 2017, p. 25.

adequate basis for the 10-percent adjustment.[25] Based on the 2017 memorandum opinion, in the 2018 NPRM, we proposed adopting the interim benchmark, based on AMO information.[26] However, several commenters suggested that we had not responded appropriately to the court's 2017 opinion. These commenters argued that because the court found that only the 10-percent increase was arbitrary and capricious, the Coast Guard should replace only that portion. One commenter stated that "all the Coast Guard needs to do is return to the administrative record for the 2016 rulemaking, analyze the multiple comments in support of a 25- to 37-percent adjustment, and explain its reasoning for the adjustment it determines is most appropriate.[27] Another commenter stated that the court "require[d] the Coast Guard to reconsider more carefully the pilots' position that the Canadian benchmark compensation should be increased by 25 to 37 percent to account for differences between the two pilotage groups, particularly the government health care and pensions received by the Canadians."[28]

We agree with the commenters that the court found only the 10-percent addition to be unjustified, and that the Coast Guard would legally be able to propose using the GLPA wages and benefits as a starting point to develop a revised benchmark. Indeed, when considering a revised benchmark for the 2018 ratemaking, we did reanalyze GLPA compensation. To update our information regarding the value of the Canadian benchmark, we analyzed the 2016 GLPA annual report to calculate a new average total compensation figure. Using that information, and applying the same methodology as we did in the 2016 ratemaking, we calculated that the 2016 GLPA pilot average

[25] *American Great Lakes Ports Association, et al., v. Admiral Paul F. Zukunft,* Civil Action No. 16-1019, DC District Court, November 3, 2017, p. 25.
[26] 83 FR 2581, at 2587-88.
[27] USCG-2017-0903-0004, p. 3.
[28] USCG-2017-0903-0006, p. 5.

compensation was $235,136.[29] Next, we inflated that amount using 2017 ECI data and 2018 Federal Reserve PCE inflation data,[30] to arrive at an inflation-adjusted figure of $247,510. Finally, we applied an additional 3.5 percent annual real wage increase factor for the 2 years, to match the calculation we performed in 2016 for annual wage increases of GLPA pilots, to arrive at a final $265,139 equivalent compensation figure for 2018.

Comparing the previously calculated $312,069 (without the 10-percent increase, in 2018 dollars[31]) Canadian GLP total compensation with the $265,139 (in 2018 dollars) Canadian GLP compensation calculated in 2018—using the same methodology—reveals a substantial problem with using GLPA compensation as a benchmark for U.S. pilots.[32] Specifically, the exchange rate between the U.S. and Canadian dollars underwent a shift of over 25 percent in 3 years, which caused the benchmark to shift substantially as well. An analysis of the U.S. to Canadian exchange rates reveals that this rate can fluctuate substantially, as shown using IRS data [33] in Table 2.

Table 2—U.S./Canadian Dollar Exchange Rates

Year	2012	2013	2014	2015	2016	2017
Exchange Rate (USD/CAD)	1.040	1.071	1.149	1.329	1.379	1.350

[29] We performed the 2016 calculation as follows: We used 2016 pilot compensation from the GLPA (available in the docket as USCG-2017-0903) to derive the average Canadian pilot compensation of approximately $324,252 CAD. To do so, we divided $17,769,000 total wages and benefits by 54.8 pilots. We then converted that number to U.S. dollars at the 2016 exchange rate of 1.379 CAD to USD, to derive a figure of $235,136.

[30] ECI for "total compensation for private industry workers, transportation and material moving," for 12 months ended in December, is found in Table 5 (p. 71) of the following: *https://www.bls.gov/web/eci/echistrynaics.pdf*. ECI for 2017 is 3.3 percent. PCE inflation for 2018 is 1.9 percent, see https://www.federalreserve.gov/monetarypolicy/fomcminutes20171213ep.htm.

[31] This figure is the $296,467 we calculated in 2016, inflated to 2018 dollars using the ECI and PCE inflation.

[32] If we then added 10 percent, the resultant figure would be $291,653.

[33] This information is available at: *https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates*.

This fluctuation reveals a fundamental challenge with using the GLPA compensation as a benchmark. If we were to continue to use it, we would have to adjust it every 5 years using the current exchange rate. As shown, doing so could lead to very substantial fluctuations in the benchmark, which would not relate to economic conditions in the United States or to the state of the U.S. labor market. Such an increase in volatility would be counter to the Coast Guard's goals of rate and compensation stability and promoting recruitment and retention of qualified United States registered pilots.

We note that two commenters representing pilotage associations argued that the Coast Guard should not have abandoned the Canadian GLPA compensation benchmark, because using the interim benchmark resulted in a proposed lower level of compensation.[34] One commenter stated that one problem with using the proposed revised benchmark is that it "*reduces* the compensation target by at least $20,000 relative to retaining the GLPA benchmark and adjusting it for another year of inflation—resulting in the very "substantial volatility regarding compensation" that the Coast Guard says it wants to avoid...."[35] We note two flaws with this argument. First, as shown above, continuing to use the GLPA benchmark would have resulted in a significant decrease in target compensation, even below the level derived from the interim benchmark. Second, the Coast Guard believes the commenters misinterpret the issue of volatility. The fact that the target compensation can decrease when it is re-benchmarked is a feature of the system. It would hardly be fair if, upon a showing that the relevant compensation level had decreased, the Coast Guard resorted to a new benchmark as part of a scheme to keep compensation rising. We hope to reduce volatility by selecting a relatively stable

[34] USCG-2017-0903-0004, p. 5; USCG-2017-0903-0006, p. 8.
[35] USCG-2017-0903-0004, p. 5. Emphasis in original.

compensation benchmark, but may still reduce target compensation and rates when warranted by the data.

In light of the court's opinion, the Coast Guard has also considered the commenters' assertions that we should re-analyze the 2016 comments on the "adjustment factor" that is applied to GLPA rates, and simply use that number, rather than use the interim compensation benchmark. One commenter suggested that the Coast Guard should "analyze the multiple comments in support of a 25%-37% adjustment, and explain its reasoning for the adjustment it determines is most appropriate."[36] Another commenter asserted the D.C. District Court, in its 2017 opinion, "require[d] the Coast Guard to reconsider more carefully the pilot's position that the Canadian benchmark compensation should be increased by 25-37% to account for differences between the two pilotage groups, particularly the government health care and pensions received by Canadians."[37] We note that the court itself not only suggested that the Coast Guard should have more closely analyzed the pilots' comments, but also suggested we consider the option of, "as the shipping industry suggested, foregoing an adjustment altogether."[38]

In analyzing those comments, we found little evidence or data to warrant the substantial adjustments to arrive at the 25- and 37-percent figures suggested by the commenters. The 25-percent figure, suggested by the Great Lakes Pilots,[39] was not based on specific information, but instead was simply asserted in light of the listing of 10 general differences between U.S. and Canadian pilots (e.g., "Canadian pilots receive healthcare benefits as government employees. American pilots pay for their own

[36] USCG-2017-0903-0004, p. 3.
[37] USCG-2017-0903-0006, p. 5.
[38] *American Great Lakes Ports Association, et al., v. Admiral Paul F. Zukunft,* Civil Action No. 16-1019, DC District Court, November 3, 2017, p. 25.
[39] This comment is available at www.regulations.gov, docket number USCG-2015-0497-0052.

healthcare."[40]) In the comment by the International Organization of Masters, Mates, and Pilots, which produced the figure of 37 percent, we found several questionable assumptions.[41] First, as noted in the 2016 final rule, the mathematical basis of adding a 37-percent premium to the Canadian compensation level in order to arrive at an equivalent level of compensation for a U.S. pilot requires increasing the salary proportion of the component by 15 percent to account for a purported cost of living differential between Detroit, Michigan, and Windsor, Ontario, resulting in an additional $35,156 in salary. As we noted in the 2016 final rule, "we do not think the 15 percent COLA differential between Detroit, MI and Windsor, ON is relevant – a single comparison point should not be utilized to establish the regional comparison."[42] The commenter also makes the assumption that to match $49,716 in Canadian benefits, which includes health insurance, pension benefits, and tax "true-ups," among other items, would require U.S. pilots be paid an additional $118,741 (which includes $43,231 in health insurance costs and $53,000 in pension contributions). We do not believe that taxation differences should be taken into account when determining whether compensation is equivalent for several reasons. First, taxation varies over time and by specific locality within both the U.S. and Canada. Second, services are received in exchange for taxes, and it would be unfair to pay an individual more to compensate for taxes that pay for services they receive. Finally, we note that tax policy is under the control of neither the USCG nor the GLPA, but we could control whether the pre-tax compensation is similar. We also do not accept the commenter's assertion that the pension costs require such a tremendous

[40] USCG-2015-0497-0052, p.16. We note that health benefits were included in the estimate of Canadian compensation used to create the benchmark.
[41] This comment is available at www.regulations.gov, docket number USCG-2015-0497-0038.
[42] 81 FR 11908, at 11915.

increase in compensation. Given that there is a mathematical basis of pension contributions (i.e., there is no reason a properly-funded monetary pension should cost more in the United States than it does in Canada), we do not believe these calculations are sound. In this particular instance, the commenter stated that "[f]or pension costs if we had used the MMP pension plan contribution rate of 18% of wages plus a 5% IRAP the cost would be $61,992. But the IRS has a cap on the contribution for self-employed individuals at $53,000 and we will use that number."[43] However, the commenter did not assert whether the Canadian pension plan is similar to the MMP pension plan, rendering it impossible to understand why the contributions needed to fund the two plans are so different.

Based on our analysis of the substantial changes in the exchange rate, and the uncertainty regarding the correct comparison of the Canadian and U.S. compensation systems, we decided not to continue using the GLPA information as a compensation benchmark. Instead, as described below, we believe that a comparison with a U.S. system is a better interim benchmark until the Coast Guard can complete its compensation study.

2. Comparison with U.S. Pilotage Associations

Several commenters also repeated a request that, instead of basing our compensation benchmark on Canadian pilots or U.S. mates, we should instead base it on a figure derived from the compensation of other U.S. pilotage organizations. One commenter argued that "many pilots are comparably regulated in other U.S. jurisdictions and their rates and compensation set in open and evidence-based proceedings. The Coast

[43] USCG-2015-0497-0038, p.5. Acronyms were undefined in original comment, internal citations to U.S. statutes omitted.

Guard has never provided a convincing rationale for its failure to consider or adopt a benchmark based on the compensation of other U.S. pilots."[44] The commenter also provided examples of other U.S. pilot compensation, which it noted were considerably higher than any benchmark the Coast Guard had used in the past. The AMO, on whose contracts the proposed interim benchmark was based, argued that, rather than using AMO contracts with U.S. shipping companies as a basis to determine the target rate of compensation, "it would make considerably more sense for the Coast Guard to use publicly available information on the compensation levels for other independent compulsory pilots throughout the United States."[45]

While we agree with the commenters that the final compensation information of some other U.S. pilots is publicly available, we are not, at this time, convinced that it is the best benchmark. We note that there are over 60 pilotage associations in the U.S., with huge variations in pay structure and levels. For example, in some of our research involving pilot compensation, we found that pilot compensation levels that ranged from a low of $173,554 annually[46] to a high of $758,922.[47] Such a wide range does not provide sufficient information about the proper compensation of Great Lakes pilots on its own.

At this time, we do not have sufficient, reliable information regarding how the baseline average compensation levels of other U.S. pilotage associations are set, only information on the rate changes from year to year. While the final compensation levels are public, the methods by which those compensation levels were benchmarked (as opposed to adjusted on a year-by-year basis) is not apparent. As we mention above, the

[44] USCG-2017-0903-0006, p. 6.
[45] USCG-2017-0903-0005, p. 1.
[46] https://www.governmentjobs.com/careers/lacity/jobs/1823743/port-pilot-5151?keywords=port%20pilot&pagetype=jobOpportunitiesJobs.
[47] See "NOBRA 2017 Income Disclosure," docket # USCG-2017-0903-0009.

Coast Guard continues to study the compensation structures of other pilotage systems as part of our comprehensive study, and in the course of that study, has reached out to numerous pilot associations and shipping interests as to how compensation levels and shipping rates are determined, but would certainly welcome input on how compensation is set and what factors contribute to that determination.

Further, as noted in the 2018 NPRM, the Coast Guard commissioned a study to better understand the direct and secondary impacts of the U.S. pilotage charges. The report is titled "Analysis of the Great Lakes Pilotage Costs on Great Lakes Shipping and the Potential Impact of Increases in U.S. Pilotage Charges"[48] and assessed the baseline economic conditions of maritime commerce on the Great Lakes, quantified the cost of operating vessels on the Great Lakes, compared the cost of foreign trade on the Great Lakes to other modes of transportation and coastal ports, and assessed the impact of changes in pilotage rates to the Great Lakes shipping industry, including surrounding ports. This study demonstrated that pilotage costs play a role in determining the amount of cargo shipped on the Great Lakes. Because the Coast Guard considers the impact of shipping costs on Great Lakes pilotage as part of its ratemaking considerations, this study provided evidence that large increases in pilotage rates could negatively affect shipping on the Great Lakes. While we recognize that the study itself is not a comprehensive analysis of all economic factors, it is one factor that the Coast Guard considered when setting rates for shipping.

[48] "Analysis of Great Lakes Pilotage Costs on Great Lakes Shipping and the Potential Impact of Increases in U.S. Pilotage Charges," prepared by John C. Martin Associates, LLC, June 28, 2017 (hereinafter the "2017 Pilotage Cost Analysis").

To assess the potential impact of the U.S. pilotage charges on the competitive cost position of the Great Lakes/St. Lawrence Seaway System and the associated impact on tonnage moving via the Great Lakes ports, the 2017 Pilotage Cost Analysis considered the actual increases in pilotage charges between 2015 and 2016, and assuming numerous other economic factors remained constant,[49] projected potential impacts in the event that similar increases in U.S. pilotage charges were to occur in the following year. While the 2017 rates did not actually increase in accordance with the model's assumption, and thus the projected impacts did not actually occur, the study provides evidence of the Great Lakes/St. Lawrence Seaway System's sensitivity to changes in the cost of U.S. pilotage, as a percentage of total voyage costs.

The 2017 Pilotage Cost Analysis is informative to our ratemaking process and supports the notion that there is an upper limit to the amount that can be charged for pilotage services before shippers consider diverting cargo to other locations or other modes of transportation. As pilot compensation costs constitute the bulk of the input into pilotage fees, the Coast Guard continues to carefully consider the direct and secondary impacts of our annual rate adjustments.

B. Revised Compensation Benchmark Issues

In the preceding subsections, we described why we did not continue to use the Canadian GLPA data or data from the other U.S. pilotage associations as the basis for the interim compensation benchmark in the 2018 NPRM. In this section, we respond to comments regarding our choice to use the 2015 AMO contract information as the basis

[49] This study is a single sector analysis, which means it assumes that numerous other factors that affect the cost of international shipping in the Great Lakes/St. Lawrence Seaway System are held constant. If the other factors or sectors were not held constant, but instead were allowed to fluctuate as they actually do, it is likely that the impact from changing pilotage rates would be different. It is important to note that the results of a single sector analysis should not be interpreted as a full regional or national impact analysis.

for the compensation benchmark instead. We received several comments on the AMO contract information's validity and how to implement it, which we address in several subsections that follow. In the first subsection, we address why we chose the 2015 rate. In the second subsection, we discuss comments from the AMO about the application of overtime compensation to the daily aggregate rate. Finally, in the third subsection, we address industry comments regarding the application of the daily aggregate rate to the 270-day shipping season on the Great Lakes.

