



Transmitted via Email

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Paul DeMarco
U.S. Army Corps of Engineers
701 San Marco Boulevard
Jacksonville, FL 32207-8915
E-mail: SFBaytoStockton@usace.army.mil

Re: Final General Reevaluation Report and Environmental Impact Statement for the San Francisco to Stockton Navigation Improvement Project

Dear Mr. DeMarco:

Center for Biological Diversity (the “Center”), Communities for a Better Environment (“CBE”), Friends of the Earth (“FoE”), Natural Resources Defense Council (“NRDC”), San Francisco Baykeeper (“Baykeeper”), and Sierra Club (collectively, “Commenters”) respectfully submit comments on the March 2020 Final General Reevaluation Report and Environmental Impact Statement for the San Francisco Bay to Stockton, California Navigation Study (“FEIS”) issued by the U.S. Army Corps of Engineers (“Army Corps”).

I. Introduction.

Commenters find the published Final Environmental Impact Statement (“FEIS”) to be deficient for a multitude of reasons under the National Environmental Policy Act (“NEPA”). The FEIS and accompanying response reflect a studied refusal to confront the wholly predictable and very real consequences of a dredging project (“Project”) designed to facilitate increased tanker traffic to oil refineries. Commenters raised significant and well-documented concerns in their comments last year on the Draft Environmental Impact Statement (“DEIS”), but those concerns have been met by the Army Corps with a stubborn refusal to even acknowledge them. NEPA requires a hard look at environmental impacts, but the Army Corps has in many cases met Commenters’ methodical calls to evaluate the potential for increased refining throughput and impacts to Bay ecosystems with not even so much as a passing glance, opting to respond with cut-and-paste reiteration of largely irrelevant generalities.

The FEIS additionally suffers from many procedural deficiencies: adequate notice was not provided, the review period did not allow the public reasonable opportunity to comment under the circumstances of the COVID-19 pandemic, it has an improperly included sponsor, and it fails to demonstrate compliance with state and federal laws. The FEIS also failed to address or adequately respond to numerous issues identified by Commenters in the earlier DEIS such as

improper piecemealing of the Project, a failure to consider and publish an expert report demonstrating numerous impacts of the Project's enabling of increased oil refinery production, and the repeated failure to consider the many indirect impacts of that increased production.

On the substance, Commenters strenuously object to this ill-conceived dredging Project. The dredging of San Francisco Bay and nearby water bodies for the express purpose of boosting oil company profits is both unnecessary and unjust. Communities that already suffer from pollution from nearby refineries will be harmed even more by allowing more crude oil and more large tankers to enter and leave the Bay. Marine mammals and fish species that inhabit this delicate ecosystem will also be put at risk by the increased intensity of dredging activities and the ship traffic to follow. The increased scale of an oil spill would be catastrophic for water quality, species, and for local economies that depend on the Bay. Moreover, at a time when California and the rest of the nation must be making drastic reductions in greenhouse gas emissions, it is inappropriate to subsidize and facilitate increased oil production through this Project. In short, we urge the Army Corps to reject the proposed dredging Project.

II. Commenters' Interests

The Center for Biological Diversity ("the Center") is a non-profit environmental organization with over 1.7 million members and online activists, many of whom live and recreate in the Bay Area. The Center uses science, policy and law to advocate for the conservation and recovery of species on the brink of extinction and the habitats they need to survive. The Center has and continues to actively advocate for increased protections for species and their habitats in California. The proposed Project is likely to adversely affect habitat for listed, rare, and imperiled species that the Center has worked to protect, including the delta smelt, imperiled salmon species, and a host of marine mammals that inhabit the Bay Area. The Center's board, staff, and members use the land and water in California affected by this Project for quiet recreation (including hiking and camping), scientific research, aesthetic pursuits, and spiritual renewal. The Project would also be detrimental to the Center's interest in fighting climate change and ushering a just transition toward a safe and sustainable future.

Communities for a Better Environment ("CBE") is a California non-profit environmental health and justice organization with offices in the San Francisco Bay and Los Angeles areas. CBE has thousands of members throughout the state of California. More than 2,700 of CBE's members live, work, or engage with environmental justice issues in urban communities in Northern and Southern California. This includes hundreds of people living, working, and breathing in Contra Costa County ("County") and the areas affected by the four refineries with operations the Project will de-bottleneck. CBE's organizational goals include protecting and enhancing the environment and public health by reducing air and water pollution and minimizing hazards in California's environmental justice communities, including the communities proximate to the Bay Area's refineries.

Friends of the Earth, founded by David Brower in 1969, fights to protect our environment and create a healthy and just world. We are more than 1.9 million members and activists across all 50 states working to make this vision a reality. We are part of the Friends of the Earth International Federation, a network in 75 countries working for social and environmental justice. Together we speak truth to power and expose those who endanger the health of people and the planet for corporate profit. To accomplish our mission, Friends of the Earth works at the nexus of environmental protection, economic justice and social justice to fundamentally transform the way our country and the world value people and the environment. Our campaigns work to hold politicians and corporations accountable, transform our economic systems, protect our forests and oceans, and revolutionize our food & agriculture systems.

Natural Resources Defense Council (“NRDC”) is a nonprofit environmental membership organization that uses law, science, and the support of more than 375,000 members throughout the United States to protect wildlife and wild places and to ensure a safe and healthy environment for all living things. Over 66,000 of NRDC’s members reside in California. NRDC has been active in advocating for climate solutions, opposing fossil fuel infrastructure expansion, and fighting for stringent controls on the transport and refining of crude oil to curb environmental impacts.

San Francisco Baykeeper (“Baykeeper”) is a non-profit organization that protects San Francisco Bay from its biggest threats and holds polluters accountable. Baykeeper has over 5,000 members and supporters in the San Francisco Bay area that are dedicated to ensuring that the Bay is protected for its aquatic and human communities. As part of that work, since its founding in 1989, Baykeeper has worked to ensure that dredging in the Bay is conducted in the most environmentally responsible manner possible.

