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VIA ELECTRONIC MAIL

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**Re: Application of Port of Stockton, San Joaquin County, CA, West Complex
Dredging Docks 16-20, Section 404 Clean Water Act and Section 10 Rivers and
Harbors Act, US Army Corps of Engineers No: SPK-2008-00171**

Dear Ms. Pakenham-Walsh:

Thank you for providing the public an opportunity to review and comment on the application of Port of Stockton, U.S. Army Corps of Engineers No. SPK-2008-00171 (“the Application”), for a permit under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act 1899 (33 U.S.C. § 403 *et seq.*) for work affecting navigable waters of the United States. These comments are submitted on behalf the Sierra Club and the California Sportfishing Protection Alliance. These non-profit organizations represent nearly 150,000 members in California who are dedicated to protecting the environment and our shared natural resources, such as state waterways, and to seeking positive solutions to the challenge of global climate instability caused by the combustion of fossil fuels. We appreciate the opportunity to provide public comment on the application materials and the cooperation of the Army Corps of Engineers (Corps) in providing a comment deadline extension and information regarding this proposed project.

We strongly urge the Corps to deny the application because the agency cannot conclude, based on the available information, that the public benefit from this dredging proposal to increase bulk commodity exports like coal outweighs the negative impacts. As you know, the Corps, in reviewing the Application, is required to conduct a detailed and thorough public interest review.¹ That analysis must include an evaluation of the cumulative impacts of the proposal as well as “a careful weighing of *all those factors which become relevant in each particular case.*”² A permit is not to be granted if the “district engineer determines that it would

¹ 33 C.F.R. § 320.4.

² *Id.* at § 320.4(a)(1) (emphasis added).

be contrary to the public interest.”³ “The benefits which may reasonably be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments.”⁴

The Port’s application to the Corps contains a number of deficiencies. Chiefly, the Port avoids mentioning the purpose of its dredging request—to facilitate the increased shipments of bulk commodities such as coal and cement. In addition, the Port attempts to recycle a number of old studies from earlier proposals to dredge or dredging at other docks at the Port in a confusing application that does not provide recent enough information for the Corps to meaningfully analyze the impacts of the proposed dredging at Docks 16-20. The Port also submitted information cited in its application over a month into the public comment period. Moreover, these multiple dredging actions, with cumulative impacts on the San Joaquin River, should be analyzed in one single EIS. As will be discussed further below, these dredging projects relate to other rail and road infrastructure projects that are being piecemealed to avoid comprehensive NEPA analysis. It is also concerning that the Corps is requesting public comment on the potentially adverse impacts of this project before it has prepared an analysis of the environmental impacts pursuant to the National Environmental Policy Act (NEPA). Given the Port of Stockton’s piecemeal submission of critical environmental documents and the fact that there is no NEPA document yet available, the permit application should be rejected by the Corps until such time as the Port has provided all relevant information regarding the potential environmental impacts and benefits to the public interest that would result from the proposed project, at which time the Corps should reopen the public comment period.

Despite these procedural infirmities, extensive information exists regarding the negative impacts of coal dust, coal combustion, diesel emissions, and the proposed dredging activities and use of the San Joaquin River/Stockton Deepwater Ship Channel for a coal export facility. In the absence of the applicant’s and the agency’s environmental review documents, we have endeavored to provide the Corps with a selection of the available information regarding the potential negative impacts to the public interest of the proposed coal export facility. Those include adverse impacts to human health caused by fugitive emissions of coal dust and diesel emissions. We have grave concerns about the potential impacts to threatened and endangered fish resulting from the proposed dredging activities and discharge of stormwater and process wastewater associated with a coal export facility, and the proposal also threatens to interfere with recreation, navigation, and other uses of the San Joaquin River. The negative impacts also include pollution from the burning of coal in Asia, which would cause increases in mercury and ground level ozone pollution in the Pacific Northwest and other places. And we have serious concerns about the burning of coal and emissions of carbon dioxide, which will contribute to accelerating climate change and ocean acidification and resulting adverse impacts to human health and the environment.

Equally as troubling is the fact that the benefits that would derive from this proposal are hardly mentioned, including the names of companies and goods that would utilize these docks.

³ *Id.*

⁴ *Id.* at § 320.4(a)(1).

The Corps' regulations clearly require better information on whether this specific project would benefit the local community and the American public. The Corps therefore simply does not have reliable, detailed information on the benefits to the local and American publics that is required to conduct the balancing required by the regulations.

I. Port of Stockton's Plans to Increase Bulk Commodity Exports like Coal and Cement

The Port of Stockton plans to greatly increase the amount of coal exported from its facility which has been under 100,000 tons. It currently has 300 acres of land that can be developed for such purpose, which presumably includes the West Complex. In March 2012, Union Pacific and Metro Ports completed a \$1.2 million rail line expansion into the port, effectively doubling their coal and iron ore capacity from 3 trains/week to 6 trains/week. The addition included 5,825 ft of extra track.⁵ In March 2013, Bowie Resources, operator of the Bowie II mine in Colorado, secured an agreement with the port of Stockton to ship up to 1,000,000 tons per year (TPY). Bowie has been working with Metro Ports.⁶ On June 28, 2013, Bowie Resources announced a deal with Galena Private Equity Resource Fund for jointly purchase Arch Coal's Canyon Fuels, LLC for \$435 million. The deal included three mines in Utah's Uinta Basin. Trafigura signed on to market Bowie's new coal acquisitions. Bowie will partner with Metro Ports at the port to ship up to 2,300,000 TPY to export markets.⁷