1. Use of AMO 2015 Aggregate Rate

In addition to suggestions that we continue using the Canadian GLPA compensation as a benchmark or that we base our compensation on those of other U.S. pilotage associations, we received several comments specifically regarding our decision to make use of the AMO aggregate daily rates from 2015 (note this is separate from the discussion of comments, in Section V.B.2., regarding how to apply the AMO aggregate daily rates). A discussion of the comments regarding use of AMO 2015 aggregate rates and our responses follows.

One commenter supported the use of AMO data, stating that this approach was "a more rational approach to identification of some analogous field of endeavor against which to test the reasonableness of pilot compensation levels."[50] The commenter also stated that comparisons with AMO members aboard U.S.-flag vessels avoid difficulties, identified above in Section V.A.2, in trying to develop comparisons across countries. However, the commenter criticized the Coast Guard's acceptance of the AMO's decision to withhold contract information and obtain compensation data from other sources, and

[50] USCG-2017-0903-0008, p. 4.

stated that the commenters "lack information necessary to validate the stated 'daily aggregate rates' identified in the NPRM."[51] In response, we note that 1) we do not have the authority to compel anyone to provide confidential contract information; 2) we have been working to obtain other compensation data, and have commissioned a comprehensive review of that data; and 3) it may be possible for shipping industry personnel to acquire data about AMO contracts with shipping companies on their own.

One commenter argued that basing the compensation on the 2015 AMO data was inappropriate. The commenter stated that "the use of old, disputed, extrapolated AMOU data does not adhere to the Coast Guard's own regulations (as proposed) in 404.104,"[52] which state that the Coast Guard will set a compensation benchmark after considering the most relevant currently available non-proprietary information. The commenter argued that the information is old (it is from October 2013), irrelevant (stating that it relates to laker-masters, not pilots), and proprietary (as actual data from 2018 is not available), and thus should not be used as a basis for pilot compensation.

We disagree with the commenter, and believe that the data supplied in the October 4, 2013, letter from the AMO describing aggregate daily rates,[53] meets the standard in 46 CFR 404.104 of being the "most relevant currently-available non-proprietary information" for the reasons described below.

First, we believe that the data in the AMO letter is the 'most relevant' information. Notwithstanding AMO's statement that "…the AMO is disappointed to

[51] USCG-2017-0903-0008, p. 5, footnote 5.
[52] USCG-2017-0903-0004, p. 4.
[53] We refer to this document as the "AMO letter," which is available at www.regulations.gov, docket number USCG-2013-0534-0007. For a discussion about how the information from the 2013 AMO letter was extrapolated to derive the 2015 baseline compensation figures, see Section VII of the 2018 NPRM, entitled "Revised Compensation Benchmark," 83 FR 2581, at 2587.

learn that the U.S. Coast Guard is again attempting to rely on the use [of] AMO contracts with U.S. shipping companies on the Great Lakes as a basis to determine the 'target rate of compensation' for U.S.-registered pilots on the Great Lakes," for the reasons described in the NPRM,[54] we believe that it provides a highly relevant gauge for how much experienced mariners working on the Great Lakes are compensated. While AMO's position on the matter are certainly highly relevant, we still believe that the compensation of U.S. masters on Great Lakes ships provides a useful proxy for the compensation of U.S. pilots on Great Lakes ships, and the interim benchmark methodology is an effective manner to translate the AMO figure into a useable number for the latter. The interim benchmark is based on the idea that a Great Lakes pilot should earn, on average, about 1.5 times the salary of a first mate,[55] given the demanding nature of Great Lakes pilotage work and the experience required. On that basis, the AMO data—which describes what a first mate earns for a day of work—is highly relevant, and perhaps the most relevant piece of information possible.[56]

Second, we believe that the data in the AMO letter is currently-available. We interpret this term to mean "available at the current time." As the letter has been posted in the public docket for years and is still available, we believe it meets the definition of "currently available." The purpose of this provision is to prohibit the use of data that is in existence but not available for public release.

Finally, we believe the data in the AMO letter is non-proprietary. While the AMO asserts that the underlying contract data is proprietary, and so we did not rely on

[54] See Section entitled "Revised Compensation Benchmark", 83 FR 2581, 2587-2590.
[55] For a full discussion of how the interim benchmark was derived, see 83 FR 2581, at 2587-2590.
[56] We also note that the commenters' assertion that the AMO data relates to 'laker-masters' is incorrect; it relates to first mates.

that information in setting the interim benchmark, the AMO has publically released the daily aggregate compensation figure. Indeed, the commenter cites language from our 2016 pilotage rates NPRM (2016 NPRM), the year the AMO stopped making its information publically available, saying "the union *now regards* that data as proprietary and will *no longer disclose it* [emphasis added]."[57] We consider this an acknowledgement that the earlier data, which we are using, is not proprietary information. We note that there are other non-proprietary sources of information, and simply noting that a data source is non-proprietary does not mean that it necessarily provides information that the Coast Guard is obligated to incorporate into its ratemaking calculations. For example, several pilotage organizations also provided overall information about pilot compensation without explaining the factors that went into that information, but for the reasons described above in Section V.A.2., we did not use that information to determine the target compensation for Great Lakes pilots.

2. Overtime Compensation

In the 2018 NPRM, we used the public figures provided by AMO for its 2014 compensation rate, expressed as a daily aggregate rate, to determine the target compensation figure for the interim compensation benchmark. These figures were provided by AMO in its letter to the Coast Guard in 2013, and represented the most current information we had to implement this method of computing a benchmark. However, in its comments on the 2018 NPRM, the AMO indicated that the information it provided in the 2013 letter was incomplete. Specifically, it stated that the daily aggregate rates the Coast Guard is using to determine the benchmark compensation do not take into

[57] USCG-2017-0903-0004, p. 5, citing 80 FR 54484.

account "standard overtime compensation that is consistently earned by U.S. merchant mariners under AMO contracts."[58] The AMO stated that the average overtime for a U.S. credentialed chief mate under AMO contracts is 40 hours per month, which at the 2018 hourly pay rate would be $60.07 per hour, or $21,625 for a 9-month period. This was also stated by the pilot associations, which stated that "this 'overtime' compensation is planned and expected (by both the shipping companies and the AMO merchant mariners) [as] part of the AMO-negotiated compensation package, and represents a *guaranteed payment* [emphasis added], for an average of 40 hours per month or more, for overtime work (including clerical work) that is expected and intended each mate will perform."[59]

The information on guaranteed overtime is new to the Coast Guard. In the past, when we based our compensation rates on the daily aggregate rates provided by the AMO, guaranteed overtime was not included in those calculations. Nor was information on guaranteed overtime provided to the Coast Guard by the AMO in the "settlement agreements" from 2011,[60] which listed factors that go into the daily aggregate wages. These factors included wages, medical plan contributions, and pension plan contributions. We used this information to validate the daily aggregate rates provided in the 2013 AMO letter.[61] However, this formula did not include a guaranteed overtime bonus. We note the footnote in the shipping industry's comment that they "lack information necessary to validate the stated 'daily aggregate rates' identified in the

[58] USCG-2017-0903-0005, p. 2.
[59] USCG-2017-0903-0006, pp. 9-10.
[60] These settlement agreements, between the AMO, Key Lakes, and Mittal Steel (Agreements "A" and "B", respectively), are not public information. Therefore, we cannot publicly reveal detailed information about their contents.
[61] See 83 FR 2581, at 2588. The formula to derive the aggregate daily rate multiplies the wage (including weekend, holiday, and bonus days) by 1.5, adds a 5-percent 401k contribution, and adds the medical plan and pension plan contributions.

NPRM and submit that the underlying calculation of those rates should have been explained....”[62] The Coast Guard agrees that it would be better to have incorporated the new information into the daily aggregate rates at the proposed rule stage. However, we cannot now ignore highly relevant information simply because it was not apparent at the beginning of the rulemaking process, and we further note that the Coast Guard has been criticized for not using AMO data provided during the course of the rulemaking process in the past.[63] Because it is our goal to base our target compensation on the actual compensation of mates under the AMO contract, we believe it is appropriate to include the guaranteed overtime in the daily aggregate rates. We note that the use of “overtime” as part of the AMO contract terms does not mean there is overtime compensation for U.S. pilots, and shippers only pay for actual hours worked at the levels proscribed in the regulatory text.

We have modified the overtime number provided by the AMO to account for the fact that they provided 2018 information. As stated in the 2018 NPRM, we are basing the target compensation on the 2015 AMO contract information, which contains the last information that is publically available, and using an inflation index to arrive at a comparable 2018 rate. Because our rates are based on 2015 information, and not 2018 information, we are not using the 2.5 percent annual wage adjustment figures from 2015 through 2018 that the AMO provides and the Great Lakes Pilots reiterate, even though they assert that those are the actual wage increases. While this may be true, it is not relevant for the purposes of determining the 2015 daily aggregate rate. As stated above

[62] USCG-2017-0903-0008, p. 5, footnote 5.
[63] See *St. Lawrence Seaway Pilots Association, Inc., et al. v. United States Coast Guard,* No. 14-cv-392, (D.D.C., March 27, 2015), p. 11-12.

in this section, in order to base the compensation on 2015 rates, we are adjusting the 2015 rates for inflation to reach a 2018 rather than tracking contract permutations. To incorporate the 2018 average overtime figure, we first deflated the hourly overtime rate to 2015, using the 2.5 percent annual rate[64] provided by the AMO, to derive its 2015 value, which is $55.68. We then broke down the 40 hours per month of overtime into a daily average of 80 minutes over 30 days (or one and one third hours per day), to arrive a total value of $74.24 ($55.68 x 1.3333) in overtime compensation per day. We then added that value to the provided daily aggregate rates to provide revised daily aggregate rates of $1,216.30 for Agreement A, and $1,198.96 for Agreement B.[65] From that point, the calculations are similar to those performed in the NPRM, as shown in Table 3.

Table 3—Calculation of Seasonal Rates by Agreement

	Aggregate Daily Rate	**Seasonal Compensation (Aggregate Daily Rate x 270)**
Agreement A	1,216.30	$328,401
Agreement B	$1,198.96	$323,719

Next, we apportion the compensation provided by each agreement according to the percentage of tonnage represented by companies under each agreement. As shown in Table 4, approximately 70 percent of cargo was carried under the Agreement A contract, while approximately 30 percent of cargo was carried under the Agreement B contract.

Table 4—Weighted Average of Each Agreement

	Tonnage	**Percentage of Tonnage (Total tonnage / 1,215,811)**
Agreement A	361,385 tons	29.7237811
Agreement B	854,426 tons	70.2762189
Total tonnage	1,215,811 tons	100.00

[64] While the 2.5 percent rate is not relevant for calculating the 2018 aggregate total, it is appropriate for translating the AMO-provided 2018 dollar figure to an actual 2015 figure, as that was the actual amount by which it was inflated, per the AMO.

[65] $1,142.06 + $74.24 = $1,216.30 for Agreement A; $1,124.72 + $74.24 = $1,198.96 for Agreement B.

Third, we develop an average of compensation based on the total compensation under the two contracts, weighting each contract by its percentage of total tonnage, as shown in Table 5. Based on this calculation, we developed a figure of $325,110 for total compensation in 2015.

Table 5—Calculation of Averaged Compensation

	Percentage of Tonnage	**Weighted Compensation (Seasonal Compensation x Percentage of Tonnage) (rounded)**
Agreement A - weighted	29.7237811	$97,613
Agreement B - weighted	70.2762189	$227,497
Total Compensation (Agreement A + B)	100.00	$325,110

3. Calculation of Number of Days in Pay

As stated above, in the NPRM, we proposed to set the compensation benchmark by multiplying the aggregate daily rate by 270, the number of days in the shipping season, to derive a "seasonal average compensation figure."[66] Industry commenters argued that the use of the 270-day figure was inappropriate. They stated that, while "in past ratemaking proceedings [the Coast Guard] has used the 270-day assumption as a basis for extrapolating AMOU compensation data to pilot compensation… the Coast Guard has since (see 2016 final rule) imposed mandatory rest periods on pilots that limit their working days each month and has imposed on rate payers additional costs attributable to increased staffing levels that are, in large part, attributable to mandatory

[66] 83 FR 2581, at 2589.

rest periods."[67] The industry commenters suggest that, instead of multiplying the daily aggregate rate by 270, the aggregate rate should be multiplied by only 200, given that the AMO figures are tied to working days and that Great Lakes pilots are only expected to work 200 days.[68]

First, the Coast Guard notes that the industry commenters have mischaracterized the 10 days of rest that we have incorporated into the staffing model. Unlike Canadian pilots, AMO mates, or other U.S. pilots, United States registered pilots do not have guaranteed days off during the shipping season. Instead, Great Lakes pilots are expected to be on call and available for work each day during the entire 270-day season. However, it is our goal that when pilot demand is not at its highest level (during the 7 months that are not the opening or closing of the season), pilots are able to rest for 10 days, and we have set the number of pilots so that there are approximately 1/3 more pilots than necessary to handle traffic during these times, allowing an average pilot 10 days of rest during an average non-peak traffic month. As we noted in the 2016 NPRM when we proposed this system, "we propose building into our base seasonal work standard only 200 workdays per pilot per season. The 70-day difference should facilitate a 10-day recuperative rest period for each pilot in each of the seven months (mid-April to mid-November) between peak traffic periods."[69] As we noted in that document, "our goal is to regulate the pilotage system to *maximize the likelihood* [emphasis added] for providing the full 10 days per month."[70]

[67] USCG-2017-0903-0008, p. 5, footnote 7.
[68] USCG-2017-0903-0008, p. 5.
[69] 80 FR 54484, at 54490.
[70] 80 FR 54484, at 54490, footnote 30.

The industry commenters suggest that, like AMO mates, Great Lakes pilots should be compensated only for days that they are actually expected to work, and thus that the aggregate daily wage be multiplied by 200, rather than 270. This calculation would mean that Great Lakes pilots would receive zero compensation for being "on call" during those additional 70 days of the season.[71] On the other hand, we recognize that multiplying the aggregate daily wage by 270 means that Great Lakes pilots would receive full compensation for days on call, even if the system is designed so that they are not expected to work for those days. While neither number is perfect, we acknowledge that this is a consequence of using the AMO compensation model, which has a sharp delineation between guaranteed days worked and guaranteed days off, and of applying it to the Great Lakes pilots, where a day on the tour-de-roll may not correlate to a day actively undertaking pilotage duties.

The Coast Guard's mission in regulating pilotage on the Great Lakes is to "promote safe, efficient, and reliable pilotage service on the Great Lakes."[72] However, there is a natural balancing in this mission. To promote safe pilotage, the Coast Guard strives to attract the most experienced pilots, and to attract sufficient numbers, so that each vessel assigned a pilot is assured an experienced, well-rested pilot. To promote reliable pilotage, we must ensure there are sufficient numbers of pilots so that a rested pilot is available for duty at the required location at the required time, even in periods where traffic is more than expected. Both of these goals recommend that we hire more pilots, and ensure competitive compensation, thus advocating for higher pilotage rates.