The Sierra Club is a national non-profit organization of approximately 786,643 members dedicated to exploring, enjoying, and protecting the wild places of the earth; to practicing and promoting the responsible use of the earth’s ecosystems and resources; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives. The affected Bay Area and Delta region crosscuts three of our chapters--Mother Lode, Redwood, and San Francisco Bay--with a total membership of approximately 65,000 people. Sierra Club’s Dirty Fuels and Beyond Coal Campaign work to stem our nation's dependence on oil and coal and to secure protections for communities and ecosystems from the significant toxic and global warming pollution emitted by oil and coal development, including prevention of oil spills and other catastrophic events and pollution emissions that result from transporting extreme forms of crude oil and coal. Sierra Club has nearly 170,000 members in the State of California who want to ensure that California's treasured landscape and coastlines are protected into the future.

III. The FEIS Suffers from Severe Procedural Deficiencies.

The FEIS fails in multiple respects to meet the procedural requirements of both the National Environmental Policy Act, 42 U.S.C. § 4321 *et seq.* (“NEPA”) and other statutes applicable to the Project.

A. The Army Corps Failed to Provide Adequate Notice of the FEIS Comment Period.

Under NEPA, the Army Corps is required to “[m]ake diligent efforts to involve the public in preparing and implementing their NEPA procedures.” 40 C.F.R. § 1506.6(a). It also must “[p]rovide public notice of NEPA-related hearings, public meetings, and the availability of environmental documents so as to inform those persons and agencies who may be interested or affected.” 40 C.F.R. § 1506.6(b). “In all cases the agency shall mail notice to those who have requested it on an individual action.” 40 C.F.R. § 1506.6(b)(1).

Despite Commenters’ previous assertions of inadequate notice of the DEIS, the Army Corps still failed to notify any of the Commenters’ organizations of the availability of the FEIS for comment. The Army Corps was in possession of contact information for each of the Commenters’ organizations as comments on the DEIS were provided by email to the Army Corps on June 24, 2019 with the email addresses of at least one representative from each group carbon copied. However, none of the Commenters’ representatives were included on the list of stakeholders referenced in Chapter 6.2 of the FEIS who were notified by the Army Corps of the availability of the EIS for review.¹ In fact, the only staff member from any of the Commenters’ organizations on the list was a former San Francisco Baykeeper employee who left the organization more than five years ago. The failure of the Army Corps to provide notice of the availability of the FEIS to interested environmental and community groups that had previously requested notice on the Project demonstrates a clear violation of NEPA’s public involvement requirements.

B. The Army Corps Deprived the Public of Reasonable Opportunity to Comment by Refusing to Extend the FEIS Review Period Despite the Global COVID-19 Pandemic.

Almost every aspect of life is being disrupted by the current novel coronavirus (COVID-19) pandemic and the associated shelter in place and social distancing directives from all levels of government, yet amidst this unprecedented global crisis the Army Corps initially only allowed the minimum 30-day time period for comments. Commenters submitted a letter on March 24, 2020 to the Army Corps and the Environmental Protection Agency (“EPA”) requesting an extension of the review period to last until the global pandemic has subsided to a level making it

¹ Further, this stakeholder list was to be made available on request, but Commenters’ request for the list made on March 17, 2020 was not answered by the Army Corps until April 2, 2020 – only four days before the original close of the comment period.

safe to resume work and daily life approximating the time prior to the crisis. On April 6, the Army Corps agreed to a brief two-week extension. While the additional time is welcome, in the face of what may be one of the most compelling reasons for delay in modern history, a mere two weeks is contrary to the goals of NEPA and deprives the public of their due process rights.

One of the main purposes of an EIS is to “provide full and fair discussion of significant environmental impacts” and to “inform decisionmakers and the public.” 40 C.F.R. § 1502.1. When notice of a Final Environmental Impact Statement is published in the Federal Register, a review period begins where no decision on the proposed action shall be made for a minimum of 30 days. 40 C.F.R. § 1506.10(b)(2). The lead agency is free to extend beyond this minimum prescribed period. 40 C.F.R. § 1506.10(d). Notice of the FEIS for the S.F. Bay to Stockton Project was published in the Federal Register on March 6, 2020 and the 30-day minimum review period ended on April 6, 2020.

The global COVID-19 pandemic has led to a disruption of the global economy and a response from almost every federal agency. The Centers for Disease Control and Prevention (CDC) has recommended all people leaving their homes wear protective masks and avoid close contact with other people where COVID-19 is spreading in the community. The California Department of Public Health has reported widespread community transmission throughout the state and in all counties affected by this Project. The Health Officers of the State of California and the Counties of Contra Costa and Solano issued and renewed Shelter-in-Place Legal Orders directing residents to stay inside their homes and for non-essential businesses to close, with the first order issued on March 16, 2020, only ten days into the review period.²

The widespread disruption caused by the COVID-19 pandemic has not allowed for meaningful review of the published FEIS. Community members represented by Commenters’ organizations affected by this Project, as well as our own employees, have been at home with their families, taking care of their school-age children, elders, and others put at risk by this pandemic. Many community members have lost their jobs, and other community members are working even longer hours in industries deemed essential. Decisionmakers and local governments have meanwhile closed local offices and buildings and have turned any remaining resources towards addressing this crisis. Further, members of the public without a household internet connection were denied access to the FEIS as the published hard copies of the document were at two libraries that were closed for the majority of the review period under state and county shelter-in-place orders. Such circumstances prevented the public and decisionmakers the opportunity for meaningful review or even to be informed of a voluminous and complex document like a FEIS.

² See, e.g., Order of the State Public Health Officer, March 19, 2020; Order Of The Health Officer Of The County Of Contra Costa Directing All Individuals Living In The County To Shelter At Their Place Of Residence, March 16, 2020; Order of the Solano County Health Officer Directing Individuals to Shelter at Home, March 19, 2020.

Despite Commenter's raising of these compelling reasons for extension of review in a March 24 letter, the Army Corps limited its extension to two weeks. While Commenters have done the best they can under the circumstances to address the multitude of issues with the FEIS in these comments, a "full and fair discussion" of the environmental impacts of the Project that involves all members of the public, not only those with an internet connection, is still yet to be had.