In a presentation to the San Joaquin Council of governments in May 2013, the Port of Stockton laid out some of its infrastructure plans to expand bulk commodity shipments at the Port, including connected rail and road actions.⁸ These actions will be discussed more in-depth below, and should be properly analyzed as connected actions under the National Environmental Policy Act (NEPA). The Port noted that an additional 18,000 feet of track added to the East Complex would permit coal export capacity to increase to 3 MTPY, and that 8000 feet of track at the West Complex would increase bulk commodity exports of cement by 200,000 tons, among other commodities.⁹

⁵ *Port of Stockton Gets New Mile of Track, Expansion will mean more ships, traffic tie-ups*, March 10, 2012,

http://www.recordnet.com/apps/pbcs.dll/article?AID=/20120310/A_BIZ/203100316/1/NEWSMAP **Exh. A.**

⁶ *Bowie Resources Complete Debt Financing with White Oak Global Advisors*, PR Newswires, March 26, 2013, <http://www.prnewswire.com/news-releases/bowie-resources-llc-completes-debt-financing-with-white-oak-global-advisors-llc-200086801.html> **Exh. B.**

⁷ *Bowie Announces Co-Investment with Galena Private Equity Resource Fund to acquire Bowie and Canyon Fuel Mines*, Yahoo Finance, June 28, 2013, <http://finance.yahoo.com/news/bowie-resources-llc-announces-co-135600928.html> **Exh. C.**

⁸ *Goods Movement by Rail*, May 21, 2013, <http://www.sjcog.org/documentcenter/view/252> at Slide 27. **Exh. D.**

⁹ *Goods Movement by Rail*, May 21, 2013, <http://www.sjcog.org/documentcenter/view/252> at Slide 29. **Exh. D.**

II. Proposed Port of Stockton Dredging Project

A. The project proposes almost 10 feet of “maintenance” dredging.

The Port of Stockton (hereafter “Applicant” or “Port”) has applied for CWA Section 404 and RHA Section 10 permits to perform maintenance dredging to -35ft MLLW at Docks 16-20 of its West Complex, the former Rough and Ready Naval Supply depot. Application (App.) at 2. The current depth of Docks 16-20 is only -26 ft MLLW. PN at 1.

Docks 16-20 are spread over 12.75 acres, and would result in 160,000 cubic yards of dredged material removal during only the initial dredging, and up to 200,000 with additional maintenance dredging over a 5 year period. PN at 2. That is the equivalent of 25 football fields buried in 3 feet of dirt.¹⁰

Docks 16-18 have not been dredged in at least 15 years, and Docks 19 and 20 were last dredged in December 2001. App. at 2. The Port does not state to which depth those docks were previously dredged or provide any documentation to that effect. The Port does claim that based on pictures (not provided with their application) and their own report, the docks were previously dredged to -35 ft MLLW and thus it requests that its application proceed as maintenance dredging as opposed to deepening dredging.

B. Purpose of project is vague and undefined; more information is necessary.

The Port states the project’s purpose as “to facilitate access of deep draft commercial vessel traffic...at the Port of Stockton’s West Complex and to maintain the nominal operating depth of 35 feet below MLLW at the docks.” App. at 2. “Based on available information, the overall project purpose is to facilitate access of deep-draft commercial vessel traffic to Docks 16 through 20 of the Port’s West Complex. The Applicant believes there is a need to provide the water depth necessary to allow commercial shipping vessels the ability to safely access the docks, such that the efficiency of terminal operations at the Port can be maintained and enhanced.” PN at 1.

Nowhere in the Port’s application does it state which companies are currently shipping from Docks 16-20 or what commodities are being shipped. Presumably, this dredging allows new use of these docks and/or larger ships to access those docks than have previously used those docks before given the dramatic increase in depth from -26 ft MLLW to -35 MLLW. The Corps NEPA analysis must analyze these direct, indirect and cumulative impacts that might include any number of things such as: additional ship and rail traffic; the impacts of larger ships; coal or cement dust air and water quality impacts to communities during rail and ship transport, loading

¹⁰ 57,600 square feet in standard american football field, 1 cubic yard = 27 cubic feet
160,000 cubic yard = 4,320,000 cubic feet. 4,320,000 cube feet / 57,600 square feet = Or 25
football field buried 3 ft/1 yard deep with dirt.

and unloading of rail cars and ships, and the like.