[71] Or longer, as some recent shipping seasons have lasted longer than 270 days due to changes in ice patterns on the Great Lakes. For example, we note that the 2017 shipping season in District 1 lasted 296 days.
[72] See 46 CFR 404.1(a).

On the other hand, the promotion of efficient pilotage pulls in the opposite direction. We can lower pilotage rates by more efficiently utilizing a lower number of pilots—moving them around more, or giving them less rest—with the understanding that this may result in less reliable service when traffic is higher than predicted. Similarly, we can lower compensation—improving efficiency by hiring less experienced pilots who will work for less compensation—with the understanding that this could have consequences for safety.

While we believe that the industry commenters' suggestion of multiplying the aggregate daily wage by 200, rather than 270, has merit, we have decided that in the interests of recruiting and retaining a suitable number of experienced pilots, a multiplier of 270 is the preferable course of action. While we have considered the argument that it would be more efficient to pay pilots less or have fewer of them to generate lower shipping rates, we believe the effect on safety and reliability warrant a multiplier of 270. In the past, when compensation levels were lower, the pilot associations asserted that they had trouble attracting and retaining qualified pilots, and we believe offering higher compensation will help the pilot associations attract and retain higher numbers of more experienced pilots. Furthermore, we continue to note that the Great Lakes pilots' target compensation is within the range compensation of other U.S. pilotage associations (although we note we are still gathering data as to how the compensation and tariff levels of other U.S. pilotage associations are set). We also note that our economic analysis of shipping on the Great Lakes, discussed above, demonstrates that pilotage costs remain low enough to enable a robust trade of commodities.

Additionally, we point to an issue raised by commenters as an additional reason to ensure that safety and reliability are emphasized in the Coast Guard's analysis of Great

Lakes pilotage. One commenter noted that cruise ships are becoming an increasingly important source of business on the Great Lakes, and that unlike cargo ships, which can weather delays with relatively little impact, cruise ships are severely impacted by delays as they cannot keep to their schedules.[73] We believe that with cruise ships becoming a large share of business, the need to minimize delays by having an adequate number of pilots grows in importance.

C. Inflation Adjustment Factor for Adjustment Years

In the NPRM, we proposed that in non-benchmark years, the target compensation for Great Lakes pilots be increased by an inflation factor to promote predictability and increase the efficiency of the ratemaking process. All commenters who discussed this issue were supportive of an automatic increase for inflation. However, several commenters recommended that the inflation benchmark used was inappropriate. While we proposed to use the CPI for the Midwest Region,[74] several commenters recommended different inflation adjustments.

One commenter questioned why the Coast Guard expected the CPI for the Midwest Region to track actual AMO wage increases year after year, and stated that the AMO contract increased wages at 3 percent per year.[75] Another commenter argued that the Coast Guard's method of "guessing at current AMOU compensation" using the CPI was inherently flawed.[76] In response, we note that the NPRM never proposed that the

[73] USCG-2017-0903-0004, p. 11. We note that the commenter also requested that the Coast Guard adjust its regulations to allow pilots to give priority to cruise ships for this reason. While such a request is outside the scope of the ratemaking procedure, we will give the idea consideration.
[74] Specifically, we proposed to use the Midwest Region CPI or the Federal Open Market Committee (FOMC) median economic projections for Personal Consumption Expenditures (PCE) inflation. The PCE figure would be used for years where CPI data is not available.
[75] USCG-2017-0903-0006, p. 9.
[76] USCG-2017-0903-0004, p. 7.

compensation rate should track yearly increases in the AMO rate, and that its intent was to set a compensation benchmark at a rate derived from the 2015 AMO rate, and then increase that rate by an inflation factor. The Coast Guard explicitly stated that the goal was not to track AMO rates developed after 2015,[77] and thus believes the commenters' suggestions are not warranted.

Several commenters suggested that instead of adjusting the compensation benchmark by the CPI, we should instead adjust it by the ECI for the transportation and material moving sector.[78] One commenter noted that "the [ECI] is the more relevant index because unlike the CPI, it tracks the parameter we're talking about: employment cost in the transportation sector."[79] We agree with the commenters that, for the purposes of inflating compensation costs, the ECI provides a better gauge of compensation inflation than the CPI does. Our goal is to promote recruitment and retention of skilled pilots, and that goal is undermined if the wages of Great Lakes pilots increase less than the wages of other skilled maritime professionals in the transportation sector as the result of an inflationary gauge that was not as accurate as possible. Thus, we have substituted the ECI for the CPI in our annual inflation adjustor for target compensation. We note that this logic does not apply to the increase in operating costs, for which we will continue to use CPI as the benchmark for inflation, because the ECI measures the change in the cost of labor.

Finally, we note that in instances where BLS ECI or CPI inflation data is not available, the Coast Guard has historically used the FOMC median PCE estimates. We

[77] See 83 FR 2581, at 2588.
[78] USCG-2017-0903-0004, p. 9; USCG-2017-0903-0007.
[79] USCG-2017-0903-0004, p. 9.

have included language to that extent in the language for 46 CFR 404.102 and 404.104, respectively, to make the process more transparent. We note that we did not include this as proposed language in the NPRM, but given that the particular inflationary gauges used in the rule have been raised as a serious issue in comments, believe that being more explicit about the exact figures used in the calculations of both the NPRM and final rule is a logical outgrowth of that issue.

D. Staffing Model Relocation and Calculations

In the NPRM, we proposed to relocate the staffing model regulations from 46 CFR 404.103(a) through (c) to 46 CFR 401.220(a). We did not propose making any modification to the text of the staffing model. We stated that the rationale for moving the text was to improve the clarity of the regulations and simplify the process for preparing the annual rulemaking documents. Noting that, under the current organizational scheme, "Ratemaking Step 3" produces two sets of pilot numbers (one produced by the staffing model and a different one used in the ratemaking calculation), the staffing model text should be moved to part 401, where other pilotage inputs that inform the ratemaking process, but are not part of the annual calculation, are located.[80]

We received one comment from a pilotage organization that protested this organizational change. The commenter argued that this proposal allows the Director of Great Lakes Pilotage to conduct the calculations whenever he or she believes it is necessary, which could allow long periods of neglect.[81] We note that, if the commenter believes the staffing levels are being neglected, the commenter is able to raise this concern in the many public forums, such as GLPAC meetings, that are available for input

[80] 83 FR 2581, at 2586.
[81] USCG-2017-0903-0004, p.11.

into the ratemaking process. We also note that analyzing the number of pilots required is not a process currently conducted once per year, but something that is continuously done. It is similar to the system for determining the number of applicant pilots, which, while it informs the methodology, is not part of it. Instead, those regulations are located in § 401.211 of the Great Lakes Pilotage Regulations. We believe placing the staffing model text in part 401 is the best way to ensure transparency in the regulations, and makes clear that it is the number of working pilots that we authorize in the regulations—which may not correspond to the number generated by the staffing model—that is the relevant value for establishing pilotage rates.

One commenter stated that the Coast Guard had miscalculated the number of pilots needed in Districts One and Two, and that we should add an additional pilot to each of those Districts pursuant to the staffing model. In the calculations for those Districts, we determined that 17.25 and 15.41 pilots were needed, which we rounded down to 17 and 15, respectively.[82] The commenter argued that "the [staffing] model contemplates additional duties of the Association Presidents as a basis for rounding pilot numbers. It is entirely nonsensical to round down to account for extra workload and duties."[83]

We disagree with the commenter's analysis, and believe that the commenter is referring to a rounding convention that was applicable to a different staffing model. We did state, in the 2017 pilotage rates NPRM, that "[i]n all districts, when the calculation results in a fraction of a pilot, we round pilot numbers up to the nearest whole pilot. We do this to avoid shortening our demand calculation and also to compensate for the role of

[82] 82 FR 41466, at 41480, Table 6. For District 3, we calculated 21.55 pilots, which was rounded up to 22.
[83] USCG-2017-0903-0007.

the district presidents as both working pilots and representatives of their associations."[84] However, that statement was made in regard to a proposal to switch from a "peak staffing model" to an "average staffing model." The proposed average staffing model, which, based on comments we received, was never finalized, derived the number of pilots from their average workload during the year. Because a pilot association has responsibilities beyond pilotage, which takes up some of each pilot's time, the Coast Guard proposed to round up to account for those responsibilities. However, this situation does not apply to the staffing model currently used, which is based on the number of pilots needed at the beginning and close of the season, when traffic is highest and treacherous conditions often require double pilotage. Under the current staffing model, during the first and last months of the season, we expect all pilots to focus on pilotage duties, while allowing an average of 10 days of rest for pilots during the remaining 7 months. Pilot association presidents can undertake their administrative responsibilities during this time, so there is no need to round up, and a traditional rounding system can be used.

E. Working Capital Fund Basis and Use

One commenter suggested that the Coast Guard eliminate the working capital fund, or alternatively, that the Coast Guard promulgate regulations that segregate the working capital funds and govern their use, and prevent their distribution as compensation. While we did not propose any modifications to the calculation or use of working capital funds and are not incorporating them into the 2018 ratemaking procedure at this late stage, we do believe that some of the ideas expressed by the commenter merit discussion.

[84] 81 FR 72011, at 72015-16.

First, we discuss the commenter's argument that the value of the working capital fund "appears to be an entirely arbitrary 'adder' that bears no clear relationship to its supposed function or nomenclature."[85] The commenter stated that "the term 'working capital' is commonly understood to be a balance sheet measure that is the difference between current assets and current liabilities." The commenter also stated that the relationship between the amount of money collected pursuant to Step 5 of the ratemaking process and the infrastructure costs of the District is unclear. Finally, the commenter raised the point that, in the past, surcharges had been used to fund infrastructure improvements, and there should be a mechanism to ensure that it is used for that purpose.

In the 2016 NPRM, we discussed both the purpose of the working capital fund as well as its name.[86] In our discussion of why we proposed to change the name of this step from "return on investment" to "working capital fund," we stated that "the intent of [this section of the ratemaking methodology is] to provide the pilots with working capital for future expenses associated with capital improvements, technology investments, and future training needs, *with the goal of eliminating the need for surcharges* [emphasis added]."[87] We also agree that there may be merit in a mechanism to ensure that the funds are set aside for future projects, and will investigate the need for such regulation and how to best effect it. We encourage commenters to engage with the Coast Guard on this issue with additional information.

The commenter also suggested that the amount of money collected by the working capital fund calculation was incorrect, and that the Coast Guard should re-

[85] USCG-2017-0903-0008, p.6.
[86] 81 FR 72011, at 72017.
[87] 81 FR 72011, at 72017.

evaluate what is the working capital fund's function and relationship to pilot-compensation. However, the commenter did not suggest an alternative value for the fund. In the 2017 final rule, we stated that the fund "is structured so that the pilot associations can demonstrate credit worthiness when seeking funds from a financial institution for needed infrastructure projects, and those projects can produce a return on investment at a rate commensurate to repay a financial institution."[88] Because the purpose of the working capital fund is that the pilot associations can demonstrate credit worthiness when seeking funds from a financial institution for needed infrastructure projects, the value of the working capital fund contribution is tied to pilot association revenue and prevailing corporate interest rate.

Separate from the amount of the working capital fund, the commenter suggested that the use of money collected as part of the working capital fund be clearly bounded, and any unspent money should be segregated and carried forward from year to year, and not be distributed as compensation.[89] The commenter stated that a number of surcharges have been imposed on rate payers over the years for specific capital projects and expenses, and so the purpose of the working capital fund is unclear.

Since 2016, when the ratemaking methodology was updated, we have not used surcharges to finance infrastructure improvements or maintenance, only to train new pilots. The purpose of the working capital fund is to demonstrate that pilots can achieve a return on investment, and thus have the ability to acquire loans to finance needed capital improvements. In the event that loans are taken out for this purpose, we would

[88] 82 FR 41466, at 41484.
[89] USCG-2017-0903-0008, p. 6.

expect the working capital funds to be used to finance those loans, and so we would not permit the financing expenses to be counted as operating expenses.

Currently, there are no requirements for how money collected under this provision is spent or distributed. However, we agree that the idea has merit. We believe that the money is meant to secure the financing for infrastructure improvements, and should not be used as compensation. While we believe that this ratemaking proceeding is not the proper venue to determine whether and how the Coast Guard could or should implement some limitations on the use of working capital fund money, we will take the idea under advisement.

F. Use of 10-year Traffic Baseline

One issue raised by industry commenters concerns the use of a 10-year moving average to calculate average traffic. The commenters noted that "the 10-year average is depressed by the significant reduction of traffic that occurred in the 2008-2013 period,"[90] which was caused by the global recession of 2008 and 2009. Noting that in years since 2013, traffic has been substantially higher, the commenters assert that "it [is] rational to assume that 2018 hours will be generally comparable to levels in the 2014-2017 period."[91] If those traffic numbers are reached, then actual revenue would be substantially higher than the "revenue needed" under Step 7 of the ratemaking methodology, and pilots will exceed their target compensation.

To rectify this, the industry commenters recommend that instead of using a 10-year average traffic volume to calculate revenue needed, the Coast Guard should use a 3-year period instead. This would result in substantially lower shipping costs, as the total

[90] USCG-2017-0903-0008, p. 6.
[91] USCG-2017-0903-0008, p. 7.

revenue needed ($22,438,782, as identified in Step 7 of the NPRM[92]) would be divided by 51,607 hours of traffic, rather than the 43,384 hours of traffic using the 10-year average. Applying this change would lower the average rate across all areas from $517.21 per hour to $434.80 per hour, a reduction of approximately 16 percent.

Commenters assert that a 3-year traffic average convention would make more sense than a 10-year average, as the Coast Guard's other parts of the ratemaking methodology that feed into the "Revenue Needed" use more recent data.[93] The commenters note that operating expenses, used in Step 1 of the ratemaking methodology, are based on data that is 3 years old, and staffing levels, used in Step 3 of the ratemaking methodology, are based on current year data. The industry commenters assert that "the Coast Guard's chronic underestimation of revenue in 2014-2016… is [partly] caused by asymmetry in the time span of data in the Revenue Needed and Time on Task data in Step 7."[94]

While we agree that, for the purposes of the 2018 calculations, hourly pilotage rates would be lower if we used a 3-year window, we do not believe that this argument is convincing. Given a normal distribution of traffic, approximately 5 years out of every 10 will have traffic above the 10-year average level, and approximately 5 will have traffic below it. We note that traffic volumes on the Great Lakes can vary significantly from year to year, and a 10-year average is a good way to smooth out variations in traffic caused by global economic conditions. Industry commenters provide data showing actual

[92] 83 FR 2581, at 2595. This figure is derived by adding the totals from Tables 20, 21, and 22. Note that it does not include revenues from surcharges.
[93] We note that "revenue needed" is determined by adding operating expenses, pilot compensation, and working capital fund contributions, and then dividing by total number of hours. These numbers are calculated on an area-by-area basis.
[94] USCG-2017-0903-0008, p.7.

traffic numbers from 2007 through 2016; those numbers clearly demonstrate that traffic can dramatically change from one year to the next.[95] We do not see this as support for the industry's assertion that it would be rational to assume 2018 hours will be generally comparable to the 2014 through 2017 period.