C. The Port of Stockton is an Inappropriate Non-Federal Sponsor.

While Commenters re-raise concerns of improper piecemealing of the larger dredging project below, if the 13.2 mile portion of the planned dredging activities addressed in the FEIS were truly separate from the remainder of the dredging project stretching to Stockton, it would be improper for the Army Corps to select the Port of Stockton as a non-federal sponsor agency for the dredging. None of the "re-scoped" portion of dredging activity would occur within the Port's jurisdiction. The Board of the Port of Stockton consists of four members appointed by the City of Stockton and three members appointed by the County of San Joaquin Board of Supervisors. None of these officials answers to a constituency affected by the re-scoped Project.

Given that no local agency is sponsoring the Project, there is no basis for the Army Corps' assertion that there is no locally preferred plan (FEIS 5-1), or that the Project is consistent with "local objectives." (FEIS 3-8.) Moreover, because a large portion of the refined petroleum products are *exported*, there is little or no benefit to local communities, who are left only with the burden of increased pollution and risks of catastrophic spills.

D. The Army Corps Has Not Shown that the Project Complies with State and Federal Law.

The FEIS acknowledges that it has not obtained a concurrence letter from the San Francisco Bay Conservation and Development Commission, and thus it has not complied with the Coastal Zone Management Act. (FEIS 6-5). In addition, the Regional Water Quality Control Board has not issued a Clean Water Act § 401 water quality certification. (FEIS 6-4). The FEIS only refers to an "intent" of these agencies to eventually issue the requisite approvals in the future. The Army Corps' plan to certify the FEIS without such approvals in hand is improper.

IV. The Army Corps Failed to Adequately Respond to Comments in the FEIS.

NEPA obligates agencies conducting NEPA review to meaningfully respond to public comments "both individually and collectively," stating its response in the final EIS. 40 C.F.R. § 1503.4(a). Under that provision, the Army Corps was required to either make appropriate changes in response to comments received on the DEIS, or else "Explain why the comments do not warrant further agency response, citing the sources, authorities, or reasons which support the agency's position and, if appropriate, indicate those circumstances which would trigger agency reappraisal or further response." In most cases, the Army Corps did neither. Rather, it replied to thoughtful and detailed comments provided on the DEIS with the same few cut-and-paste

paragraphs that in many cases only tangentially pertained to the overall subject matter of the comment it purported to respond to. (Appx. I-2, p. 15-33). This failure to respond to comments individually, and to cite sources justifying refusal to make changes based on them, violates NEPA. The Army Corps should therefore issue a Supplemental Draft Environmental Impact Statement that addresses in full the comments it has received, in particular those described in the sections below.

A. The Army Corps Did Not Address Comments Regarding “Rescoping” as an Improper Piecemealing of the Project.

The Army Corps did not substantively address comments on the DEIS that the first phase of the larger dredging project, which extends 78 miles to the Port of Stockton, was improperly severed into smaller projects. As discussed in those comments, the severing of the larger project to Stockton into two projects impermissibly and artificially lessens the analyzed environmental impacts of the larger project. The dredging Project to Avon discussed in the FEIS and the remaining dredging to the Port of Stockton are connected actions as defined under NEPA and thus should be discussed in the same EIS.

NEPA requires closely related or “connected actions,” to be discussed in the same environmental impact statement. 40 C.F.R. § 1508.25(a)(1). Actions are connected if they: “Automatically trigger other actions which may require environmental impact statements”, “Cannot or will not proceed unless other actions are taken previously or simultaneously”, and “Are interdependent parts of a larger action and depend on the larger action for their justification.” 40 C.F.R. § 1508.25(a)(1)(i-iii). “Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.” 40 C.F.R. § 1508.27(b)(7).

As raised in comments on the DEIS, the two actions are connected due to interdependent parts and the dependence of one upon the other. The segmentation of the larger project into two connected actions only serves to artificially lessen the analysis of environmental impacts and is a violation of NEPA. The Army Corps did not respond to comments regarding this issue, which is also a violation of NEPA.

B. The Army Corps Did Not Adequately Respond to or Ignored Comments and an Expert Report on the Numerous Indirect Impacts of the Project from De-Bottlenecked Oil Refinery Production.

A significant portion of comments on the DEIS from Commenters centered on the numerous indirect effects of the Project allowing increased production at several Bay Area refineries. The FEIS fails to address or adequately respond to almost all of these comments and never acknowledged the underlying analysis provided by commenters. While admitting the primary beneficiaries are the crude oil transporters and refiners, the FEIS does not assess the cumulative impact of the dredging Project, which would allow more crude oil to be transported, with the expanding capacity of refineries along the dredging route.

Commenters' concern that the Project would allow for tankers to bring in more crude oil and export more refined petroleum is backed by a scientific expert report that relies on production and economic data to make an estimate of the potential increase in oil refining enabled by the Project. The Army Corps not only ignored this report, but also did not reproduce it in the FEIS for public consideration, violating several NEPA requirements and its stated purpose of understanding environmental consequences.

1. The Army Corps Did Not Acknowledge or Include in the FEIS an Expert Report Demonstrating the Project's Ability to De-Bottleneck and Increase Oil Refinery Production.

NEPA requires that agencies like the Army Corps to "discuss at appropriate points in the final statement any responsible opposing view which was not adequately discussed in the draft statement and shall indicate the agency's response to the issues raised." 40 C.F.R. § 1502.9(b). "This disclosure requirement obligates the agency to make available to the public high quality information, including accurate scientific analysis, expert agency comments and public scrutiny, before decisions are made and actions are taken." *Ctr. for Biological Diversity v. U.S. Forest Serv.*, 349 F.3d 1157, 1167 (9th Cir. 2003), citing 40 C.F.R. § 1500.1(b). If an agency disagrees with comments, the agency must "[e]xplain why the comments do not warrant further agency response, citing the sources, authorities, or reasons which support the agency's position and, if appropriate, indicate those circumstances which would trigger agency reappraisal or further response." 40 C.F.R. § 1503.4(5).

The Expert Report of Greg Karras ("Expert Report") was submitted in tandem with comments on the DEIS and was referred to extensively in those comments. That report used data from a variety of reliable sources, such as the U.S. Energy Information Administration and California Energy Commission, to find that the Project could lead to a potential increase of refinery capacity utilization between 2.4 to 9.2 percent, and from there calculated the associated potential increases in air pollution and greenhouse gases. (Expert Report of Greg Karras, 7; attached as Ex. A).