III. Clean Water Act Section 404 guidelines

A. CWA Regulatory Background

The Clean Water Act (“CWA”) was enacted “to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.”¹¹ In order to permit the proposed activities, the Corps must find that the activity complies with Section 404 of the Clean Water Act (“CWA”). The basic precept of Section 404 is: “that dredged or fill material should not be discharged into the aquatic ecosystem, unless it can be demonstrated that such a discharge will not have an unacceptable adverse impact either individually or in combination with known and/or probable impacts of other activities affecting the ecosystem of concern.” 40 C.F.R. § 230.1 (c). The Corps and EPA’s 404(b)(1) Guidelines impose important limitations on when a § 404 permit may be issued. In general, no discharge of dredged or fill material shall be permitted: 1) if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem; 2) if the discharge will cause or contribute to violations of applicable state water quality standards; 3) if the discharge will cause or contribute to significant degradation of the environment; and 4) unless all appropriate steps have been taken to minimize potential adverse impacts. 40 C.F.R. § 230.10. The Guidelines provide that significant adverse effects on human health or welfare; aquatic life and other water dependent wildlife; aquatic ecosystem diversity, productivity, and stability; or recreational, aesthetic, and economic values are effects contributing to significant degradation. 40 C.F.R. § 230.10(c)(1)–(4). Significant effects are those that are more than “trivial.” Preamble to Guidelines for Specification of Disposal Sites for Dredged or Fill Material (“Preamble”), December 24, 1980, 45 Fed. Reg. 85,336, 85,343. These factors must be considered both individually and collectively when evaluating the permit application.

The Guidelines prohibit the discharge of dredged or fill materials which will cause or contribute to significant degradation of the waters of the United States. Determining whether a proposed discharge will cause or contribute to significant degradation requires an evaluation of the potential adverse effects to waters of the U.S.,¹² There are four categories of effects to the aquatic ecosystem that are evaluated. These include effects on: (1) human health or welfare, including on water supplies, plankton, fish, shellfish, wildlife, and special aquatic sites; (2) aquatic life and other wildlife dependent on aquatic ecosystems; (3) aquatic ecosystem diversity, productivity, and stability, including the loss of fish and wildlife habitat or loss of the capacity of a wetland to assimilate nutrients or purify water; and (4) recreational, aesthetic, and economic values.¹³

¹¹ 33 U.S.C. § 1251(a).

¹² 40 C.F.R. § 230.10(c).

¹³ *Id.* § 230.10(c)(1)-(4).

B. Clean Water Act and Rivers and Harbors Act Permitting Regulations Require the Corps to Conduct a Detailed and Thorough Public Interest Review of the Proposed Project and its Impacts on the Environment, Human Health and Safety and Public Welfare.

Pursuant to the Corps' implementing regulations, the "decision whether to issue a permit will be based upon an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest."¹⁴ This "public interest" review lies at the heart of the Corps' analysis and must guide the agency's important oversight of the Port of Stockton's application. Given the lack of information given by the Applicant about its proposed activities, the Corps should at minimum require more details to carry out its public interest review. It is impossible to determine whether the public interest is met with this lack of information about the project's purpose or users. Assuming that the proposal is consistent with the Port's plans to increase bulk commodity shipments of coal, this activity is not in the public interest given the several localized coal dust impacts, and the climate change implications to burning this coal abroad.

The public interest review is intended to be broad, capturing all relevant issues that could impact the environment, human health and natural resources.

Evaluation of the probable impact which the proposed activity may have on the public interest requires a careful weighing of all those factors which become relevant in each particular case. The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. The decision whether to authorize a proposal, and if so, the conditions under which it will be allowed to occur, are therefore determined by the outcome of this general balancing process. That decision should reflect the national concern for both protection and utilization of important resources.¹⁵

The Corps' regulations include a non-exhaustive list of factors that may be relevant for each individual project.

All factors which may be relevant to the proposal must be considered including the cumulative effects thereof: among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.¹⁶

¹⁴ 30 C.F.R. § 320.4(a)(1).

¹⁵ *Id.*

¹⁶ *Id.*

Consistent with the mandate that the Corps consider “all those factors that become relevant,” this non-exhaustive list of factors includes issues beyond those directly related to the impacts of in-water work. By requiring an analysis of “cumulative impacts” and by including a non-exhaustive but far reaching list of factors, the Corps’ regulations clearly require a broad, all-encompassing analysis of the public interests that captures all impacts associated with the project and not just those that result directly from the permitted activities. The public interest review includes a “careful weighing of all those factors which become relevant in each particular case.”¹⁷ In its review, the Corps must consider:

- (i) The relative extent of the public and private need for the proposed structure or work;
- (ii) Where there are unresolved conflicts as to resource use, the practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed structure or work; and
- (iii) The extent and permanence of the beneficial and/or detrimental effects which the proposed structure or work is likely to have on the public and private uses to which the area is suited.¹⁸

In addition to these criteria, the Corps must consider “the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest.”¹⁹

1. The project is unnecessary and is not in the public interest.

The Port of Stockton failed to provide much information at all about its need for this project. Moreover, given the Port’s grander plans to expand coal exports, it is likely planning an expansion that involves these docks, which is wholly unnecessary and it contrary to the public interest.

¹⁷ 33 C.F.R. § 320.4(a)(1). The section reads:

The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest. Evaluation of the probable impact which the proposed activity may have on the public interest requires a careful weighing of all those factors which become relevant in each particular case. The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. The decision whether to authorize a proposal, and if so, the conditions under which it will be allowed to occur, are therefore determined by the outcome of this general balancing process. For activities involving 404 discharges, a permit will be denied if the discharge that would be authorized by such permit would not comply with the Environmental Protection Agency’s 404(b)(1) guidelines. Subject to the preceding sentence and any other applicable guidelines and criteria (see Section 320.2 and 320.3), a permit will be granted unless the district engineer determines that it would be contrary to the public interest.

¹⁸ *Id.* § 320.4(a)(2).