Unlike operating expenses, which do not have wide swings from year to year, and pilot staffing levels, which can be determined with a high degree of precision, traffic averages are the hardest part of the ratemaking inputs to predict. Using a 3-year average would lead to dramatic swings from year to year, while a 10-year average smooths out those transitions. For that reason, we have decided to continue using the 10-year average in our calculations. With regard to the idea that, in 2018, this number may underestimate traffic, we note that in some years, the use of the 10-year average overestimated traffic.

G. Calculation of Surcharges and Incorporation into Operating Costs

In the NPRM, we proposed to add surcharges totaling $1,050,000 to subsidize the training of seven applicant pilots. This was based on the fact that there are seven apprentice pilots, and we use the figure of $150,000 as an estimate for the total training costs of a pilot (this includes a stipend). In their comments, industry commenters noted that they support adequate training for pilot trainees, but stated that "the content and cost of all elements of the training program must be put to a process of public review."[96] The commenter asserted that this element of the NPRM should be withdrawn and a supplemental NPRM should be issued to permit public comment on the elements of a training program.

[95] See, e.g., the change from 2009 to 2010, increasing by over 50% from 28,201 hours to 43,960 hours.
[96] USCG-2017-0903-0008, p.8.

We disagree that industry commenters have not had a chance to comment on the propriety of the $150,000 figure. This amount has been used each year since 2016, without change. In the 2016 NPRM, when it was introduced, we discussed the basis for that figure. We stated that "[b]ased on historic pilot costs, the stipend, per diem, and training costs for each applicant pilot are approximately $150,000."[97] More detail is provided in the financial reports submitted by pilotage associations. For example, the 2016 financial reports submitted by the pilotage associations[98] contain the following line items for applicant pilots:

- Salaries – Applicant Pilots
- Benefits – Applicant Pilots
- Housing Allowance – Applicant Pilots
- Subsistence/Travel – Applicant Pilots
- Training – Applicant Pilots
- Payroll Taxes – Applicant Pilots

If it is unclear, the purpose of using surcharges to cover anticipated pilotage costs, instead of operating expenses, is so that retiring pilots do not have to pay costs that they will be unable to recoup, as operating expenses are factored into the ratemaking calculations only after a 3-year delay.

We also note that while the $150,000 figure is an approximation of the amount required to train a new pilot, the number is ultimately balanced with the actual cost through the modifications of operating expenses. This means that pilotage associations will provide audited information relating to pilotage training costs each year as part of the

[97] 80 FR 54484, at 54500.
[98] Available at www.regulations.gov, docket number USCG-2016-0268.

public ratemaking process. Because operating expenses are analyzed using a 3-year delay (see Step 1 of the ratemaking process), and 2016 was the first year we authorized a surcharge for training applicant pilots, these figures will become subject to public review beginning with the 2019 ratemaking. When actual operating expenses are provided, pilotage associations will be able to add to their operating costs any expenditures that exceeded the $150,000 collected surcharge. Similarly, if they did not spend that much, the excess monies will be deducted from their authorized operating expenses. In this way, ratepayers will never pay more or less than the actual cost incurred to train a new pilot. We note that this would not cause any additional paperwork costs, because pilot organizations already provide the Coast Guard with their operating expenses on a yearly basis. As we noted in Section VII.D below, this rule will not change the burden in the collection currently approved by OMB under OMB Control Number 1625-0086.

While the current $150,000 surcharge practice began only in 2016, the process of providing money up front for training, and then balancing that later through the accounting of operating expenses, is one we have used in the past. For example, in 2014, we authorized a 3 percent surcharge in District One to recoup $48,995 in expenses that the association incurred for training.[99] However, because realized traffic in 2014 exceeded projections (and at the time, there was no mechanism to prevent the over collection of surcharges), we note that the pilot association collected $146,424.01.[100] The amount of the 2014 surcharge that exceeded actual training costs was deducted from operating expenses in the next 2 years. In the 2015 final rule, for example, we disallowed

[99] Great Lakes Pilotage Rates – 2014 Annual Review and Adjustment, final rule, 79 FR 12084, at 12088 (March 4, 2014).
[100] See 81 FR 11908 at 11929, Figure 8, footnote.

the $48,314 "pilot training" item from the operating expenses, because pilot training expenses are deducted from surcharges.[101] We made a further "surcharge adjustment" in the 2016 operating expenses to deduct for the remaining amount of $97,429.[102]

We also received a comment from a pilotage organization relating to the surcharge provision. Specifically, the commenter argued that, in some instances, pilot associations do not collect the full amount of the authorized surcharge during the shipping season. The commenter pointed out that, because the 2017 rates did not become effective until later in the season, the pilot associations did not collect the entirety of the authorized sum. Noting that there is a provision to stop collecting surcharges when the authorized amount is reached, the commenter requested that the Coast Guard revise 46 CFR 401.401 to "protect the pilots from surcharge under-generation in the same way it protects users from surcharge over-generation."[103] We do not believe such a mechanism is necessary at this time, and again point to the mechanism above where collected surcharges and audited training expenditures are ultimately balanced via adjustment to the operating expenses. In the case where the collected surcharges did not cover the actual cost of training a pilot, either because the surcharge was too low or it was not collected, the pilot association would be able to include any extra expenses in their allowable operating expenses 3 years later.

H. Other Issues Relating to Pilotage Oversight

[101] Great Lakes Pilotage Rates – 2015 Annual Review and Adjustment, final rule, 80 FR 10365, at 10370, Table 2 (February 26, 2015).
[102] 81 FR 11908, at 11929, Figure 8. In the footnote to the table, we noted that "the adjustment represents the difference between the collected amount and the authorized amount of $48,995 authorized in the 2014 final rule."
[103] USCG-2017-0903-0004, p. 10.

We received several comments from the shipping industry that did not relate to the specific ratemaking in this rule, but touched on areas regulated by the Coast Guard. While we are unable to make changes to the regulations in this final rule due to the fact that the scope of the NPRM covered only the proposed 2018 adjustments to pilotage rates, we acknowledge that some of these matters are important issues and should be addressed in the appropriate forum.

1. Unnecessary Pilot Orders for Use of Tugs

One comment concerned situations in which vessel masters or owners disagreed with pilots on the matter of whether extra tugs were required. The commenter asserted that there has been a sharp increase in "questionable pilot tug callouts"[104] and requested that the Coast Guard implement a procedure whereby protests over these callouts can be registered with the Captain of the Port or District Commander. The commenter further requested that, if the tug is ruled unnecessary, the relevant pilot association be required to reimburse the vessel owner for the costs of the tug callout. At this time, there is no mechanism by which a vessel owner can contest such a charge, but we would welcome additional discussion of this issue at an appropriate venue.

2. Mechanisms to Prevent or Discourage Delays

Industry commenters also raised concerns that they were experiencing significant charges for pilotage attributable to time on board vessels that are not in active navigation, but are delayed by issues beyond the control of the vessel. These issues included items such as congestion, lack of available pilots at a change point, and unavailability of pilot boats. The commenters made two suggestions: 1) the Coast Guard should forbid pilotage

[104] USCG-2017-0903-0008, p. 9.

charges when vessels are not under active navigation; or 2) the Coast Guard should develop a separate, lower rate structure for pilot charges in these circumstances, possibly including a cap or limit for situations where the vessel is stopped at anchor. The commenters also noted that these charges are particularly significant in the parts of the season before May 1 and after November 30.[105]

We note that existing regulations in § 401.420 speak to these situations. In situations where a delay occurs, a pilotage association cannot charge for pilotage if the delay is caused by the pilotage association or the pilot (such as in the situation of a lack of a pilot boat). Delays caused by weather are, however, charged to the vessel before May 1 or after November 30. We disagree with the commenters that this provision should be changed. During these "peak" periods of the season, pilot time is a scarce resource, and we want to encourage the most efficient use of the pilot's time. There is a risk of delay when using the Great Lakes during parts of the year where delays caused by ice is common, and we want shippers, who decide when to use the Great Lakes, to incorporate the risks of those delays into their business decisions. Excluding fees for weather delays, at times when weather is a known risk, encourages inefficient use of pilot time and puts pressure on the system to increase the number of pilots, thus increasing rates for all.

3. Delays Related to Labor Disputes

Industry commenters also raised the issue of delays caused by labor disputes. The commenters stated that there were incidents in which pilots delayed vessel operations, citing pickets or demonstrations by labor interests at terminal facilities being used by a

[105] USCG-2017-0903-0008, pp. 8 and 9. The commenter also stated that in 2016, the Coast Guard removed a $250/hour limitation on certain charges, but we are uncertain to what the commenter is referring.

vessel required by law to use pilot services.[106] The commenters requested that the Coast Guard establish mechanisms to require pilot associations to reimburse the vessel operator for any delay costs associated with these actions.

We believe that there is currently no specific regulation that would require or enable the Coast Guard to impose monetary or damages for delays associated with a pilot or pilot association refusing service to a vessel based on labor protests. If a vessel operator believes this situation is occurring, he or she may use the procedures in § 401.510, "Operation without registered pilots," to determine the best course of action. If an owner or operator believes he or she has accrued monetary damages from an improper delay, that person may wish to pursue those claims in a civil venue.

4. Over-realization of Revenues

Industry commenters raise the issue of over-realization of revenues on the part of the pilot associations, and said the Coast Guard is failing to give this matter sufficient attention in the NPRM. The commenters argued that high U.S. pilotage rates had an adverse effect on the economy, and were substantively higher than Canadian rates for similar routes.

We note that, while we did not write at length on the issue of over-realization of revenues in the NPRM, it is because it is not a highly salient issue at this time. In the past, over-realization of revenues was caused by two factors, as the industry commenters note in their remarks: the lack of incorporation of weighting factor fees into the ratemaking methodology (revised per the suggestion of industry commenters), and a traffic level higher than the 10-year average. As we stated earlier in this preamble, higher

[106] USCG-2017-0903-0008, p. 9.

traffic than expected translating into more revenues than expected is a feature of the pay-for-service economic model on the Great Lakes, not a shortcoming of the methodology. Furthermore, we note that, contrary to the commenter's assertion, we have considered the secondary economic impact of pilotage rates—the 2017 Pilotage Cost Analysis the commenters cite being an example of how we analyze them. The results of the study are clear: although pilotage rates have by necessity increased substantially (given our focus on increasing the number of pilots and their compensation to encourage recruitment and retention), they have not increased to levels that threaten the economic viability of Great Lakes shipping.

VI. Discussion of Rate Adjustments

Having made the adjustments to the ratemaking methodology and inputs as described in the previous section, in this section, we discuss the revised 2018 ratemaking model used to derive the new pilotage rates. We note that several of the inputs have changed from the NPRM because this final rule was developed in 2018, and so various data points have been updated to include 2017 data that has become available. These changes include a revision of the Moody's rate for corporate securities, in Step 5, a revision to the 10-year average traffic figures, in Step 7, and a revision of the average weighting factors, in Step 8. Several inflation factors have been similarly adjusted to incorporate 2017 data and revised estimates. We have provided citations to all relevant data, where possible.

A. Step 1 – Recognition of operating expenses

Step 1 in our ratemaking methodology requires that the Coast Guard review and recognize the previous year's operating expenses (§ 404.101). To do this, we begin by

reviewing the independent accountant's financial reports for each association's 2015 expenses and revenues.[107] For accounting purposes, the financial reports divide expenses into designated and undesignated areas. In certain instances, for example, costs are applied to the undesignated or designated area based on where they were actually accrued. For example, costs for "Applicant pilot license insurance" in District One are assigned entirely to the undesignated areas, as applicant pilots work exclusively in those areas. For costs that accrued to the pilot associations generally, for example, insurance, the cost is divided between the designated and undesignated areas on a *pro rata* basis. The recognized operating expenses for the three districts are shown in Tables 6 through 8.

Table 6—2015 Recognized Expenses for District One

	District One		
	Designated	**Undesignated**	**TOTAL**
Reported Expenses for 2015	St. Lawrence River	Lake Ontario	
Operating Expenses			
Other Pilotage Costs			
Pilot subsistence/travel	$344,718	$267,669	$612,387
Applicant Pilot subsistence/travel	$59,992	$88,313	$148,305
License insurance	$26,976	$26,976	$53,952
Applicant Pilot license insurance	$0	$2,271	$2,271
Payroll taxes	$97,531	$61,656	$159,187
Applicant Pilot payroll taxes	$8,200	$12,583	$20,783
Other	$5,679	$5,341	$11,020
Total other pilotage costs	$543,096	$464,809	$1,007,905
Pilot Boat and Dispatch Costs			
Pilot boat expense	$134,400	$106,064	$240,464

[107] These reports are available in the docket for this rulemaking (see https://www.regulations.gov, Docket # USCG-2017-0903).

Dispatch expense	$0	$0	$0
Payroll taxes	$9,688	$7,645	$17,333
Total pilot and dispatch costs	$144,088	$113,709	$257,797
Administrative Expenses			
Legal - general counsel	$12,388	$9,733	$22,121
Legal - shared counsel (K&L Gates)	$904	$710	$1,614
Legal - USCG litigation	$0	$0	$0
Insurance	$16,261	$12,832	$29,093
Employee benefits	$8,752	$6,907	$15,659
Payroll taxes	$5,628	$4,441	$10,069
Other taxes	$9,447	$7,455	$16,902
Travel	$795	$627	$1,422
Depreciation/auto leasing/other	$55,850	$31,763	$87,613
Interest	$12,337	$9,736	$22,073
Dues and subscriptions	$15,867	$15,513	$31,380
Utilities	$9,573	$461	$10,034
Salaries	$56,126	$44,291	$100,417
Accounting/Professional fees	$5,254	$4,146	$9,400
Pilot Training	$0	$0	$0
Applicant Pilot training	$0	$0	$0
Other	$9,118	$6,446	$15,564
Total Administrative Expenses	$218,300	$155,061	$373,361
Total Operating Expenses (Other Costs + Pilot Boats + Admin)	$905,484	$733,579	$1,639,063
Adjustments (Independent certified public accountant (CPA))		-	-
Pilot subsistence/travel	$0	-$2,943	-$2,943
Payroll taxes	$0	$0	$0
Applicant Pilot payroll taxes	$0	$0	$0
TOTAL CPA ADJUSTMENTS	$0	-$2,943	-$2,943
Adjustments (Director)			
Legal - general counsel (corrected number)	$904	$710	$1,614
Legal - general counsel (corrected number)	-$12,388	-$9,733	-$22,121
Legal - shared counsel (K&L	$12,388	$9,733	$22,121

Gates) (corrected number)			
Legal - shared counsel (K&L Gates) (corrected number)	-904	-710	-$1,614
Legal - shared counsel - 3% lobbying fee (K&L Gates)	-$371	-$292	-$663
TOTAL DIRECTOR'S ADJUSTMENTS	-$371	-$292	-$663
Total Operating Expenses (OpEx + Adjustments)	**$905,113**	**$730,344**	**$1,635,457**