The Army Corps never acknowledged this Expert Report in its responses to comments, nor was the report reproduced, referenced, or refuted in the FEIS. Rather, the Army Corps replied to Commenters eight times, and to EPA another, with the same conclusory paragraph stating that "The Corps does not expect the proposed channel modification (3-foot deepening) to have an impact on the global supply and demand of crude oil and refined petroleum exports, and therefore would not be expected to have an increase in oil refinery production." (FEIS Appx. I-2). As discussed in the subsection below, this statement by the Army Corps is not supported by any sources, authorities, nor data, and in fact is refuted by the provided Expert Report. The Army Corps did not even identify any circumstances that would trigger reappraisal or further response.

Since the Expert Report was not provided or referenced by the FEIS, despite its accurate scientific analysis undisputed by the Army Corps, the public could not in turn analyze this responsible opposing view nor the data or methodology supporting it. The Army Corps' failure to disclose and analyze this opposing viewpoint and its failure to properly respond to comments based on this Expert Report are both violations of NEPA's requirements and purpose.

2. The Army Corps Did Not Adequately Respond to Comments Regarding Greenhouse Gas Impacts Resulting from Debottlenecked Refinery Access.

Multiple comments on the DEIS, supported by the Expert Report of Greg Karras, called upon the Army Corps to take a hard look at the likely increase in greenhouse gas ("GHG") emissions likely to result from debottlenecking access to the refineries within the Project area. The Army Corps' response to these comments is conclusory, dismissive, and wholly inadequate. The response, provided in a paragraph repeated word for word to every comment touching on this subject, is an assertion that (i) the refineries could have increased shipments already if they wanted to, and (ii) there are many factors that might impact tonnage through a port. This is a non-response to a critical issue. The stated purpose of the Project is to enhance shipping of crude oil to the refineries. It is thus incumbent upon the Army Corps to study and analyze its impact tonnage, and any resulting direct and indirect GHG emission increases that may result. Instead, what we have been provided is a speculative list of reasons, devoid of citation or analysis, as to why the Project might not have an impact on throughput volume. What is the basis for concluding that refineries could receive more crude, in an economically viable fashion, from increased rail or truck shipments? We are not told. Are the "many exogenous factors" listed that "may influence" throughput tonnage actually influencing it in this case, and if so by how much? We are not told that, either.

The FEIS thus failed to respond to comments regarding inadequate analysis of GHG emissions and impacts. Despite the inevitable result that more crude oil will be transported and refined as a result of this dredging, the FEIS fails to disclose or analyze the GHG emission increases that will follow. The FEIS erroneously calls the Project consistent with state objectives. (FEIS 3-8). But the projected increase in vessels and transported crude oil – particularly to the extent they may increase total throughput tonnage of crude to the refineries - are completely inimical to the state's GHG emission reduction goals. It projects an increase in ships carrying crude through 2040. But the state's GHG emissions goals will require *less* fossil fuel production in the future, not more. The FEIS is inadequate without a full accounting of the increased greenhouse gas emissions that will result from higher volumes of transport, refining, and combustion of fossil fuels.

The FEIS also fails to respond at all to comments on the DEIS changing crude feedstock that this Project would facilitate. Deepening the channel will encourage oil companies to ship more carbon-intensive crude from Canadian tar sands. The FEIS does not mention feedstocks, let

alone provide an analysis of how these changes will lead to air quality impacts, GHG emission increases, or risks of catastrophic spills.

The FEIS also fails to adequately respond to comments regarding the impacts of climate change. In particular, it fails to provide any support for its comment response stating that contaminants in marine organisms will not be exacerbated by climate change. It provides no citation for the conclusory statement that damage to salmon would be “minimal and likely unmeasurable.” (Appx. I, 2; Env. Groups – 10)

C. The Army Corps Did Not Adequately Respond to Comments Regarding Air Quality.

As noted in comments on the DEIS, the Army Corps failed to consider the air quality and environmental impacts of the Project’s enabled increase of production capacity at four of the five refineries in the Bay Area. These impacts were hand-waved away by the Army Corps again in the FEIS with two more repeats of the same rote paragraph claiming without evidence that the Project would have no effect on oil refinery production, and once more in response to similar comments from the EPA. As noted above and throughout, the Expert Report of Greg Karras provided with comments on the DEIS provides unrefuted production and economic data supporting estimates of increased oil refinery production potential between 2.4 and 9.2 percent. (Expert Report of Greg Karras, 7). That same report estimates at the upper bound associated increases of co-pollutants SO₂, NO_x, and CO three times the significance thresholds used in the FEIS. The Army Corps does not respond to the data or analysis supporting these air quality impact estimates and instead improperly dismisses the claims without evidence.

D. The Army Corps Did Not Adequately Respond to Comments Regarding Environmental Justice.

The Army Corps also failed to respond to comments regarding the environmental justice implications of such air quality and GHG impacts by using its rote and inapplicable paragraph unsupported by evidence. No consideration was given to Commenters’ concerns regarding the Project’s potential impacts that would disproportionately harm low-income communities of color by enabling further air pollution in those communities that live adjacent to refineries. The Army Corps showed no concern for these potential impacts, even though it was required to perform an environmental justice analysis, and these refinery communities are within the Project’s Area of Potential Effects. The FEIS also failed to consider recent events occurring since publishing of the DEIS demonstrating the dangers of the oil refining industry to these communities, like the fire that ignited tanks of highly hazardous ethanol at the NuStar Energy facility in Crockett on October 15, 2019. Nor does the FEIS respond to nor even mention the estimated increase in mortality risk for the Bay Area associated with the Project’s potentially enabled increase in Particulate Matter smaller than 2.5 microns (PM_{2.5}): anywhere from 53 to 201 additional deaths over 30 years. The proximity of low-income communities of color to these refineries exposes

them to this risk disproportionately, but the FEIS demonstrates its inadequacy by remaining silent on this point.