¹⁹ *Id.* § 320.4(a)(1); *see also id.* pt. 325 App. B. § (7)(b)(3).

a. The Adverse Impacts of Coal Dust and Diesel Emissions on Human Health and the Environment

In conducting its public interest review, the Corps must consider the impacts of fugitive coal dust and diesel emissions from trains on human health and the environment. Coal is most commonly transported via open top rail cars. According to Burlington Northern Santa Fe and coal dust proceedings before the Surface Transportation Board (STB), these cars lose huge volumes of coal dust during transportation, an average of 500 pounds of coal per rail car. Each train is composed of 120 cars or more. In a dense rail corridor, such as the Powder River Basin where there are at least 70 trains per day containing 120 cars or more, 2000 tons of coal dust is being deposited each day. If all of the Northwest coal barging and export facilities are built, approximately 60 new trains would travel through the region daily so similar coal dust problems would be expected. While surfactants and loading practices, if utilized and correctly applied, might reduce some dust, many companies are not employing these practices because there is no legally binding obligation for them to do so. Coal shippers, coal companies and rail companies are currently arguing over a BNSF voluntary coal dust mitigation requirement before the Surface Transportation Board. Additionally, surfactants contain a myriad of unknown chemicals that have not yet been adequately studied. Surfactants could cause a number of potential harms, including: danger to human health during and after application; surface, groundwater and soil contamination; air pollution; changes in hydrologic characteristics of the soils; and impacts on native flora and fauna populations.

Coal dust causes a number of well-known respiratory diseases, including pneumoconiosis (commonly known as Black Lung Disease), bronchitis and emphysema, and transportation of coal is identified by the Occupations Health and Safety Administration as one of the methods for human exposure to coal dust. Airborne coal dust can also exacerbate asthma and chronic obstructive pulmonary disease (COPD), and respirable coal dust is responsible for the deaths of as many as 700 miners and ex-miners in the United States each year. Although much of available information relates to health threats for underground coal miners, there may also be severe risks of exposure to lower levels of coal dust based on what is known about how coal dust impacts the human respiratory system. Coal dust in all size fractions also contains varying amounts of heavy metals, including lead, mercury, chromium and uranium. Fugitive emissions of coal dust from transportation can also cause increases in levels of fine particulate matter (PM10), which also presents significant threats to human health.

Even apart from the direct health threats, fugitive coal dust along rail lines and near terminals has caused nuisance conditions for neighboring businesses and residences, resulting in economic losses due to the need for frequent cleaning. Mayors, businesses, and residents located in communities where coal barging, handling and export facilities currently exist such as Seward, Alaska; Newport News and Roda, Virginia; Mobile, Alabama; and Floyd County, Kentucky, are all impacted by coal dust from coal transportation, loading, processing, and shipping facilities. Even communities like Metropolis, Illinois, where there is no coal export or barging facility, suffer coal dust problems from passing coal barges. The Corps' analysis must also include dust impacts in the communities along the San Joaquin River and San Francisco Bay where ships

would pass, and along the rail line in all communities through which trains would travel to deliver the coal from Utah to Stockton.

Coal dust also threatens to cause adverse impacts to salmon and steelhead. A study published in 1997 noted how coal dust can enter the aquatic environment as a result of “storm water discharge, coal pile drainage run-off, and when coal dust from storage piles, transfer conveyor belts and rail cars becomes airborne and is deposited in the surrounding environment (i.e. fugitive coal dust) (Xuan and Robins, 1994).”²⁰ The authors also noted that the “practice of using additives, such as surfactants, in the water being used for surface wetting of coal piles can increase the solubility of hydrophobic compounds and thus their mobility in the aquatic environment (Enzminger and Ahlert, 1987).”²¹ The authors further noted that polycyclic aromatic hydrocarbons (“PAHs”) “since chironomid larvae, a significance food source for juvenile salmon, have been shown to bioaccumulate PAHs in estuaries contaminated with coal byproducts (dickman et al., 1992).”²² In their study, the authors exposed juvenile salmon to coal dust and concluded that their results “directly demonstrate that juvenile Chinook salmon exposed to coal dust exhibit increased hepatic expression of both L5 and CYP1A1 genes which encode proteins which play crucial roles in cellular metabolism.”²³

In addition to impacts to fish, the Corps must assess impacts to water quality.²⁴ Storm water and waste water releases from coal storage facilities is typically acidic, and coal runoff may contain high concentrations of copper, iron, aluminum, nickel, and other constituents present in coal.²⁵ The Corps must consider both point and non-point pollution, and it must also assess compliance with applicable effluent limitations and water quality standards. We emphasize the importance of the Corps considering impacts to the narrative water quality criteria. We also emphasize the importance of the Corps seeking and obtaining a certification of compliance with water quality standards from the state pursuant to Section 401 of the Clean Water Act.

b. The Adverse Impacts of Coal Combustion, Mining and Transportation on Climate Change and Ocean Acidification.

In conducting its public interest review, the Corps must give serious consideration to the greenhouse gas emissions associated with coal combustion, mining and transportation and the resulting impacts on climate change and ocean acidification, which threaten to impose a host of adverse impacts on human health and the natural resources of the West Coast. The Port of

²⁰ P.M. Campbell, R.H. Devlin, *Increased CYP1A1 and ribosomal protein L5 gene expression in a teleost: The response of juvenile Chinook salmon to coal dust exposure*, *Aquatic Toxicology* 38 (1997) 1-15. **Exh. E.**

²¹ *Id.*

²² *Id.*

²³ *Id.*

²⁴ 30 C.F.R. § 320.4(d).