Table 7—2015 Recognized Expenses for District Two

	District Two		
	Undesignated	**Designated**	**TOTAL**
Reported Expenses for 2015	Lake Erie	SES to Port Huron	
Operating Expenses			
Other Pilotage Costs			
Pilot subsistence/travel	$163,276	$244,915	$408,191
Applicant Pilot subsistence/travel	$0	$0	$0
License insurance	$6,798	$10,196	$16,994
Applicant Pilot license insurance	$0	$0	$0
Payroll taxes	$53,242	$79,863	$133,105
Applicant Pilot payroll taxes	$0	$0	$0
Other	$457	$686	$1,143
Total other pilotage costs	$223,773	$335,660	$559,433
Pilot Boat and Dispatch Costs			
Pilot boat expense	$175,331	$262,997	$438,328
Dispatch expense	$9,000	$13,500	$22,500
Employee benefits	$74,855	$112,282	$187,137
Payroll taxes	$9,724	$14,585	$24,309
Total pilot and dispatch costs	$268,910	$403,364	$672,274
Administrative Expenses			
Legal - general counsel	$10,282	$15,422	$25,704
Legal - shared counsel (K&L Gates)	$8,346	$12,520	$20,866
Legal - USCG litigation	$0	$0	$0

Office rent	$26,275	$39,413	$65,688
Insurance	$10,618	$15,926	$26,544
Employee benefits	$23,930	$35,896	$59,826
Workman's compensation – pilots	$47,636	$71,453	$119,089
Payroll taxes	$5,428	$8,141	$13,569
Other taxes	$29,220	$43,830	$73,050
Depreciation/auto leasing/other	$19,757	$29,636	$49,393
Interest	$4,159	$6,238	$10,397
APA Dues	$11,827	$17,741	$29,568
Utilities	$15,850	$23,775	$39,625
Salaries	$51,365	$77,048	$128,413
Accounting/Professional fees	$10,721	$16,081	$26,802
Pilot Training	$0	$0	$0
Other	$11,775	$17,662	$29,437
Total Administrative Expenses	$287,189	$430,782	$717,971
Total Operating Expenses (Other Costs + Pilot Boats + Admin)	$779,872	$1,169,806	$1,949,678
Adjustments (Independent CPA)		-	-
Pilot boat costs	-$444	-$666	-$1,110
TOTAL CPA ADJUSTMENTS	-$444	-$666	-$1,110
Adjustments (Director)			
Legal - shared counsel 3% lobbying fee (K&L Gates)	-$250	-$376	-$626
TOTAL DIRECTOR'S ADJUSTMENTS	-$250	-$376	-$626
Total Operating Expenses (OpEx + Adjustments)	**$779,178**	**$1,168,764**	**$1,947,942**

Table 8—2015 Recognized Expenses for District Three

	District Three		
	Undesignated	**Designated**	**TOTAL**

Reported Expenses for 2015	Lakes Huron and Michigan and Lake Superior	St. Mary's River	
Operating Expenses			
Other Pilotage Costs			
Pilot subsistence/travel	$457,393	$152,465	$609,858
Applicant pilot subsistence/travel	$0	$ -	$0
License insurance	$16,803	$5,601	$22,404
Payroll taxes	$160,509	$53,503	$214,012
Applicant pilot payroll taxes	$0	$ -	$0
Other	$1,546	$515	$2,061
Total other pilotage costs	$636,251	$212,084	$848,335
Pilot Boat and Dispatch Costs			
Pilot boat costs	$488,246	$162,748	$650,994
Dispatch costs	$128,620	$42,873	$171,493
Employee benefits	$12,983	$4,327	$17,310
Payroll taxes	$14,201	$4,734	$18,935
Total pilot and dispatch costs	$644,050	$214,682	$858,732
Administrative Expenses			
Legal - general counsel	$16,798	$5,599	$22,397
Legal - shared counsel (K&L Gates)	$18,011	$6,004	$24,015
Legal - USCG litigation	$0	$ -	$0
Office rent	$6,372	$2,124	$8,496
Insurance	$12,227	$4,076	$16,303
Employee benefits	$93,646	$31,215	$124,861
Payroll Taxes	$9,963	$3,321	$13,284
Other taxes	$1,333	$445	$1,778
Depreciation/auto leasing/other	$29,111	$9,703	$38,814
Interest	$3,397	$1,132	$4,529
APA Dues	$22,736	$7,579	$30,315
Utilities	$32,716	$10,906	$43,622
Salaries	$84,075	$28,025	$112,100
Accounting/Professional fees	$19,696	$6,565	$26,261
Pilot Training	$26,664	$8,888	$35,552
Other	$25,228	$8,409	$33,637
Total Administrative Expenses	$401,973	$133,991	$535,964

Total Operating Expenses (Other Costs + Pilot Boats + Admin)	$1,682,274	$560,757	$2,243,031
Adjustments (Independent CPA)			
Pilot subsistence/Travel	-$67,933	-$22,645	-$90,578
Payroll taxes	-$14,175	-$4,725	-$18,901
Other expenses	-$4,058	-$1,353	-$5,411
TOTAL CPA ADJUSTMENTS	-$86,166	-$28,723	-$114,890
Adjustments (Director)			
Legal - shared counsel 3% lobbying fee (K&L Gates)	-$540	-$180	-$720
TOTAL DIRECTOR'S ADJUSTMENTS	-$540	-$180	-$720
Total Operating Expenses (OpEx + Adjustments)	**$1,595,565**	**$531,854**	**$2,127,420**

*Values may not sum due to rounding. District 3 provided the Coast Guard data for Areas 6, 7, and 8. However, the Coast Guard combined areas 6 and 8 to present the operating expenses by designated and undesignated areas.

B. Step 2 – Projection of operating expenses

Having ascertained the recognized 2015 operating expenses in Step 1, the next step is to estimate the current year's operating expenses by adjusting those expenses for inflation over the 3-year period. The Coast Guard calculated inflation using the Bureau of Labor Statistics data from the CPI for the Midwest Region of the United States[108] and reports from the FOMC median economic projections for PCE inflation.[109] Based on that information, the calculations for Step 2 for all three districts are shown in Tables 9 through 11.

[108] Annual average CPI for 2017, 2016, and 2015 is 229.874, 226.115, and 224.21, respectively. Operating expenses were updated to 2016 using 0.8% and to 2017 using 1.7%, as shown in the last column of the table found at https://www.bls.gov/regions/midwest/data/consumerpriceindexhistorical_midwest_table.pdf.
[109] Operating expenses were updated to 2018 using the median PCE inflation for 2018 found in Table 1: Economic projections of Federal Reserve Board members and Federal Reserve Bank presidents, under their individual assessments of projected appropriate monetary policy, December 2017. Available at https://www.federalreserve.gov/monetarypolicy/fomcminutes20171213ep.htm.

Table 9—Adjusted Operating Expenses for District One

	Designated	Undesignated	Total
Total Operating Expenses (Step 1)	$905,113	$730,344	$1,635,457
2016 Inflation Modification (@0.8%)	$7,241	$5,843	$13,084
2017 Inflation Modification (@1.7%)	$15,510	$12,515	$28,025
2018 Inflation Modification (@1.9%)	$17,629	$14,225	$31,854
Adjusted 2018 Operating Expenses	**$945,493**	**$762,927**	**$1,708,420**

Table 10—Adjusted Operating Expenses for District Two

	Undesignated	Designated	Total
Total Operating Expenses (Step 1)	$779,178	$1,168,764	$1,947,942
2016 Inflation Modification (@0.8%)	$6,233	$9,350	$15,583
2017 Inflation Modification (@1.7%)	$13,352	$20,028	$33,380
2018 Inflation Modification (@1.9%)	$15,176	$22,765	$37,941
Adjusted 2018 Operating Expenses	**$813,939**	**$1,220,907**	**$2,034,846**

Table 11—Adjusted Operating Expenses for District Three

	Undesignated	Designated	Total
Total Operating Expenses (Step 1)	$1,595,565	$531,854	$2,127,420
2016 Inflation Modification (@0.8%)	$12,765	$4,255	$17,020
2017 Inflation Modification (@1.7%)	$27,342	$9,114	$36,456
2018 Inflation Modification (@1.9%)	$31,078	$10,359	$41,437
Adjusted 2018 Operating Expenses	**$1,666,750**	**$555,582**	**$2,222,333**

*Values may not sum due to rounding. District 3 provided the Coast Guard data for Areas 6, 7, and 8. However, the Coast Guard combined areas 6 and 8 to present the operating expenses by designated and undesignated areas.

C. Step 3 – Estimate number of working pilots

In accordance with the proposed text in § 404.103, we estimated the number of working pilots in each district. Based on input from the Saint Lawrence Seaway Pilots Association, we estimate that there will be 17 working pilots in 2018 in District One. Based on input from the Lakes Pilots Association, we estimate there will be 14 working pilots in 2018 in District Two. Based on input from the Western Great Lakes Pilots Association, we estimate there will be 18 working pilots in 2018 in District Three.

Furthermore, based on the staffing model employed to develop the total number of pilots needed, we assign a certain number of pilots to designated waters, and a certain number to undesignated waters. These numbers are used to determine the amount of revenue needed in their respective areas.

Table 12—Authorized Pilots

	District One	**District Two**	**District Three**
Maximum number of pilots (per § 401.220(a)) [110]	17	15	22
2018 Authorized pilots (total)	17	14	18
Pilots assigned to designated areas	10	7	4
Pilots assigned to undesignated areas	7	7	14

D. Step 4 – Determine target pilot compensation

In Step 4, we determine the total pilot compensation for each area. Because we are conducting a "full ratemaking" this year, we follow the procedure outlined in the revised paragraph (a) of § 404.104, which requires us to develop a benchmark after considering the most relevant currently available nonproprietary information. The

[110] For a detailed calculation, see 82 FR 41466, Table 6 at 41480 (August 31, 2017).

compensation benchmark for 2018 is $352,485 per pilot. We derived this figure by using the number we calculated for the 2015 AMO rate ($325,110), and then adjusting for inflation to arrive at the interim benchmark number for 2018, using the ECI and PCE inflation indexes as discussed in Section VI.C. The calculations are shown in Table 13.

Table 13—Calculation of 2018 Target Compensation Benchmark

	Inflation (%)[111]	**Target Compensation**
2015 AMO Pilot Compensation	…	$325,110
2016 Inflation Adjustment (2016 ECI)	3.0%	$334,863
2017 Inflation Adjustment (2017 ECI)	3.3%	$345,913
2018 Inflation Adjustment (2018 PCE)	1.9%	**$352,485**

Next, we certify that the number of pilots estimated for 2018 is less than or equal to the number permitted under the staffing model in § 401.220(a). The staffing model suggests that the number of pilots needed is 17 pilots for District One, 15 pilots for District Two, and 22 pilots for District Three,[112] which is greater than or equal to the numbers of working pilots provided by the pilot associations.

Thus, in accordance with proposed § 404.104(c), we use the revised target individual compensation level to derive the total pilot compensation by multiplying the individual target compensation by the estimated number of working pilots for each district, as shown in Tables 14 through 16.

Table 14—Target Pilot Compensation for District One

	Designated	**Undesignated**	**Total**

[111] ECI for total compensation, for private industry workers, Transportation and material moving, percent changes for 12 months ended in December, found in Table 5 (p. 71) of the following: https://www.bls.gov/web/eci/echistrynaics.pdf. Median PCE inflation can be found at https://www.federalreserve.gov/monetarypolicy/fomcminutes20171213ep.htm.

[112] See Table 6 of the 2017 final rule, 82 FR 41466 at 41480. The methodology of the staffing model is discussed at length in the final rule (see pages 41476-41480 for a detailed analysis of the calculations).

Target Pilot Compensation	$352,485	$352,485	$352,485
Number of Pilots	10	7	17
Total Target Pilot Compensation	**$3,524,850**	**$2,467,395**	**$5,992,245**

Table 15—Target Pilot Compensation for District Two

	Undesignated	**Designated**	**Total**
Target Pilot Compensation	$352,485	$352,485	$352,485
Number of Pilots	7	7	14
Total Target Pilot Compensation	**$2,467,395**	**$2,467,395**	**$4,934,790**

Table 16—Target Pilot Compensation for District Three

	Undesignated	**Designated**	**Total**
Target Pilot Compensation	$352,485	$352,485	$352,485
Number of Pilots	14	4	18
Total Target Pilot Compensation	**$4,934,790**	**$1,409,940**	**$6,344,730**

E. Step 5 – Calculate working capital fund

Next, we calculate the working capital fund revenues needed for each area.[113] First, we add the figures for projected operating expenses and total pilot compensation for each area. Then, we find the preceding year's average annual rate of return for new issues of high grade corporate securities. Using Moody's data, that number is 3.74 percent.[114] By multiplying the two figures, we get the working capital fund contribution for each area, as shown in Tables 17 through 19.

[113] We note that the policy discussion of this issue is located in Section V ("Discussion of Comments and Changes to Methodology"), above. The specific discussion about the working capital fund is located in Section V.E.

[114] Moody's Seasoned Aaa Corporate Bond Yield, average of 2017 monthly data (not seasonally adjusted), located at https://fred.stlouisfed.org/series/AAA. The Coast Guard uses the most recent complete year of data.

Table 17—Working Capital Fund Contribution for District One

	Designated	Undesignated	Total
Adjusted Operating Expenses (Step 2)	$945,493	$762,927	$1,708,420
Total Target Pilot Compensation (Step 4)	$3,524,850	$2,467,395	$5,992,245
Total 2018 Expenses	$4,470,343	$3,230,322	$7,700,665
Working Capital Fund (3.74%)	$167,191	$120,814	$288,005

Table 18—Working Capital Fund Contribution for District Two

	Undesignated	Designated	Total
Adjusted Operating Expenses (Step 2)	$813,939	$1,220,907	$2,034,846
Total Target Pilot Compensation (Step 4)	$2,467,395	$2,467,395	$4,934,790
Total 2018 Expenses	$3,281,334	$3,688,302	$6,969,636
Working Capital Fund (3.74%)	$122,722	$137,942	$260,664

Table 19—Working Capital Fund Contribution for District Three

	Undesignated	Designated	Total
Adjusted Operating Expenses (Step 2)	$1,666,750	$555,582	$2,222,332
Total Target Pilot Compensation (Step 4)	$4,934,790	$1,409,940	$6,344,730
Total 2018 Expenses	$6,601,540	$1,965,522	$8,567,062
Working Capital Fund (3.74%)	$246,898	$73,511	$320,409

F. Step 6 – Calculate revenue needed

In Step 6, we add up all the expenses accrued to derive the total revenue needed for each area. These expenses include the projected operating expenses (from Step 2), the total pilot compensation (from Step 4), and the working capital fund contribution (from Step 5). The calculations are shown in Tables 20 through 22.

Table 20—Revenue Needed for District One

	Designated	Undesignated	Total

Adjusted Operating Expenses (Step 2)	$945,493	$762,927	$1,708,420
Total Target Pilot Compensation (Step 4)	$3,524,850	$2,467,395	$5,992,245
Working Capital Fund (Step 5)	$167,191	$120,814	$288,005
Total Revenue Needed	$4,637,534	$3,351,136	$7,988,670

Table 21—Revenue Needed for District Two

	Undesignated	Designated	Total
Adjusted Operating Expenses (Step 2)	$813,939	$1,220,907	$2,034,846
Total Target Pilot Compensation (Step 4)	$2,467,395	$2,467,395	$4,934,790
Working Capital Fund (Step 5)	$122,722	$137,942	$260,664
Total Revenue Needed	$3,404,056	$3,826,244	$7,230,300

Table 22—Revenue Needed for District Three

	Undesignated	Designated	Total
Adjusted Operating Expenses (Step 2)	$1,666,750	$555,582	$2,222,333
Total Target Pilot Compensation (Step 4)	$4,934,790	$1,409,940	$6,344,730
Working Capital Fund (Step 5)	$246,898	$73,511	$320,409
Total Revenue Needed	$6,848,438	$2,039,033	$8,887,472

G. Step 7 – Calculate initial base rates

Having determined the revenue needed for each area in the previous six steps, we divide that number by the expected number of hours of traffic to develop an hourly rate. Step 7 is a two-part process. In the first part, we calculate the 10-year average of traffic in each district. Because we are calculating separate figures for designated and undesignated waters, there are two parts for each calculation. The calculations are shown in Tables 23 through 25.