E. The Army Corps Did Not Adequately Respond to Comments Regarding Ship Calls.

The Army Corps does not respond directly to our comment regarding a likely increase in ship traffic or ship strikes. The comment response provides only the unsubstantiated speculation that vessel trips “may decrease as a result of the Project due to more efficient loading, so ship strikes would not be expected to increase.” (Appx. I, 2; Env. Groups – 7.) In fact, there is no substantial evidence in the record that ship calls will decrease in the future. Moreover, basic economics suggest that, if the cost of transporting crude through the Bay decreases, then more companies may be inclined to use the route to link oil fields with refineries. Thus, the costs saved through the elimination of light loading and restrictions on navigation times would tend to lead to more crude and more vessel calls. There are no limitations included in the mitigation measures that would otherwise cap the number or ships or the volume of oil transported through the Bay. It is hence foreseeable that ship calls, and with them crude oil volume, would increase as a result of the Project. The Army Corps’ comment response should thus have explained and documented its conclusion, given the existence of factors calling it into question.

The FEIS also fails to respond to comments regarding the increase in Aframax and Suezmax vessels as a result of the Project. (Id. Env. Groups – 8.) The FEIS response only repeats its unsupported claim that it does not expect the number of ship strikes to increase. The FEIS, however, acknowledges that the number of large vessels will increase. The number of Aframax ships will increase from 50 ships per year under the no-action alternative to 56 per year after the Project dredging is complete. Similarly, the Suezmax vessel calls will increase from 30 per year under the no-action alternative to 33 as a result of the Project. (Compare App. D at D-16, Fig. 4. With Table 4-26, FEIS at 4-74.) Thus, the FEIS itself *does* acknowledge an increase in these two types of vessels if the Project goes forward. This is particularly important for assessing ship strikes given the large size and speed of these vessels. The inconsistent numbers and conflation between the FEIS and Appendix projections result in unsupported conclusions. In particular, the conclusion that “the number of vessel trips may decrease as a result of the Project due to more efficient loading, so ship strikes would not be expected to increase” is unfounded. The impacts attributable to the increase in Aframax and Suezmax cannot be brushed aside by a purported decrease in Panamax vessels. (As discussed above, ship traffic in general is also likely to increase.) The analysis of Aframax and Suezmax ships is therefore inadequate.

F. The Army Corps Did Not Adequately Respond to Comments Regarding Noise Impacts.

In response to detailed comments on the subject, the FEIS does not add any additional analysis on the implications of noise for resident wildlife and fisheries species. Instead, it refers to the third paragraph of section 5.4 of the BA for its discussion of noise impacts. (Appx. I, 2;

Env. Groups – 7.) This is the same section we demonstrated was inadequate in our comments on the DEIS. In response to Env. Groups Comment 9, the Army Corps also claims to have used the NMFS guidelines to “assess the effects of noise on wildlife,” but there is no such assessment in the FEIS materials.

G. The Army Corps Did Not Adequately Respond to Comments Regarding Water Quality and Degradation.

The agency does not address our concerns about suspension of contaminants. (Appx. I, 2; Env. Groups – 7). The responses only repeat, without substantiation, that the dredged sediment is expected to be “clean” and that additional testing will be conducted during the design phase. It is improper to finalize the FEIS without *first confirming* the impacts to water quality. The Army Corps’ approach flips NEPA on its head by drawing conclusions about water and species impacts while postponing testing until after the Project’s approval. The FEIS also provides no support for its assertion that the quality of sediments below previous dredging depths provide reliable data for water and sediment quality testing because they are generally not affected by anthropologic activities. The agency states that “When assessing the quality of sediments from a deepening project, the sediment horizon is below previous dredging depths so the material is generally not affected by anthropologic activities.” As such, the date of the sampling and analysis of sediments to be dredged as part of a deepening project is less critical as long as the analytical methods are similar to those samples tested more recently. We reiterate our concern that the 1997 sediment contaminant data is outdated and therefore unacceptable.

H. The Army Corps Did Not Adequately Respond to Comments Regarding the Impacts of Dredging Past the Work Window.

The FEIS acknowledges that completing the Project within the work window will be “tight.” (FEIS ES-6.) Despite a reasonably foreseeable scenario in which dredging activity extends beyond the work window, there is no analysis of those potential impacts or mitigation. The FEIS only suggests that “additional coordination would immediately be initiated with the appropriate agencies.” (Id.) Promises for future coordination provide no useful information to the public and are not a substitute for environmental impact analysis under NEPA. The responses to comments also state that work window extensions “likely will not be permitted,” but mitigation measures provide no assurances that the Army Corps will adhere to the work window.

I. The Army Corps Did Not Adequately Respond to Comments Regarding Impacts to Wildlife and Fisheries.

Fisheries and wildlife impacts were not adequately disclosed or analyzed in the DEIS, and the Army Corps has failed to respond to comments raising those issues. The increased risk of ship strikes, water quality degradation, the risk of spills, fossil fuel-induced climate change, and noise impacts will cause significant harm to the area’s aquatic life. The high probability of

dredging activity extending past the work window will also increase the harm to species. We reiterate our call for analysis of impacts to species resulting from the causes described herein.

V. The Army Corps' Economic Analysis Is Flawed.

As discussed above, the Army Corps was required under NEPA to account for increased refinery throughput likely to result from the Project, and for the increased GHG emissions that would result from that increased throughput. Those GHG emissions will have a significant adverse effect on public health and safety, the environment, and the economy. While the Army Corps went to great lengths to monetize the purported economic benefits of the Project, it made no effort to consider the economic cost of the increased GHG emissions associated with the throughput increase. As discussed below, courts have made clear that NEPA does not allow a skewed cost-benefit analysis of this nature, which trumpets the purported economic benefits of a project while ignoring environmental costs. If the Army Corps elects to quantify the economic benefits of the Project, it may not do so without quantifying the economic harms.³

A. The SCC was an Available Tool for Monetizing Increased GHG Emissions

The Social Cost of Carbon (“SCC”) is a method for estimating the damages associated with a small increase in CO₂ emissions, conventionally one metric ton, in a given year.⁴ It was developed specifically to enable federal agencies to monetize and incorporate the cost of increased GHG emissions into their economic analyses.⁵ It is intended to capture various damages associated with climate disruption, including changes in net agricultural productivity, human health, property damages, and the value of ecosystem services, all of which climate change can degrade.⁶ Presenting those impacts in dollar amounts provides a cognizable comparison that is not reliant on evaluating the difference between, for instance, “slight” climate effects and “mild” climate effects. Furthermore, translating the climate impacts of GHGs into dollar amounts can help inform whether an action is socially desirable by addressing its

³ There is a legitimate question whether monetizing costs and benefits in the NEPA context is appropriate at all. NEPA regulations state that if there are “important qualitative considerations,” then the ultimate “weighing of the merits and drawbacks of the various alternatives” should not be displayed exclusively as a “monetary cost-benefit analysis.” 40 C.F.R. § 1502.23. Regardless, any economic analysis cannot simply ignore the costs of greenhouse gas emissions, and that if purported benefits are monetized then costs should be as well, using available analytical tools.