²⁵ Steam Electric Power Generating Point Source Category: Final Detailed Study Report, EPA 821-R-09-008, October 2009.

Stockton's proposal to export **3 million tons of coal** significant in the context of California's climate change regulations like AB32. Combustion of 3 million metric tons of coal will generate at least **6 million metric tons of CO2 annually**²⁶.

Mining causes a broad array of environmental harms through contamination of air, surface and groundwater, and additional climate impacts. The coal proposed to be shipped would supposedly originate from Utah. More specific information is needed about the mines that plan to ship coal through this proposed barging port is necessary to fully assess the impacts associated with the mining. The impacts of increased mining to water and air must be analyzed. For instance, many underground coal mines in the West cannot be mined unless significant amounts of explosive methane are removed from the mine. In many cases, the methane is then simply vented to the atmosphere untreated, where it has over 20 times the heat trapping ability of CO₂.²⁷ The Corps needs to analyze methane problems, in addition to other air impacts including ozone and PM-10. Any additional mining that would occur due to plan to export coal—such as leasing new tracts of land to facilitate coal export—must also be included in this analysis.

In conducting its public interest analysis, the Corps must use the most up-to-date information available on the causes and implications of global warming. In 2007, the United Nations' Intergovernmental Panel on Climate Change ("IPCC") released its frequently cited report reflecting the scientific consensus that unrestrained GHG emissions are causing global warming. As summarized by the UN in a press release:

The IPCC, which brings together the world's leading climate scientists and experts, concluded that major advances in climate modeling and the collection and analysis of data now give scientists "very high confidence" – at least a nine out of ten chance of being correct – in their understanding of how human activities are causing harm the world to warm. This level of confidence is much greater than the IPCC indicated in their last report in 2001. The report confirmed that it is "very likely" that greenhouse gas emissions have caused most of the global temperature rise observed since the mid-twentieth century. Ice cores, going back 10,000 years, show a dramatic rise in greenhouse gases from the onset of the industrial age. The co-chair of the IPCC working group stated, "There can be no question that the increase in these greenhouse gases are dominated by human activity."

The United Nations went on to summarize the key findings of the report:

The report describes an accelerating transition to a warmer world – an increase of three degrees Celsius is expected this century – marked by more extreme

²⁶ EPA estimates that that burning one rail car containing 90.89 metric tons of coal results in the emissions of 183.65 metric tons of carbon dioxide. See <http://www.epa.gov/cleanenergy/energy-resources/refs.html>.

²⁷ EPA, methane, <http://www.epa.gov/methane/>.

temperatures including heat waves, new wind patterns, worsening drought in some regions, heavier precipitation in others, melting glaciers and arctic ice, and rising global sea levels.

Scientific analysis since then has demonstrated that the urgency to act on climate impacts is even greater than it was in 2007. The recent Copenhagen Climate Science Congress, attended by 2,000 scientists, concluded with this “Key Message 1:”

Recent observations confirm that, given high rates of observed emissions, the worst-case IPCC scenario trajectories (or even worse) are being realized. For many key parameters, the climate system is already moving beyond the patterns of natural variability within which our society and economy have developed and thrived. These parameters include global mean surface temperatures, sea-level rise, ocean and ice sheet dynamics, ocean acidification, and extreme climactic events. There is a significant risk that many of the trends will accelerate, leading to an increased risk of abrupt or irreversible climate shifts.²⁸

Numerous studies predict the severe impact from climate change in California, including dramatic reductions in snowpack, declining river flows, increased deaths from temperatures and air pollution, increased risk of wildfires and resulting conversions in vegetation type, loss of salmon and shellfish habitat, lost hydropower generation, and flooding.

To summarize, the Corps must assess the direct, indirect and cumulative impacts resulting from the emissions of greenhouse gasses that would result from the proposed combustion, mining and transportation of coal that would be handled by the proposed coal export expansion at Port of Stockton. In doing so, the Corps must assess the totality of greenhouse gas emissions associated with all of the coal export facilities that are currently proposed for the West Coast, and the Corps must not only consider the total emissions but also the resulting impacts to climate change and the associated impacts on human health and natural resources resulting from rising temperatures, changing climatic patterns, rising sea levels, and increasing ocean acidification.

c. The Adverse Impacts on Public Safety and Welfare

The Corps must also consider closely the potential adverse impact to human health and safety resulting from the transportation and handling of large amounts PRB coal by trains, which will pass through numerous local communities between the mine and Port of Stockton. Each fully loaded train is over a mile long, and this proposal would significantly increase the daily number of trains along the rail route. These trains will bisect multiple communities along the route, leading to significant traffic delays and potential safety issues at grade-crossings. The delay of only a few minutes for an emergency response vehicle can mean the difference between

²⁸ *International Scientific Congress Climate Change: Global Risks, Challenges, and Decisions* (Mar. 12, 2009).

life and death for citizens in these rural communities. In addition, increased rail traffic will lead to increased collisions between passenger vehicles, pedestrians, and trains. There are approximately 3,000 vehicle collisions with coal trains each year already, and 900 pedestrian accidents.