Table 23—Time on Task for District One

Year	Designated	Undesignated

	Hours	Hours
2017	7605	8679
2016	5434	6217
2015	5743	6667
2014	6810	6853
2013	5864	5529
2012	4771	5121
2011	5045	5377
2010	4839	5649
2009	3511	3947
2008	5829	5298
Average	5545	5934

Table 24—Time on Task for District Two

Year	Undesignated Hours	Designated Hours
2017	5139	6074
2016	6425	5615
2015	6535	5967
2014	7856	7001
2013	4603	4750
2012	3848	3922
2011	3708	3680
2010	5565	5235
2009	3386	3017
2008	4844	3956
Average	5191	4922

Table 25—Time on Task for District Three

Year	Undesignated Hours	Designated Hours
2017	26183	3798
2016	23421	2769
2015	22824	2696
2014	25833	3835
2013	17115	2631

2012	15906	2163
2011	16012	1678
2010	20211	2461
2009	12520	1820
2008	14287	2286
Average	19431	2614

Next, we derive the initial hourly rate by dividing the revenue needed by the average number of hours for each area. This produces an initial rate required to produce the revenue needed for each area, assuming the amount of traffic is as expected. The calculations for each area are shown in Tables 26 through 28.

Table 26—Rate Calculations for District One

	Designated	Undesignated
Revenue needed (Step 6)	$4,637,534	$3,351,136
Average time on task (hours)	5,545	5,934
Initial rate	$836	$565

Table 27—Rate Calculations for District Two

	Undesignated	Designated
Revenue needed (Step 6)	$3,404,056	$3,826,244
Average time on task (hours)	5,191	4,922
Initial rate	$656	$777

Table 28—Rate Calculations for District Three

	Undesignated	Designated
Revenue needed (Step 6)	$6,848,438	$2,039,033
Average time on task (hours)	19,431	2,614
Initial rate	$352	$780

H. Step 8 – Calculate average weighting factors by area

In this step, we calculate the average weighting factor for each designated and

undesignated area. We collect the weighting factors, set forth in 46 CFR 401.400, for each vessel trip. Using this database, we calculate the average weighting factor for each area using the data from each vessel transit from 2014 onward, as shown in Tables 29 through 34.

Table 29—Average Weighting Factor for Area 1 (District 1, Designated)

Vessel Class/Year	Number of Transits	Weighting factor	Weighted Transits
Class 1 (2014)	31	1	31
Class 1 (2015)	41	1	41
Class 1 (2016)	31	1	31
Class 1 (2017)	28	1	28
Class 2 (2014)	285	1.15	327.75
Class 2 (2015)	295	1.15	339.25
Class 2 (2016)	185	1.15	212.75
Class 2 (2017)	352	1.15	404.8
Class 3 (2014)	50	1.3	65
Class 3 (2015)	28	1.3	36.4
Class 3 (2016)	50	1.3	65
Class 3 (2017)	67	1.3	87.1
Class 4 (2014)	271	1.45	392.95
Class 4 (2015)	251	1.45	363.95
Class 4 (2016)	214	1.45	310.3
Class 4 (2017)	285	1.45	413.25
Total	2464		3149.5
Average weighting factor (weighted transits/number of transits)		1.28	

Table 30—Average Weighting factor for Area 2 (District 1, Undesignated)

Vessel Class/Year	Number of Transits	Weighting factor	Weighted Transits
Class 1 (2014)	25	1	25
Class 1 (2015)	28	1	28

Class 1 (2016)	18	1	18
Class 1 (2017)	19	1	19
Class 2 (2014)	238	1.15	273.7
Class 2 (2015)	263	1.15	302.45
Class 2 (2016)	169	1.15	194.35
Class 2 (2017)	290	1.15	333.5
Class 3 (2014)	60	1.3	78
Class 3 (2015)	42	1.3	54.6
Class 3 (2016)	28	1.3	36.4
Class 3 (2017)	45	1.3	58.5
Class 4 (2014)	289	1.45	419.05
Class 4 (2015)	269	1.45	390.05
Class 4 (2016)	222	1.45	321.9
Class 4 (2017)	285	1.45	413.25
Total	2290		2965.75
Average weighting factor (weighted transits/number of transits)		1.30	

Table 31—Average Weighting Factor for Area 5 (District 2, Undesignated)

Vessel Class/Year	Number of Transits	Weighting factor	Weighted Transits
Class 1 (2014)	31	1	31
Class 1 (2015)	35	1	35
Class 1 (2016)	32	1	32
Class 1 (2017)	21	1	21
Class 2 (2014)	356	1.15	409.4
Class 2 (2015)	354	1.15	407.1
Class 2 (2016)	380	1.15	437
Class 2 (2017)	222	1.15	255.3
Class 3 (2014)	20	1.3	26
Class 3 (2015)	0	1.3	0
Class 3 (2016)	9	1.3	11.7
Class 3 (2017)	12	1.3	15.6
Class 4 (2014)	636	1.45	922.2
Class 4 (2015)	560	1.45	812

Class 4 (2016)	468	1.45	678.6
Class 4 (2017)	319	1.45	462.55
Total	3455		4556.45
Average weighting factor (weighted transits/number of transits)		1.32	

Table 32—Average Weighting Factor for Area 4 (District 2, Designated)

Vessel Class/Year	Number of Transits	Weighting factor	Weighted Transits
Class 1 (2014)	20	1	20
Class 1 (2015)	15	1	15
Class 1 (2016)	28	1	28
Class 1 (2017)	15	1	15
Class 2 (2014)	237	1.15	272.55
Class 2 (2015)	217	1.15	249.55
Class 2 (2016)	224	1.15	257.6
Class 2 (2017)	127	1.15	146.05
Class 3 (2014)	8	1.3	10.4
Class 3 (2015)	8	1.3	10.4
Class 3 (2016)	4	1.3	5.2
Class 3 (2017)	4	1.3	5.2
Class 4 (2014)	359	1.45	520.55
Class 4 (2015)	340	1.45	493
Class 4 (2016)	281	1.45	407.45
Class 4 (2017)	185	1.45	268.25
Total	2072		2724.2
Average weighting factor (weighted transits/number of transits)		1.31	

Table 33—Average Weighting Factor for Areas 6 and 8 (District 3, Undesignated)

Vessel Class/Year	Number of Transits	Weighting factor	Weighted Transits

Area 6			
Class 1 (2014)	45	1	45
Class 1 (2015)	56	1	56
Class 1 (2016)	136	1	136
Class 1 (2017)	148	1	148
Class 2 (2014)	274	1.15	315.1
Class 2 (2015)	207	1.15	238.05
Class 2 (2016)	236	1.15	271.4
Class 2 (2017)	264	1.15	303.6
Class 3 (2014)	15	1.3	19.5
Class 3 (2015)	8	1.3	10.4
Class 3 (2016)	10	1.3	13
Class 3 (2017)	19	1.3	24.7
Class 4 (2014)	394	1.45	571.3
Class 4 (2015)	375	1.45	543.75
Class 4 (2016)	332	1.45	481.4
Class 4 (2017)	367	1.45	532.15
Total for Area 6	2,886		3,709.35
Area 8			
Class 1 (2014)	3	1	3
Class 1 (2015)	0	1	0
Class 1 (2016)	4	1	4
Class 1 (2017)	4	1	4
Class 2 (2014)	177	1.15	203.55
Class 2 (2015)	169	1.15	194.35
Class 2 (2016)	174	1.15	200.1
Class 2 (2017)	151	1.15	173.65
Class 3 (2014)	3	1.3	3.9
Class 3 (2015)	0	1.3	0
Class 3 (2016)	7	1.3	9.1
Class 3 (2017)	18	1.3	23.4
Class 4 (2014)	243	1.45	352.35
Class 4 (2015)	253	1.45	366.85
Class 4 (2016)	204	1.45	295.8
Class 4 (2017)	269	1.45	390.05
Total for Area 8	1,679		2224.1

Combined total	4,565		5,933.45
Average weighting factor (weighted transits/number of transits)		1.30	

Table 34—Average Weighting Factor for Area 7 (District 3, Designated)

Vessel Class/Year	Number of Transits	Weighting factor	Weighted Transits
Class 1 (2014)	27	1	27
Class 1 (2015)	23	1	23
Class 1 (2016)	55	1	55
Class 1 (2017)	62	1	62
Class 2 (2014)	221	1.15	254.15
Class 2 (2015)	145	1.15	166.75
Class 2 (2016)	174	1.15	200.1
Class 2 (2017)	170	1.15	195.5
Class 3 (2014)	4	1.3	5.2
Class 3 (2015)	0	1.3	0
Class 3 (2016)	6	1.3	7.8
Class 3 (2017)	14	1.3	18.2
Class 4 (2014)	321	1.45	465.45
Class 4 (2015)	245	1.45	355.25
Class 4 (2016)	191	1.45	276.95
Class 4 (2017)	234	1.45	339.3
Total	1892		2,451.65
Average weighting factor (weighted transits/number of transits)		1.30	

I. Step 9 – Calculate revised base rates

In this step, we revise the base rates so that once the impact of the weighting factors are considered, the total cost of pilotage will be equal to the revenue needed. To do this, we divide the initial base rates, calculated in Step 7, by the average weighting

factors calculated in Step 8, as shown in Table 35.

Table 35—Revised Base Rates

Area	Initial rate (Step 7)	Average weighting factor (Step 8)	Revised Rate (Initial rate/Average weighting factor)
District One: Designated	$836	1.28	$653
District One: Undesignated	$565	1.30	$435
District Two: Undesignated	$656	1.32	$497
District Two: Designated	$777	1.31	$593
District Three: Undesignated	$352	1.30	$271
District Three: Designated	$780	1.30	$600

J. Step 10 – Review and finalize rates

In Step 10, the Director reviews the rates set forth by the staffing model and ensures that they meet the goal of ensuring safe, efficient, and reliable pilotage. As detailed in the discussion sections of the NPRM, the proposed rates incorporate appropriate compensation for enough pilots to handle heavy traffic periods, cover operating expenses and infrastructure costs, and take into account average traffic and weighting factors. Therefore, we believe that these rates meet the goal of ensuring safe, efficient, and reliable pilotage. Thus, we are not making any alterations to the rates in this step. The final rates are shown in Table 36, and we will modify the text in § 401.405(a) to reflect them.

Table 36—Final Rates

Area	Name	Final 2017 pilotage rate	Proposed 2018 pilotage rate	Final 2018 pilotage rate

District One: Designated	St. Lawrence River	$601	$622	$653
District One: Undesignated	Lake Ontario	$408	$424	$435
District Two: Undesignated	Lake Erie	$429	$454	$497
District Two: Designated	Navigable waters from Southeast Shoal to Port Huron, MI	$580	$553	$593
District Three: Undesignated	Lakes Huron, Michigan, and Superior	$218	$253	$271
District Three: Designated	St. Mary's River	$514	$517	$600

K. Surcharges

Because there are several applicant pilots in 2018, we are authorizing surcharges to cover the costs needed for training expenses. Consistent with previous years, we are assigning a cost of $150,000 per applicant pilot. To develop the surcharge, we multiply the number of applicant pilots by the average cost per pilot to develop a total amount of training costs needed. We then impose that amount as a surcharge to all areas in the respective district, consisting of a percentage of revenue needed. In this year, there are two applicant pilots for District One, one applicant pilot for District Two, and four applicant pilots for District Three. The calculations to develop the surcharges are shown in Table 37. While the percentages are rounded for simplicity, this rounding does not impact the revenue generated, as surcharges can no longer be collected once the surcharge total has been attained.

Table 37—Surcharge Calculations

	District One	District Two	District Three
Number of applicant pilots	2	1	4
Total applicant training costs	$300,000	$150,000	$600,000
Revenue needed (Step 6)	$7,988,670	$7,230,300	$8,887,472
Total surcharge as percentage (total training costs/revenue)	4%	2%	7%

VII. Regulatory Analyses

We developed this final rule after considering numerous statutes and Executive orders related to rulemaking. Below we summarize our analyses based on these statutes or Executive orders.

A. Regulatory Planning and Review

Executive Orders 12866 ("Regulatory Planning and Review") and 13563 ("Improving Regulation and Regulatory Review") direct agencies to assess the costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility. Executive Order 13771, "Reducing Regulation and Controlling Regulatory Costs," directs agencies to reduce regulation and control regulatory costs and provides that "for every one new regulation issued, at least two prior regulations be identified for elimination, and that the cost of planned regulations be prudently managed and controlled through a budgeting process."

The Office of Management and Budget (OMB) has not designated this rule a significant regulatory action under section 3(f) of Executive Order 12866. Accordingly, OMB has not reviewed it. Because this rule is not a significant regulatory action, this rule is exempt from the requirements of Executive Order 13771. *See* the OMB Memorandum titled "Guidance Implementing Executive Order 13771, titled 'Reducing Regulation and Controlling Regulatory Costs'" (April 5, 2017). A regulatory analysis (RA) follows.

The purpose of this final rule is to establish new base pilotage rates and surcharges for training. This rule also makes changes to the ratemaking methodology and revises the compensation benchmark. The last full ratemaking was concluded in 2017.

Table 38 summarizes the regulatory changes that are expected to have no costs, and any qualitative benefits associated with them. The table also includes changes that affect portions of the methodology for calculating the base pilotage rates. While these changes affect the calculation of the rate, the costs of these changes are captured in the changes to the total revenue as a result of the rate change.

Table 38—Regulatory Changes With No Cost or Costs Captured in the Rate Change

Change	Description	Basis for No Costs	Benefits
Codification of compensation inflation adjustment	Add regulatory text to § 404.104 to make the adjustment for inflation automatic	Pilot compensation costs are accounted for in the base pilotage rates	-Pilot compensation will keep up with regional inflation -Improves consistency, transparency, and efficiency in our ratemaking procedures

Target pilot compensation	-Due to the 2016 court opinion on pilot compensation, the Coast Guard is changing the pilot compensation benchmark	Pilot compensation costs are accounted for in the base pilotage rates	Improves transparency in our ratemaking procedures
Relocation of staffing model regulations	Move the discussion of the staffing model from 46 CFR 404.103 (as part of "Step 3" of the ratemaking process), to the general regulations governing pilotage in § 401.220	We are not adjusting or modifying the regulatory text, but simply moving it to § 401.220	Improves the clarity of the regulations and improves the regulatory process
Delineation of full ratemakings and annual reviews	Set forth separate regulatory paragraphs detailing the differences between how the Coast Guard undertakes an annual adjustment of the pilotage rates, and a full reassessment of the rates, which must be undertaken once every 5 years	Change only clarifies that the benchmark level compensation will only be reconsidered during "full ratemaking" years	Simplify ratemaking procedures in interim years and better effect the statutory mandate in section 9303(f) of the Great Lakes Pilotage Act
Miscellaneous other changes	-Rename the step currently titled "Initially calculate base rates" to "Calculate initial base rates" for style purposes. -Adjust the reference to the	Minor editorial changes in this rule that do not impact total revenues	Provides clarification to regulatory text and the rulemaking

	staffing model in Step 7 to account for its relocation in text		

Table 39 summarizes the affected population, costs, and benefits of the rate changes that are expected to have costs associated with them.