⁴ U.S. Environmental Protection Agency (“EPA”), “Fact Sheet: Social Cost of Carbon” (Nov. 2013) at 1, available at https://www.epa.gov/sites/production/files/2016-12/documents/social_cost_of_carbon_fact_sheet.pdf. (attached as Ex. B). All linked documents are incorporated in full by reference. Due to quarantine conditions, Commenters are limited in their ability to use and send electronic storage equipment. Hence, the linked documents will be attached to the transmittal email to the extent possible and in additional separate emails as file size limits allow.

⁵ Interagency Working Group on Social Cost of Carbon, Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866, at 10-11 (2010) (“IWG 2010”), available at https://www.epa.gov/sites/production/files/2016-12/documents/scc_tsd_2010.pdf. (attached as Ex. C).

⁶ Interagency Working Group on Social Cost of Carbon, “Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866” (2013) (“IWG 2013”), available at <https://environblog.jenner.com/files/technical-update-of-the-social-cost-of-carbon-for-regulatory-impact-analysis-under-executive-order-12866.pdf> (attached as Ex. D).

environmental costs in a common economic language with the benefits, so as to compare apples with apples.

The SCC can be used in the NEPA context to prevent the kind of skewed economic analysis presented in the FEIS. Putting a dollar figure on each ton of CO₂ emitted as a result of a federal project places climate impacts in a context that both agency decision makers and the public can readily comprehend. It has already been used by federal agencies in both rulemaking decisions and project-level reviews⁷ under NEPA. Many agencies, academics, and institutions have utilized the SCC as a tool for attempting to quantify the impact of GHG emissions.⁸

As with any wide-ranging scientific effort, the SCC was intended to be, and has been, periodically updated to reflect the best available scientific understanding of climate damages.⁹ It has now been updated four times,¹⁰ while keeping consistent with its fundamental methodology.

⁷ Bureau of Reclamation, Navajo Generating Station-Kayenta Mine Complex Project DEIS (2016) at 3.2-1 (“Although this [EIS] does not address a proposed regulatory action . . . SCC estimates can be useful in estimating the social benefits of reducing carbon dioxide emissions.”)

⁸ The SCC was developed through a transparent consensus-based process by the federal Interagency Working Group (IWG), a panel of experts convened in 2009 that drew on the expertise of climate scientists, economists, and other experts from the EPA. Six federal agencies and six executive offices participated in the initial development of the SCC. The Government Accountability Office (GAO) scrutinized and endorsed the IWG process, finding its approach credible and noting that it used consensus-based decision-making, relied largely on existing academic literature and models, disclosed limitations, and incorporated new information by considering public comments and revising the estimates with updated research as it became available. *See* United States Government Accountability Office, *Development of Social Cost of Carbon Estimates*, Regulatory Impact Analysis, GAO-14-663, 11-20 (2014) (“GAO Report”) (attached as Ex. E). The National Academy of Sciences also issued a report affirming the scientific integrity of the SCC and its continued near-term use, and the economic policy institute Resources for the Future continues to bring together distinguished economists and scientists to continually hone the fine points of the SCC test. Nat’l Acad. Sci., Eng. & Medicine, *Assessment of Approaches to Updating the Social Cost of Carbon: Phase 1 Report on a Near-Term Update at 1* (2016), available at <https://www.nap.edu/catalog/21898/assessment-of-approaches-to-updating-the-social-cost-of-carbon>, (attached as Ex. F) *See* Resources for the Future, *Social Cost of Carbon*, available at <https://www.rff.org/topics/scc/>. Since the SCC protocol was developed, it has been cited in many academic studies, implemented by states and other nations, and used in more than 150 rulemakings and assessments. *See, e.g.*, Geoffrey M. Heal & Antony Millner, *Agreeing to Disagree on Climate Policy*, 111 Proc. of the Nat’l. Acad. of Sci. 3695 (2014) (attached as Ex. G); Richard S. J. Tol, *The Social Cost of Carbon*, 3 Ann. Rev. of Resource Econ. 419 (2011) (attached as Ex. H); Cass R. Sunstein, *On Not Revisiting Official Discount Rates: Institutional Inertia and the Social Cost of Carbon*, 104 Am. Econ. Rev. 547 (2014) (attached as Ex. I); Peter Howard & Jason Schwartz, *Think Global: International Reciprocity as Justification for a Global Social Cost of Carbon*, 42 Colum. J. of Env’tl. L. 203, 270 (2017) (identifying more than 80 regulatory proceedings that apply the SCC or the Social Cost of Methane (SCM)) (attached as Ex. J). “Governments around the world have recognized the credibility of the United States government’s social cost of carbon. For example, it has been adopted by the governments of California, Illinois, Minnesota, Maine, New York, and Washington, as well as Canada and Mexico.” *See* Michael Greenstone, *At What Cost? Examining the Social Cost of Carbon: Hearing Before the H. Comm. on Sci., Space, and Tech., Subcomm. on Env’t, Subcomm. on Oversight*, 115th Cong. 5 (2017), available at <https://e2e.haas.berkeley.edu/pdf/Greenstone%20SCC%20testimony%20022717.pdf> (transcript) (attached as Ex. K).

⁹ IWG 2013 at 4. *See also* Interagency Working Group on Social Cost of Greenhouse Gases, “Technical Support Document: - Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866” (2016) (“IWG 2016”) (attached as Ex. L).