Coal dust is a ballast safety issue and has been linked to train derailments, as discussed in a recent proceeding before the Surface Transportation Board (STB), which found coal dust to be “a pernicious ballast foulant.”²⁹ “Coal dust, even in small amounts, poses a real threat to the integrity of the ballast section and track stability.”³⁰ Coal dust has been shown to be a cause of rail bed instability and derailments, which can pose a significant public safety hazard.³¹ This is particularly true with coal trains as coal is flammable.³² Right of way fires on the land of property owners along the rail line are also a risk.³³ Finally, the storage of this highly flammable coal at the proposed facility poses a public safety hazard, as coal stored in piles has been known to spontaneously combust.³⁴

The significant increase in ship traffic also results increases the risk of groundings and spills, and accidents in the San Joaquin River and larger San Francisco Bay. These risks are not theoretical. For example, in November 2007 the Cosco Busan struck a tower of the Bay Bridge and spilled over 50,000 gallons of oil in the Bay causing millions of dollars in damage.³⁵ Similarly, the Corps must evaluate the increased risk of direct conflicts with existing ship traffic on the River and Stockton Deep Water Ship channel, including the increased risk of catastrophic accidents. For example, on May 20, 2010, three grain barges sank on the Mississippi River near Baton Rouge following a collision between a barge transporting food products and a barge transporting sulfuric acid.³⁶ The accident prompted the U.S. Coast Guard to close the shipping channel. These are just a few examples of accidents involving ship and barge traffic. Given the potential for significant increase in river traffic the Corps must assess the increased risk of barge and ship accidents and potential threats associated with these accidents, including coal spillage, barges sinking, and oil spills, as part of the public interest review this project.

d. The Adverse Impacts of Air Pollution from local coal loading and transport impacts and from Combustion of Coal in Asia

²⁹ See Decision, March 2, 2011, Arkansas Electric Cooperative Association—Petition for Declaratory Order, Surface Transportation Board, Docket No. FD 35305.

³⁰ See Hearing, July 29, 2010, Arkansas Electric Cooperative Association—Petition for Declaratory Order, Surface Transportation Board, Docket No. FD 35305, at 46:18-20.

³¹ *Id.*

³² *Id.*

³³ See Arkansas Electric Cooperative Ass’n, July 10, 2010 at 69: 7-10.

³⁴ *Id.*

³⁵ Cosco Busan Oil Spill. http://www.dfg.ca.gov/ospr/NRDA/cosco_busan_spill.aspx

³⁶ <http://www.louisianaweekly.com/river-traffic-resumes-after-barge-accident-but-threats-remain>

The ultimate burning of coal exported from the would be facility at the Port of Stockton would inevitably result in toxic and carcinogenic air pollution that would ultimately be transported back to the West Coast and other portions of the United States. The Corps must consider the direct, indirect and cumulative impacts of the air pollution generated by the consumption of coal loaded at Stockton and then exported to Asia markets.

The San Joaquin Valley is home to the worst air quality in the country, and many environmental justice communities are also located here. Coal trains and port loading operations can elevate particulate matter and NOx levels in this already overburdened area. The Corps must analyze the potential impacts in its public interest and NEPA review.³⁷

The impacts of coal burning in Asia and the associated air pollution in the United States have been addressed in numerous studies, and the Corps will have readily available information to draw upon in conducting its analysis. In particular, several studies have looked at mercury emissions and transportation from Asia to North America. Mercury is a powerful neurotoxin and bioaccumulates in the food chain, which can particularly impact important aquatic species, such as fish, resulting in fish consumption advisories, which have been issued in 48 states.³⁸ Mercury emissions in the United States have been the subject of extensive regulatory efforts, leading to some reductions in domestic emissions, but mercury emissions are rising, in some cases dramatically, in developing countries in Asia that depend heavily on coal fired power plants.³⁹ In the 2002-03 time frame, the emissions of mercury from Asia were estimated to be 56% of the total global anthropogenic emissions, and “*Asian emissions are estimated to contribute about 56% of the global anthropogenic emissions.*”⁴⁰

There is also ample evidence suggesting that emissions in Asia contribute to additional types of air pollution. In March of this year, for instance, a new study by scientists from the National Oceanic Atmospheric Administration (“NOAA”) concluded that springtime air pollution from Asia can contribute to high surface ozone pollution in the western United States.⁴¹ The scientists developed a high-resolution model that is able to differentiate the effects of local emissions from Asian emissions, thereby quantifying the contribution of those emissions to pollution problems in the United States.⁴²

³⁷ New Study Examines Air quality in San Joaquin Valley, Home to America’s Dirtiest Air, Smithsonian Magazine, March 8, 2013, <http://blogs.smithsonianmag.com/science/2013/03/new-study-examines-san-joaquin-valley-home-to-americas-dirtiest-air/>.

³⁸ Jaffe, Daniel et al., *Export of Atmospheric Mercury from Asia*, Atmospheric Environment 39 (2005) 3029-3038. <http://www-lidar.nies.go.jp/CHAAMS/JaffeAE2005.pdf> , **Exh. F**.

³⁹ *Id.*

⁴⁰ *Id.* at 3030 (emphasis added).

⁴¹ NOAA Press Release, *Asian Emissions Can Increase Ground-Level Ozone Pollution in U.S. West* (Mar. 5, 2012) (available at <http://researchmatters.noaa.gov/news/Pages/ozonestudy.aspx>).