Table 39—Economic Impacts Due to Rate Changes

Change	Description	Affected Population	Costs	Benefits
Rate Changes	Under the Great Lakes Pilotage Act of 1960, the Coast Guard is required to review and adjust base pilotage rates annually.	Owners and operators of 215 vessels journeying the Great Lakes system annually, 49 U.S. Great Lakes pilots, and 3 pilotage associations.	$2,830,061 Due to change in Revenue Needed for 2018 ($25,156,442) from Revenue Needed for 2017 ($22,326,381) as shown in Table 40 below.	-New rates cover an association's necessary and reasonable operating expenses. -Provides fair compensation, adequate training, and sufficient rest periods for pilots. -Ensures the association receives sufficient revenues to fund future improvements.

The Coast Guard is required to review and adjust pilotage rates on the Great Lakes annually. See Sections III and IV of this preamble for detailed discussions of the legal basis and purpose for this rulemaking and for background information on Great Lakes pilotage ratemaking. Based on our annual review for this rulemaking, we are adjusting the pilotage rates for the 2018 shipping season to generate sufficient revenues for each district to reimburse its necessary and reasonable operating expenses, fairly compensate trained and rested pilots, and provide an appropriate working capital fund to

use for improvements. The rate changes in this final rule will lead to an increase in the cost per unit of service to shippers in all three districts, and result in an estimated annual cost increase to shippers.

In addition to the increase in payments that will be incurred by shippers in all three districts from the previous year as a result of the rate changes, we are authorizing a temporary surcharge to allow the pilotage associations to recover training expenses that will be incurred in 2018. For 2018, we anticipate that there will be two applicant pilots in District One, one applicant pilot in District Two, and four applicant pilots in District Three. With a training cost of $150,000 per pilot, we estimate that Districts One, Two, and Three will incur $300,000, $150,000, and $600,000, respectively, in training expenses. These temporary surcharges will generate a combined $1,050,000 in revenue for the pilotage associations. Therefore, after accounting for the implementation of the temporary surcharges across all three districts, the total payments that will be made by shippers during the 2018 shipping season are estimated at $2,830,061 more than the total payments that were estimated in 2017 (Table 41).[115]

Table 40 summarizes the changes in the RA from the NPRM to the final rule. These changes were made as a result of public comments received after publication of the NPRM.

Table 40—Summary of Changes from NPRM to Final Rule

Element of the Analysis	NPRM	Final rule	Resulting change in RA
Target Pilot Compensation	$319,617	$352,485	Data indirectly affects the calculation of projected revenues.

[115]Total payments across all three districts are equal to the increase in payments incurred by shippers as a result of the rate changes plus the temporary surcharges applied to traffic in Districts One, Two, and Three.

Updated analysis with 2017 inflation and securities return data, when available	NPRM used data through 2016, as this was the most current year available	Uses 2017 data, where applicable and available	Data indirectly affects calculation of projected revenues.

Affected Population

The shippers affected by these rate changes are those owners and operators of domestic vessels operating "on register" (employed in foreign trade) and owners and operators of non-Canadian foreign vessels on routes within the Great Lakes system. These owners and operators must have pilots or pilotage service as required by 46 U.S.C. 9302. There is no minimum tonnage limit or exemption for these vessels. The statute applies only to commercial vessels and not to recreational vessels. United States-flagged vessels not operating on register and Canadian "lakers," which account for most commercial shipping on the Great Lakes, are not required by 46 U.S.C. 9302 to have pilots. However, these U.S.- and Canadian-flagged lakers may voluntarily choose to engage a Great Lakes registered pilot. Vessels that are U.S.-flagged may opt to have a pilot for various reasons, such as unfamiliarity with designated waters and ports, or for insurance purposes.

We used billing information from the years 2014 through 2016 from the Great Lakes Pilotage Management System (GLPMS) to estimate the average annual number of vessels affected by the rate adjustment. The GLPMS tracks data related to managing and coordinating the dispatch of pilots on the Great Lakes, and billing in accordance with the services. We found that a total of 387 vessels used pilotage services during the years 2014 through 2016. That is, these vessels had a pilot dispatched to the vessel, and billing information was recorded in the GLPMS. The number of invoices per vessel ranged

from a minimum of 1 invoice per year to a maximum of 108 invoices per year. Of these vessels, 367 were foreign-flagged vessels and 20 were U.S.-flagged.

Vessel traffic is affected by numerous factors and varies from year to year. Therefore, rather than the total number of vessels over the time period, an average of the unique vessels using pilotage services from the years 2014 through 2016 is the best representation of vessels estimated to be affected by the rate in this final rule. From the years 2014 through 2016, an average of 215 vessels used pilotage services annually. On average, 206 of these vessels were foreign-flagged vessels and 9 were U.S.-flagged vessels that voluntarily opted into the pilotage service.

Total Cost to Shippers

The rate changes resulting from the methodology will generate costs to industry in the form of higher payments for shippers. We estimate the effect of the rate changes on shippers by comparing the total projected revenues needed to cover costs in 2017 with the total projected revenues needed to cover costs in 2018, including any temporary surcharges we have authorized. We set pilotage rates so that pilot associations receive enough revenue to cover their necessary and reasonable expenses. Shippers pay these rates when they have a pilot as required by 46 U.S.C. 9302. Therefore, the aggregate payments of shippers to pilot associations are equal to the projected necessary revenues for pilot associations. The revenues each year represent the total costs that shippers must pay for pilotage services, and the change in revenue from the previous year is the additional cost to shippers discussed in this final rule.

The impacts of the rate changes on shippers are estimated from the District pilotage projected revenues (shown in Tables 20 through 22 of this preamble) and the

surcharges described in Section VI of this preamble. We estimate that for the 2018 shipping season, the projected revenue needed for all three districts is $24,106,442. Temporary surcharges on traffic in Districts One, Two, and Three will be applied for the duration of the 2018 season in order for the pilotage associations to recover training expenses incurred for applicant pilots. We estimate that the pilotage associations require an additional $300,000, $150,000, and $600,000 in revenue for applicant training expenses in Districts One, Two, and Three, respectively. This will be an additional cost to shippers of $1,050,000 during the 2018 shipping season. Adding the projected revenue of $24,106,442 to the surcharges, we estimate the pilotage associations' total projected revenue needed for 2018 will be $25,156,442. To estimate the additional cost to shippers from this final rule, we compare the 2018 total projected revenues to the 2017 projected revenues. Because we review and prescribe rates for the Great Lakes Pilotage annually, the effects are estimated as a single year cost rather than annualized over a 10-year period. In the 2017 final rule, [116] we estimated the total projected revenue needed for 2017, including surcharges, as $22,326,381. This is the best approximation of 2017 revenues as, at the time of this publication, we do not have enough audited data available for the 2017 shipping season to revise these projections. Table 41 shows the revenue projections for 2017 and 2018 and details the additional cost increases to shippers by area and district as a result of the rate changes and temporary surcharges on traffic in Districts One, Two, and Three.

[116] The 2017 projected revenues are from the 2017 Great Lakes Pilotage Ratemaking final rule (82 FR 41484 and 41489), Tables 9 and 14.

Table 41—Effect of the Final Rule by Area and District ($U.S.; Non-discounted)

Area	Revenue Needed in 2017	2017 Temporary Surcharge	Total 2017 Projected Revenue	Revenue Needed in 2018	2018 Temporary Surcharge	Total 2018 Projected Revenue	Additional Costs of this Rule
Total, District 1	$7,109,019	$0	$7,109,019	$7,988,670	$300,000	$8,288,670	$1,179,651
Total, District 2	$6,633,491	$300,000	$6,933,491	$7,230,300	$150,000	$7,380,300	$446,809
Total, District 3	$7,233,871	$1,050,000	$8,283,871	$8,887,472	$600,000	$9,487,472	$1,203,601
System Total	$20,976,381	$1,350,000	$22,326,381	$24,106,442	$1,050,000	$25,156,442	$2,830,061

The resulting difference between the projected revenue in 2017 and the projected revenue in 2018 is the annual change in payments from shippers to pilots as a result of the rate change that will be imposed by this rule. The effect of the rate change to shippers varies by area and district. The rate changes, after taking into account the increase in pilotage rates and the addition of temporary surcharges, will lead to affected shippers operating in District One, District Two, and District Three experiencing an increase in payments of $1,179,651, $446,809, and $1,203,601, respectively, over the previous year. The overall adjustment in payments will be an increase in payments by shippers of $2,830,061 across all three districts (a 13 percent increase over 2017). Again, because we review and set rates for Great Lakes Pilotage annually, the impacts are estimated as single year costs rather than annualized over a 10-year period.

Table 42 shows the difference in revenue by component from 2017 to 2018.[117] The majority of the increase in revenue is due to the inflation of operating expenses and to the addition of four pilots who were authorized in the 2017 rule. These four pilots will become full-time working pilots at the beginning of the 2018 shipping season. They will be compensated at the target compensation of $352,485 per pilot. The addition of these pilots to full working status accounts for $1,409,940 of the increase. The remaining amount is attributed to increases in the working capital fund, increases in the target compensation, and differences in the surcharges from 2017.

Table 42—Difference in Revenue by Component

Revenue Component	Revenue Needed in 2017	Revenue Needed in 2018	Difference (2018 Revenue -

[117] The 2017 projected revenues are from the 2017 final rule (82 FR 41484 and 41489), Tables 9 and 14. The 2018 projected revenues are from Tables 20 through 22 of this final rule.

			2017 Revenue)
Adjusted Operating Expenses	$5,155,280	$5,965,599	$810,319
Total Target Pilot Compensation	$14,983,335	$17,271,765	$2,288,430
Working Capital Fund	$837,766	$869,078	$31,312
Total Revenue Needed, without Surcharge	$20,976,381	$24,106,442	$3,130,061
Surcharge	$1,350,000	$1,050,000	-$300,000
Total Revenue Needed, with Surcharge	$22,326,381	$25,156,442	$2,830,061

Pilotage Rates as a Percentage of Vessel Operating Costs

To estimate the impact of U.S. pilotage costs on foreign-flagged vessels that will be affected by the rate adjustment, we looked at the pilotage costs as a percentage of a vessel's costs for an entire voyage. The portion of the trip on the Great Lakes using a pilot is only a portion of the whole trip. The affected vessels are often traveling from a foreign port, and the days without a pilot on the total trip often exceed the days a pilot is needed.

To estimate this impact, we used the 2017 study titled, "Analysis of Great Lakes Pilotage Costs on Great Lakes Shipping and the Potential Impact of Increases in U.S. Pilotage Charges."[118] We conducted the study to explore additional frameworks and methodologies for assessing the cost of Great Lakes pilot's ratemaking regulations, with

[118] The study is available under "Documents" entitled "Analysis of Great Lakes Pilotage Costs 2017" at http://www.dco.uscg.mil/Our-Organization/Assistant-Commandant-for-Prevention-Policy-CG-5P/Marine-Transportation-Systems-CG-5PW/Office-of-Waterways-and-Ocean-Policy/Office-of-Waterways-and-Ocean-Policy-Great-Lakes-Pilotage-Div/

a focus on capturing industry and port level economic impacts. The study also included an analysis of the pilotage costs as a percentage of the total voyage costs that we can use in RAs to estimate the direct impact of changes to the pilotage rates.

The study developed a voyage cost model that is based on a vessel's daily costs. The daily costs included: capital repayment costs; fuel costs; operating costs (such as crew, supplies, and insurance); port costs; speed of the vessel; stevedoring rates; and tolls. The daily operating costs were translated into total voyage costs using mileage between the ports for a number of voyage scenarios. In the study, the total voyage costs were then compared to the U.S. pilotage costs. The study found that, using the 2016 rates, the U.S. pilotage charges represent 10 percent of the total voyage costs for a vessel carrying grain, and between 8 and 9 percent of the total voyage costs for a vessel carrying steel.[119] We updated the analysis to estimate the percentage U.S. pilotage charges represent using the percentage increase in revenues from the years 2016 to 2018. Since the study used 2016 as the latest year of data, we compared the revenues needed in 2018 and 2017 to the 2016 revenues in order to estimate the change in pilotage costs as a percentage of total voyage costs from 2017 to 2018. Table 43 shows the revenues needed for the years 2016, 2017, and 2018.

Table 43—Revenue Needed in 2016, 2017, and 2018

Revenue Component	Revenue Needed in 2016[120]	Revenue Needed in 2017[121]	Revenue Needed in 2018

[119] Martin Associates, "Analysis of Great Lakes Pilotage Costs on Great Lakes Shipping and the Potential Impact of Increases in U.S. Pilotage Charges," page 33.
[120] The 2016 projected revenues are from the 2016 final rule, 81 FR 11938. Figure 32, projected revenue needed in 2016 plus the temporary surcharge ($17,453,678 + $1,650,000 = $19,103,678).
[121] The 2017 projected revenues are from the 2017 final rule, 82 FR 41484 and 41489, Tables 9 and 14.

Total Revenue Needed, with Surcharge	$19,103,678	$22,326,381	$25,156,442

From 2016 to 2017, the total revenues needed increased by 17 percent. From 2017 to 2018, the total revenues needed will increase by 13 percent. From 2016 to 2018, the total revenues needed will increase by 32 percent. While the change in total voyage cost will vary by the trip, vessel class, and whether the vessel is carrying steel or grain, we used these percentages as an average increase to estimate the change in the impact. When we increased the pilotage charges by 17 percent from 2016, we found the U.S. pilotage costs represented an average of 11.3 percent of the total voyage costs. For this year, we increased the base 2016 rates by 32 percent. With this final rule's rates for 2018, pilotage costs are estimated to account for 12.6 percent of the total voyage costs, or a 1.3 percent increase over the percentage that U.S. pilotage costs represented of the total voyage in 2017.

It is important to note that this analysis is based on a number of assumptions. The purpose of the study was to look at the impact of the U.S. pilotage rates. The study did not include an analysis of the GLPA rates. It was assumed that a U.S. pilot is assigned to all portions of a voyage where he or she could be assigned. In reality, the assignment of a United States or Canadian pilot is based on the order in which a vessel enters the system, as outlined in the Memorandum of Understanding between the GLPA and the Coast Guard.[122]

[122] Available at *http://www.dco.uscg.mil/Portals/9/DCO%20Documents/Office%20of%20Waterways%20and%20Ocean%20Policy/2013%20MOU%20English.pdf?ver=2017-06-08-082809-150.*

This analysis looks at only the impact of U.S. pilotage cost changes. All other costs were held constant at the 2016 levels, including Canadian pilotage costs, tolls, stevedoring, and port charges. This analysis estimates the impacts of Great Lakes pilotage rates holding all other factors constant. If other factors or sectors were not held constant but, instead, were allowed to adjust or fluctuate, it is likely that the impact of pilotage rates would be different. Many factors that drive the tonnage levels of foreign cargo on the Great Lakes and St. Lawrence Seaway were held constant for this analysis. These factors include, but are not limited to, demand for steel and grain, construction levels in the regions, tariffs, exchange rates, weather conditions, crop production, rail and alternative route pricing, tolls, vessel size restriction on the Great Lakes and St. Lawrence Seaway, and inland waterway river levels.