¹⁰ *See* National Academy of Sciences, *Valuing Climate Damages: Updating Estimation of the Social Cost of Carbon Dioxide* 188–89 (2017) (attached as Ex. M) (“Four updates to the Technical Support Documents related to the SC-CO₂ estimates have occurred since the 2010 release: two in 2013 and one each in 2015 and 2016. None of the updates changed the fundamental methodology used to construct the 2010 SC-CO₂ estimates.”).

While the current federal administration disbanded the Interagency Working Group (“IWG”) in 2017 via Executive Order 13878, which stated that the SCC estimates were “not representative of government policy,” the test continues to be recognized by scientists as a method of assessing carbon impacts.

A key feature of the SCC is that it recognizes and methodically addresses the uncertainty inherent in a calculation based on assumptions regarding future events. Since the SCC requires inputs such as future economic growth rates and the magnitude of climate system responses that are not knowable with certainty, the SCC models are run hundreds of times with different values for uncertain variables and parameters, producing a range of possible values. For practical applications, often a “central value” is chosen within the range.¹¹ However, the IWG also recommended using a range of values where the range could be helpful to policy decision making.¹² A particular issue that exemplifies the SCC’s flexibility with uncertain variables is the use of a discount rate, an assumption that can legitimately vary.¹³ The IWG does not instruct agencies which discount rate to use, but rather suggests discretion in addressing and applying the range of possible values – indicating that use of the “central value” of 3% may be appropriate, but also urging consideration of the range of values in regulatory impact analysis.¹⁴ According to analysis from Resources for the Future, the 3% “central value” discount rate produces an SCC of \$50 per ton, which is between the high of \$75 per ton for the 2.5% discount rate and the \$14 per ton calculated with the 5% discount rate.

B. The Army Corps Improperly Omitted Consideration of the Adverse Impacts of Additional GHG Emissions.

As explained in our comments on the DEIS, the Project will (notwithstanding the Army Corps’ off-topic cursory dismissals) likely result in a significant increase in future volumes of crude oil and refined products shipped through the Bay, because it will de-bottleneck crude oil supply to the refineries currently operating at significantly less than their full capacity.¹⁵ As discussed therein, a reasonable lower-bound assumption given current capacity utilization is a 2.4% increase in import and export volume based on the average West Coast capacity utilization

¹¹ IWG 2013. See Resources for the Future, “Social Cost of Carbon 101,” August 1, 2019, *available at* <https://www.rff.org/publications/explainers/social-cost-carbon-101/>.

¹² IWG 2013 at 12.

¹³ Commenters note that some have suggested that zero or negative discount rates are more appropriate for GHG emissions. See, e.g., Frank Ackerman & Elizabeth A. Stanton, *the Social Cost of Carbon*, 2 (Apr. 2010) (attached as Ex. N); Marc Fleurbaey & Stephane Zuber, *Climate Policies Deserve a Negative Discount Rate*, 13 *Chi. J. Int’l Law* 565 (2013) (Attached as Ex. O); Kenneth J. Arrow et al., *Should Governments Use a Declining Discount Rate in Policy Analysis*, *Review of Env’tl. Econ. & Pol’y* (2014) (Attached as Ex. P); Martin L. Weitzman, *Why the Far-Distant Future Should Be Discounted at the Lowest Possible Rate*, *J. Env’tl. Econ. & Mgt.* 36:201-08 (1998) (attached as Ex. Q). However, the fact that multiple discount rates may be appropriate does not justify the Army Corps’ decision to ignore GHG costs entirely while touting monetary benefits. To the extent there are different possible rates to be applied, the appropriate response by the Army Corps would have been to disclose the results of applying the different possible rates in order to ensure complete analysis and public information.

¹⁴ *Id.*

¹⁵ See Expert Report of Greg Karras.

rate; and a reasonable upper-bound assumption would be 9.2%, based on the utilization rate of the Chevron Richmond refinery.¹⁶ This translates to between 151 and 579 million gallons per year of gasoline and diesel (as well as other carbon-intense products such as petcoke).

While Commenters are not technically positioned to run SCC scenarios using these numbers – that should be the Army Corps’ job –even crude back-of-the-envelope calculations suggest that if the Army Corps were to apply the SCC, the monetized cost of carbon associated with the Project is highly significant, likely far exceeding the purported economic benefits of the Project. With respect to carbon emissions associated with refining, we can roughly estimate that the affected Shell Martinez, Phillips 66, and Tesoro Martinez emit 3.91, 1.43, and 2.22 million metric tons (“MMT”) of carbon dioxide equivalent (CO_{2e}) per year.¹⁷ Adding to these numbers the 2.4% and 9.2% increases yields an increase in CO_{2e} at these facilities ranging from 94,000-360,000 tons at Shell Martinez, 34,000-132,000 at Phillips 66, and 53,000-204,000 at Tesoro Martinez. As for the limited sampling of gasoline and diesel end products, combustion of 151 - 579 million gallons of gasoline yields 134,000 – 5.1 MMTs of CO₂, and combustion of that amount of diesel yields 1.5 MMTs-5.9 MMTs of CO₂.¹⁸ Multiplied by the conservative SCC of \$50 per ton¹⁹ calculated by Resources for the Future using the 3% central value discount rate²⁰ yields a total lower bound rough estimate of \$91,000,000, and an upper bound rough estimate of \$590,000,000 in annual carbon-related costs.

By contrast, the Study estimates total Project net benefits at \$10.5 million, and presents a benefit to cost ratio of 4.4 to 1.0 based on the purportedly comprehensive economic analysis presented in Appendix D. Had the Army Corps factored in the impact of refinery debottlenecking and applied the SCC to balance its economic analysis, the cost-benefit ratio would have been radically different, with costs outstripping benefits by possibly more than 50:1 if the numbers presented above are anywhere even in the ballpark.

It is because of situations like this that NEPA requires costs to be monetized to the extent possible where benefits have been monetized. Agencies conducting NEPA review may not “trumpet the benefits” of a project, as the Army Corps did here, while ignoring its costs. *Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172 (9th Cir. 2008). Courts have held that the SCC is an available tool that can be used to monetize the cost of carbon

¹⁶ *Id.* at 7.