⁴² More information on this topic is available at <http://daily.sightline.org/2012/04/03/do-asian-coal-plants-pollute-north-america/>.

The Corps has a legal obligation to consider all of these impacts associated with coal export in determining whether the proposed coal export activities are in the public interest. The science has developed to the point where we now know that we cannot simply export coal to Asia and then close our eyes to the potential impacts of the ultimate combustion of that coal to power the foreign economies of developing countries.

e. The Corps Does Not have Adequate Information on the Speculative and Poorly Documented Needs and Benefits Supposedly Associated with the Stockton’s coal expansion

There is virtually nothing in the Port of Stockton’s application regarding the public need for and the benefit of the proposed dredging project. The absence of such information suggests strongly that the Corps should deny the permit application. Presuming that this dredging is to allow Port of Stockton’s coal facility to expand, it is unclear whether such a facility is even necessary. Coal exports are a risky commodity where the market functions in boom and bust cycles. Earlier coal export facilities at the Port of Portland and in Los Angeles in the 1990s failed. The Port of Los Angeles closed six years after it opened following at least two fires and the accumulation of large amounts of coal dust.⁴³ Given Stockton’s previous bankruptcy, investing taxpayer dollars into a risky and unsustainable business model like coal exports is also a poor financial decision.

In order to balance adequately the significant environmental risks and risk to human health, safety and public welfare, the Corps requires much more detailed and specific information on the economic benefits to be derived from the proposed coal export project. Coal transportation projects, in general, create far fewer jobs per acre of land occupied than other types of industrial uses appropriate for ports.⁴⁴ Furthermore, the potential harm to existing businesses from a coal export facility—such as from rail traffic, coal dust, noise, aesthetic and nuisance concerns—has not been analyzed. Given this information, the Corps must demand a far better analysis of the proposed benefits of this project prior to issuing the requested permit.

C. The Corps should analyze this Dredging Application as one for Deepening Dredging instead of Maintenance Dredging

The Army Corps should properly characterize the Port of Stockton’s application as one for deepening dredging as opposed to maintenance dredging at Docks 16-20.⁴⁵ The Port of

⁴³ *Id.*

⁴⁴ Sightline, Northwest Coal Exports, April 2012, <http://treatyprotection.org/documentation/coal-FAQ-April12.pdf>.

⁴⁵ In no case would the Port’s application fit into any sort of Section 404 (f) exemption even if the dredged material would be utilized for dike, dam, or levee maintenance. Such exemptions are narrowly construed. *See, e.g. Borden Ranch Partnership v. United States Army Corps of Engineers*, 261 F3d 810 (9th Cir. 2001). In addition, Section 404 (f)(2) would “recapture” this

Stockton purports to apply for maintenance dredging as opposed to deepening dredging from the current -26 ft to -35 ft Mean Lower Low Water (MLLW) with an additional 2 foot overdepth. *See* Public Notice (PN) at 1-2. Initial dredging is expected to take 3 years to complete, and the Port proposes to conduct annual maintenance for remaining time under the 5 year permit.

To support its claim that the docks were previously dredged to at least -35 feet, the public notice refers to the analysis of “historic photos...to determine that the depth was at least -30 feet MLLW, based on the size of the ships moored at the docks.” PN at 2. These photos were not included with the Port of Stockton’s application or in its later submitted report. Thus, this information is therefore not part of the record and/or, if such evidence was provided, it should have been provided to Commenters with their FOIA request in order to properly analyze this application.

The Port’s Application also referenced a study that was not part of its initial application. The Port only submitted this 6 page report to the Army Corps over a month after the application went out for public notice, which did not give Commenters sufficient time to provide their own expert analysis. *See* App. at 19 (citing “Historical Dredge Depth Study” by James Durkin as an additional reference that was forthcoming.)

First, the Durkin study does not provide a complete picture of Docks 16-20, and the full range of -26ft MLLW and below. The Durkin dredging study only studied -35 ft depth/ 31.5 MLLW and lower soils, not those in the current range to which Docks 16-20 are dredged, -26 ft MLLW. It is thus impossible to draw conclusions from that information alone since there is not a solid baseline in which to compare the results. In addition, the Durkin study did not sample near Dock 16 or Dock 19 and thus does not provide a complete picture of the area in question. *See* Durkin Report at Figure 1.

Second, the Durkin report’s conclusions about any previous dredging are weak at best and do not account for the full results provided within the report. For example, the report concludes that there is a “distinct change” at 36.5 ft and that both mercury and PAHs were detected below 36.5 ft in only one sample. *See* Durkin Report at 2. But Table 1, on page 3, indicates that three samples--CP-15-40, CP 18-40.5, and CP 12-A-42.5 contained both PAHs and mercury, and were collect at depths of 40, 40.5 and 42.5 ft, or 36, 36.5, and 42.3 MLLW ft, respectively. *See* Durkin report, Table 1, at 3. The information provided in Table 1 does not provide any sort of clear pattern to these results.

Third, the conclusion only indicates that there may have been “human influence” not that any previous dredging to those levels occurred. Durkin at 2. As the West Complex was the former Rough and Ready Naval Complex, that there was past industrial activity in the area is not disputed. However, this report does not provide the strong conclusion that the Port claims in its Application that “the resulting geophysical and chemical analyses conducted during this investigation provided direct evidence that Docks 16 through 20 have been previously deepened to 35 ft below MLLW.” Application at 2.