Benefits

This final rule will allow the Coast Guard to meet the requirements in 46 U.S.C. 9303 to review the rates for pilotage services on the Great Lakes. The rate changes will promote safe, efficient, and reliable pilotage service on the Great Lakes by: (1) Ensuring that rates cover an association's operating expenses; (2) providing fair pilot compensation, adequate training, and sufficient rest periods for pilots; and (3) ensuring the association produces enough revenue to fund future improvements. The rate changes will also help recruit and retain pilots, which will ensure a sufficient number of pilots to meet peak shipping demand, which will help reduce delays caused by pilot shortages.

B. Small Entities

Under the Regulatory Flexibility Act, 5 U.S.C. 601-612, we have considered whether this rule will have a significant economic impact on a substantial number of

small entities. The term "small entities" comprises small businesses, not-for-profit organizations that are independently owned and operated and are not dominant in their fields, and governmental jurisdictions with populations of less than 50,000 people.

For this final rule, we reviewed recent company size and ownership data for the vessels identified in the GLPMS and we reviewed business revenue and size data provided by publicly available sources such as MANTA[123] and ReferenceUSA.[124] As described in Section VII.A. of this preamble, Regulatory Planning and Review, we found that a total of 387 unique vessels used pilotage services from 2014 through 2016. These vessels are owned by 59 entities. We found that of the 59 entities that own or operate vessels engaged in trade on the Great Lakes affected by this final rule, 48 are foreign entities that operate primarily outside the United States. The remaining 11 entities are U.S. entities. We compared the revenue and employee data found in the company search to the Small Business Administration's (SBA) Table of Small Business Size Standards[125] to determine how many of these companies are small entities. Table 44 shows the North American Industry Classification System (NAICS) codes of the U.S. entities and the small entity standard size established by the SBA.

Table 44—NAICS Codes and Small Entities Size Standards

NAICS	Description	Small Business Size Standard
238910	Site Preparation Contractors	$15 million
483211	Inland Water Freight Transportation	750 employees

[123] See *http://www.manta.com/.*/
[124] See *http://resource.referenceusa.com/.*/
[125] Source: *https://www.sba.gov/contracting/getting-started-contractor/make-sure-you-meet-sba-size-standards/table-small-business-size-standards*. SBA has established a Table of Small Business Size Standards, which is matched to NAICS industries. A size standard, which is usually stated in number of employees or average annual receipts ("revenues"), represents the largest size that a business (including its subsidiaries and affiliates) may be considered in order to remain classified as a small business for SBA and Federal contracting programs.

483212	Inland Water Passenger Transportation	500 employees
487210	Scenic & Sightseeing Transportation, Water	$7.5 million
488320	Marine Cargo Handling	$38.5 million
488330	Navigational Services to Shipping	$38.5 million
488510	Freight Transportation Arrangement	$15 million

The entities all exceed the SBA's small business standards for small businesses. Further, these U.S. entities operate U.S.-flagged vessels and are not required to have pilots by 46 U.S.C. 9302.

In addition to the owners and operators of vessels affected by this final rule, there are three U.S. entities affected by the rule that receive revenue from pilotage services. These are the three pilot associations that provide and manage pilotage services within the Great Lakes districts. Two of the associations operate as partnerships and one operates as a corporation. These associations are designated with the same NAICS industry classification and small-entity size standards described above, but they have fewer than 500 employees; combined, they have approximately 65 employees in total. We expect no adverse effect on these entities from this rule because all associations will receive enough revenue to balance the projected expenses associated with the projected number of bridge hours (time on task) and pilots.

We did not find any small not-for-profit organizations that are independently owned and operated and are not dominant in their fields. We did not find any small governmental jurisdictions with populations of fewer than 50,000 people. Based on this analysis, we find this final rule will not affect a substantial number of small entities.

Therefore, we certify under 5 U.S.C. 605(b) that this rule will not have a significant economic impact on a substantial number of small entities.

C. Assistance for Small Entities

Under section 213(a) of the Small Business Regulatory Enforcement Fairness Act of 1996, Pub. L. 104-121, we offer to assist small entities in understanding this rule so that they can better evaluate its effects on them and participate in the rulemaking. The Coast Guard will not retaliate against small entities that question or complain about this rule or any policy or action of the Coast Guard.

Small businesses may send comments on the actions of Federal employees who enforce, or otherwise determine compliance with, Federal regulations to the Small Business and Agriculture Regulatory Enforcement Ombudsman and the Regional Small Business Regulatory Fairness Boards. The Ombudsman evaluates these actions annually and rates each agency's responsiveness to small business. If you wish to comment on actions by employees of the Coast Guard, call 1-888-REG-FAIR (1-888-734-3247).

D. Collection of Information

This rule calls for no new collection of information under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501-3520). This rule will not change the burden in the collection currently approved by OMB under OMB Control Number 1625-0086, Great Lakes Pilotage Methodology.

E. Federalism

A rule has implications for federalism under Executive Order 13132 ("Federalism") if it has a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. We have analyzed this final rule under Executive Order 13132 and have determined that it is consistent with the

fundamental federalism principles and preemption requirements as described in Executive Order 13132. Our analysis follows.

Congress directed the Coast Guard to establish "rates and charges for pilotage services." *See* 46 U.S.C. 9303(f). This regulation is issued pursuant to that statute and is preemptive of State law as specified in 46 U.S.C. 9306. Under 46 U.S.C. 9306, a "State or political subdivision of a State may not regulate or impose any requirement on pilotage on the Great Lakes." As a result, States or local governments are expressly prohibited from regulating within this category. Therefore, this rule is consistent with the fundamental federalism principles and preemption requirements described in Executive Order 13132.

While it is well settled that States may not regulate in categories in which Congress intended the Coast Guard to be the sole source of a vessel's obligations, the Coast Guard recognizes the key role that State and local governments may have in making regulatory determinations. Additionally, for rules with federalism implications and preemptive effect, Executive Order 13132 specifically directs agencies to consult with State and local governments during the rulemaking process. If you believe this rule has implications for federalism under Executive Order 13132, please contact the person listed in the FOR FURTHER INFORMATION CONTACT section of this preamble.

F. Unfunded Mandates Reform Act

The Unfunded Mandates Reform Act of 1995, 2 U.S.C. 1531-1538, requires Federal agencies to assess the effects of their discretionary regulatory actions. In particular, the Act addresses actions that may result in the expenditure by a State, local, or tribal government, in the aggregate, or by the private sector of $100,000,000 (adjusted

for inflation) or more in any one year. Although this rule will not result in such expenditure, we discuss the effects of this rule elsewhere in this preamble.

G. Taking of Private Property

This final rule will not cause a taking of private property or otherwise have taking implications under Executive Order 12630 ("Governmental Actions and Interference with Constitutionally Protected Property Rights").

H. Civil Justice Reform

This final rule meets applicable standards in sections 3(a) and 3(b)(2) of Executive Order 12988 ("Civil Justice Reform"), to minimize litigation, eliminate ambiguity, and reduce burden.

I. Protection of Children

We have analyzed this final rule under Executive Order 13045 ("Protection of Children from Environmental Health Risks and Safety Risks"). This rule is not an economically significant rule and will not create an environmental risk to health or risk to safety that might disproportionately affect children.

J. Indian Tribal Governments

This final rule does not have tribal implications under Executive Order 13175 ("Consultation and Coordination with Indian Tribal Governments"), because it will not have a substantial direct effect on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes.

K. Energy Effects

We have analyzed this rule under Executive Order 13211 ("Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use"). We have determined that it is not a "significant energy action" under that order because it is not a "significant regulatory action" under Executive Order 12866 and is not likely to have a significant adverse effect on the supply, distribution, or use of energy.

L. Technical Standards

The National Technology Transfer and Advancement Act, codified as a note to 15 U.S.C. 272, directs agencies to use voluntary consensus standards in their regulatory activities unless the agency provides Congress, through OMB, with an explanation of why using these standards would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., specifications of materials, performance, design, or operation; test methods; sampling procedures; and related management systems practices) that are developed or adopted by voluntary consensus standards bodies. This rule does not use technical standards. Therefore, we did not consider the use of voluntary consensus standards.

M. Environment

We have analyzed this final rule under Department of Homeland Security (DHS) Directive 023-01, Revision (Rev) 01, *Implementation of the National Environmental Policy Act* [DHS Instruction Manual 023-01 (series)] and Commandant Instruction M16475.lD, which guide the Coast Guard in complying with the National Environmental Policy Act of 1969 (42 U.S.C. 4321-4370f), and have determined that this action is one of a category of actions that do not individually or cumulatively have a significant effect on the human environment. A Record of Environmental Consideration supporting this

determination is available in the docket where indicated under the ADDRESSES section of this preamble. This rule is categorically excluded under paragraph A3 of Table 1, particularly subparts (a), (b), and (c) in Appendix A of DHS Directive 023-01(series). CATEX A3 pertains to promulgation of rules and procedures that are: (a) strictly administrative or procedural in nature; (b) that implement, without substantive change, statutory or regulatory requirements; or (c) that implement, without substantive change, procedures, manuals, and other guidance documents. This rule adjusts base pilotage rates and surcharges for administering the 2018 shipping season in accordance with applicable statutory and regulatory mandates, and also proposes several minor changes to the Great Lakes pilotage ratemaking methodology.

List of Subjects

46 CFR Part 401

Administrative practice and procedure, Great Lakes, Navigation (water), Penalties, Reporting and recordkeeping requirements, Seamen.

46 CFR Part 404

Great Lakes, Navigation (water), Seamen.

For the reasons discussed in the preamble, the Coast Guard amends 46 CFR parts 401 and 404 as follows:

PART 401—GREAT LAKES PILOTAGE REGULATIONS

1. The authority citation for part 401 continues to read as follows:

Authority: 46 U.S.C. 2103, 2104(a), 6101, 7701, 8105, 9303, 9304; Department of Homeland Security Delegation No. 0170.1(II)(92.a), (92.d), (92.e), (92.f).

2. Revise § 401.220(a) to read as follows:

§ 401.220 Registration of pilots.

(a) The Director shall determine the number of pilots required to be registered in order to assure adequate and efficient pilotage service in the United States waters of the Great Lakes and to provide for equitable participation of United States Registered Pilots with Canadian Registered Pilots in the rendering of pilotage services. The Director determines the number of pilots needed as follows:

(1) The Director determines the base number of pilots needed by dividing each area's peak pilotage demand data by its pilot work cycle. The pilot work cycle standard includes any time that the Director finds to be a necessary and reasonable component of ensuring that a pilotage assignment is carried out safely, efficiently, and reliably for each area. These components may include, but are not limited to—

(i) Amount of time a pilot provides pilotage service or is available to a vessel's master to provide pilotage service;

(ii) Pilot travel time, measured from the pilot's base, to and from an assignment's starting and ending points;

(iii) Assignment delays and detentions;

(iv) Administrative time for a pilot who serves as a pilotage association's president;

(v) Rest between assignments, as required by § 401.451;

(vi) Ten days' recuperative rest per month from April 15 through November 15 each year, provided that lesser rest allowances are approved by the Director at the pilotage association's request, if necessary to provide pilotage without interruption through that period; and

(vii) Pilotage-related training.

(2) Pilotage demand and the base seasonal work standard are based on available and reliable data, as so deemed by the Director, for a multi-year base period. The multi-year period is the 10 most recent full shipping seasons, and the data source is a system approved under 46 CFR 403.300. Where such data are not available or reliable, the Director also may use data, from additional past full shipping seasons or other sources, that the Director determines to be available and reliable.

(3) The number of pilots needed in each district is calculated by totaling the area results by district and rounding them to the nearest whole integer. For supportable circumstances, the Director may make reasonable and necessary adjustments to the rounded result to provide for changes that the Director anticipates will affect the need for pilots in the district over the period for which base rates are being established.

* * * * *

3. Revise § 401.405(a) to read as follows:

§ 401.405 Pilotage rates and charges.

(a) The hourly rate for pilotage service on—

(1) The St. Lawrence River is $653;

(2) Lake Ontario is $435;

(3) Lake Erie is $497;

(4) The navigable waters from Southeast Shoal to Port Huron, MI is $593;

(5) Lakes Huron, Michigan, and Superior is $271; and

(6) The St. Mary's River is $600.

* * * * *

PART 404—GREAT LAKES PILOTAGE RATEMAKING

4. The authority citation for part 404 continues to read as follows:

Authority: 46 U.S.C. 2103, 2104(a), 9303, 9304; Department of Homeland Security Delegation No. 0170.1(II)(92.a), (92.f).

5. Revise § 404.100 to read as follows:

§ 404.100 Ratemaking and annual reviews in general.

(a) The Director establishes base pilotage rates by a full ratemaking pursuant to §§ 404.101 through 404.110, which is conducted at least once every 5 years and completed by March 1 of the first year for which the base rates will be in effect. Base rates will be set to meet the goal specified in § 404.1(a).

(b) In the interim years preceding the next scheduled full rate review, the Director will adjust base pilotage rates by an interim ratemaking pursuant to §§ 404.101 through 404.110.

(c) Each year, the Director will announce whether the Coast Guard will conduct a full ratemaking or interim ratemaking procedure.

6. Revise § 404.102 to read as follows:

§404.102 Ratemaking step 2: Project operating expenses, adjusting for inflation or deflation.

The Director projects the base year's non-compensation operating expenses for each pilotage association, using recognized operating expense items from §404.101. Recognized operating expense items subject to inflation or deflation factors are adjusted for those factors based on the subsequent year's U.S. government consumer price index data for the Midwest, projected through the year in which the new base rates take effect, or if that is unavailable, the Federal Open Market Committee median economic projections for Personal Consumption Expenditures inflation.

7. Revise § 404.103 to read as follows:

§ 404.103 Ratemaking step 3: Estimate number of working pilots.

The Director projects, based on the number of persons applying under 46 CFR part 401 to become U.S. Great Lakes registered pilots, and on information provided by the district's pilotage association, the number of pilots expected to be fully working and compensated.

8. Revise § 404.104 to read as follows:

§ 404.104 Ratemaking step 4: Determine target pilot compensation benchmark.

(a) In a full ratemaking year, the Director determines base individual target pilot compensation using a compensation benchmark, set after considering the most relevant currently available non-proprietary information. For supportable circumstances, the Director may make necessary and reasonable adjustments to the benchmark.

(b) In an interim year, the Director adjusts the previous year's individual target pilot compensation level by the Bureau of Labor Statistics' Employment Cost Index for the Transportation and Materials sector, or if that is unavailable, the Federal Open Market Committee median economic projections for Personal Consumption Expenditures inflation.

(c) The Director determines each pilotage association's total target pilot compensation by multiplying individual target pilot compensation computed in paragraph (a) or (b) of this section by the number of pilots projected under § 404.103(d) or § 401.220(a) of this chapter, whichever is lower.

9. Revise § 404.107 to read as follows:

§ 404.107 Ratemaking step 7: Calculate initial base rates.

(a) The Director calculates initial base hourly rates by dividing the projected needed revenue from § 404.106 by averages of past hours worked in each district's designated and undesignated waters, using available and reliable data for a multi-year period set in accordance with § 401.220(a) of this chapter.

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