¹⁷ D. Gordon, “Crude Transparency: The Opportunities and Benefits of Additional Oil Data Collection in California,” March 3, 2020 at 19 (attached as Ex. R).

¹⁸ U.S. Energy Information Administration, Carbon Dioxide Emissions Coefficients (February 2, 2016), *available at* https://www.eia.gov/environment/emissions/co2_vol_mass.php, (attached as Ex. S).

¹⁹ Literature supports a social cost of carbon of at least \$220 per ton. See, e.g. Moore, Frances C. & Delavagne B. Diaz, Temperature Impacts on Economic Growth Warrant Stringent Mitigation Policy, *Nature Climate Change Adv. Online Pub.* (Jan 12, 2015), doi: 10.1038/NCLIMATEE248, (attached as Ex. T) and Ackerman, Frank & Elizabeth A. Stanton, Climate Risks and Carbon Prices: Revising the Social Cost of Carbon, 6 *Economics: The Open-Access, Open-Assessment E-Journal* (April 4, 2012), <http://www.economics-ejournal.org/economics/journalarticles/2012-10>, (attached as Ex. U)

²⁰ Resources for the Future, “Social Cost of Carbon 101,” *supra* note 8, (attached as Ex. V).

emissions associated with a project subject to NEPA review – including and especially the indirect “downstream” emissions from end-use fossil fuel combustion enabled by the project. *See Mont. Envtl. Info. Ctr. v. U.S. Office of Surface Mining*, 274 F. Supp. 3d 1074, 1099 (D. Mont. 2017) (“*MEIC*”) (federal defendant’s NEPA review “failed to adequately address the indirect and cumulative impacts of greenhouse gas emissions” from a coal mining project); *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174, 1198 (D. Colo. 2014) (“reasonably foreseeable effect” of downstream combustion “must be analyzed, even if the precise extent of the effect is less certain”). In *High Country*, the court held that, while NEPA does not require formal cost-benefit analysis, it is arbitrary and capricious to quantify the benefits of the project but not the costs of the project, and to functionally assume the costs associated with GHG emissions to be zero as a response to uncertainty about exactly how such costs should be calculated:

[T]here is a wide range of estimates about the social cost of GHG emissions. But neither the BLM’s economist nor anyone else in the record appears to suggest the cost is as low as \$0 per unit. Yet by deciding not to quantify the costs at all, the agencies effectively zeroed out the cost in its quantitative analysis.

Id. at 1192. Similarly, in *MEIC*, the court held that it was arbitrary and capricious for the agency to “quantify socioeconomic benefits while failing to quantify costs.” *Id.* at 1098-99. Ultimately, the court concluded that the agency improperly “place[d] [its] thumb on the scale by inflating the benefits of the action while minimizing its impacts.”

In both of these cases, the courts identified the SCC as an available tool to quantify and monetize the costs associated with GHG emissions in order to compare those costs to purported benefits. *MEIC*, 274 F.Supp.3d at 1103-4; *High Country*, 52 F. Supp. 3d at 1190. In *High Country*, in response to agency claims that “[s]tandardized protocols designed to measure factors that may contribute to climate change, and to quantify climatic impacts, are presently unavailable,” the court responded, “[b]ut a tool is and was available: the social cost of carbon protocol.”

Accordingly, it was improper for the Army Corps to ignore the adverse impacts of indirect GHG emissions associated with the Project, including without limitation refining and end product-related emissions associated with the debottlenecking of refinery capacity. It was also improper to quantify solely the benefits of the Project while omitting the cost of those emissions. Had it done so, it would have been clear that the true costs of the Project far outstrip any purported economic benefits.

VI. Conclusion

Like the DEIS before it, the FEIS fails to meet the requirements of NEPA. Procedurally, the Army Corps failed to provide adequate notice of the FEIS and prevented meaningful public participation in the review period by refusing to adequately extend the comment period in the midst of a global pandemic and shelter-in-place orders. The FEIS also improperly includes the Port of Stockton as a sponsor and failed to consider relevant state and federal laws. The Army Corps in this FEIS also failed repeatedly to adequately consider previous comments on the DEIS and in many cases never addressed comments at all, such as those regarding improper piecemealing and the entirety of a submitted expert report. Responses to comments on numerous topics such as the Project's impacts to GHG emissions, ship strikes, water quality, and more were inadequately addressed if directly addressed at all. Finally, the FEIS economic analysis overstates the economic benefits of the Project by ignoring its costs. For all these reasons and those incorporated by reference from previous comments on the DEIS, the FEIS fails as an informational document and does not satisfy the requirements of NEPA.

Signed,

/s/Tyler Earl

Tyler Earl
Associate Attorney, Communities for a Better Environment

/s/Ann Alexander

Ann Alexander
Senior Attorney, Nature Program, Natural Resources Defense Council

/s/Hollin Kretzmann

Hollin Kretzmann
Senior Attorney, Center for Biological Diversity

/s/Nicole Sasaki

Nicole Sasaki
Staff Attorney, San Francisco Baykeeper

/s/Marcie Keever

Marcie Keever
Oceans and Vessels Program Director, Friends of the Earth

/s/Aaron Isherwood

Aaron Isherwood
Phillip S. Berry Managing Attorney, Sierra Club

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Order Of The Health Officer Of The County Of Contra Costa Directing All Individuals Living In The County To Shelter At Their Place Of Residence, March 16, 2020.....	5
Order of the Solano County Health Officer Directing Individuals to Shelter at Home, March 19, 2020.....	5
Order of the State Public Health Officer, March 19, 2020	5
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40 C.F.R. § 1500.1(b)	8
40 C.F.R. § 1502.1	5
40 C.F.R. § 1502.23	13
40 C.F.R. § 1502.9(b)	8
40 C.F.R. § 1503.4(5)	8
40 C.F.R. § 1503.4(a).....	6
40 C.F.R. § 1506.10(d)	5
40 C.F.R. § 1506.6(a).....	4
40 C.F.R. § 1506.6(b)	4
40 C.F.R. § 1506.6(b)(1).....	4
40 C.F.R. § 1508.25(a)(1).....	7
40 C.F.R. § 1508.27(b)(7).....	7