Whether Docks 16-20 in particular have been dredged to -35 ft MLLW in the past from their current depth of -26 ft MLLW is questionable at best. This Application should proceed as

activity since the dredging would newly bring Docks 16-20 to deeper water use, and involves major hydrologic alternations in removing 160,000 cy of materials from the San Joaquin River.

one for deepening dredging, and the Port should later be required to re-apply for maintenance dredging in the future.

IV. National Environmental Policy Act (NEPA) review

A. NEPA Requirements

When taking any action that may significantly affect the environment, the Corps must comply with the National Environmental Policy Act (“NEPA”). NEPA requires that federal agencies carefully consider the direct, indirect and cumulative effects of federal actions. The statute requires federal agencies to take a “hard look” at the environmental impacts of proposed agency actions. *See Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989); 42 U.S.C. § 4331 *et. seq.* To take a “hard look” under NEPA, agencies must consider the relevant factors and the important aspects of their actions. *See Friends of the Boundary Waters Wilderness v. Dombeck*, 164 F.3d 1115, 1128 (8th Cir. 1999). If an agency approves a major federal action without taking a hard look at its impacts, a court must set aside the agency action as arbitrary and capricious. *See Robertson*, 490 U.S. at 350; 5 U.S.C. § 706. One of NEPA’s fundamental purposes is to demonstrate that the agency has properly considered the environmental consequences of its actions and given the public an opportunity to respond to the agency’s disclosures. *See Robertson*, 490 U.S. at 349 (explaining that NEPA “guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decision-making process and the implementation of that decision”). NEPA further requires agencies to “provide *full and fair discussion of significant* environmental impacts” and to inform the public and decision makers about potential alternatives to avoid or minimize environmental impacts. 40 C.F.R. § 1502.1 (emphasis added).

When doing its analysis, the agency must consider all “connected actions” in a single EIS.⁴⁶ Actions are “connected” if they (1) “automatically trigger other actions” (2) “will not proceed unless other actions are taken previously” or (3) “are interdependent parts of a larger action.”⁴⁷ The “purpose of this requirement is ‘to prevent an agency from dividing a project into multiple ‘actions,’ each of which individually has an insignificant environmental impact, but which collectively have a substantial impact.’”⁴⁸ Multiple actions are “connected” if there is no “independent utility” of either action apart from the other.⁴⁹ When “agency actions are sufficiently related so as to be ‘connected’ . . . the agency may not escape compliance with the

⁴⁶ 40 C.F.R. § 1508.25; *Great Basin Mine Watch v. Hankins*, 456 F. 3d 955, 968-69 (9th Cir. 2006).

⁴⁷ 40 C.F.R. § 1508.25 (a)(1).

⁴⁸ *Great Basin*, 456 F. 3d at 969.

⁴⁹ *Great Basin*, 456 F. 3d at 969 (To determine whether multiple actions are “so connected as to mandate consideration in a single EIS,” the Ninth Circuit applies an “independent utility” test. The crux “of the test is whether the actions ‘would have taken place with or without the other and thus had ‘independent utility.’”).

regulations by proceeding with one action while characterizing the others as remote or speculative.”⁵⁰

Even if a particular activity does not rise to the level of a “connected action,” NEPA still mandates that “where several actions have a cumulative environmental affect” these cumulative impacts must be considered in a single EIS.⁵¹ Impacts that must be considered as cumulative are “other past, present, and reasonably foreseeable future actions.”⁵² The agency must provide “quantified or detailed information”⁵³ and include a “useful analysis” and “discussion of how future projects together with the proposed project will affect the environment.”⁵⁴

A. Inadequate Public Notice

The public notice is inadequate because it does not indicate that the Army Corps is proceeding with any NEPA analysis. Assuming that the Corps is proceeding with NEPA analysis, as it must to comply with the law, we are gravely concerned that the public was asked for input on the Corps’ public interest review *before* the Corps had prepared an analysis of environmental impacts pursuant to National Environmental Policy Act (“NEPA”), including a current biological opinion. By preparing and disclosing information on the potentially adverse impacts of the project *after* the public comment period on the Corps’ public interest review, the applicant and agency are effectively preventing the public from providing meaningful input into that important review process. Relevant information regarding the potential environmental impacts and benefits to the public interest that would result from the proposed project, at which time the Corps should reopen the public comment period.

B. The Corps Must Prepare an EIS that includes all connected actions.

The proposed Port of Stockton West Complex dredging is a “connected action” to the other dockside dredging and the rail extensions at the Port of Stockton. Reviewing these projects separate from one another violates NEPA. The Corps may not segment a project into parts so as to avoid its classification as a “major federal action” requiring the preparation of an EIS.⁵⁵ The proposed activities – expansion of the Port docks and extension of the rail line to the Port – are interrelated and should be considered in a single NEPA document at the outset. This is unlawful segmentation of connected actions.

The Application only discloses that there are other dockside dredging projects in process. But the Application fails to mention the several rail projects that are also in progress that would

⁵⁰ *Thomas v. Peterson*, 753 F.2d 754, 760 (9th Cir. 1985).

⁵¹ *Northern Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1076 (9th Cir. 2011).

⁵² 40 C.F.R. § 1508.7.

⁵³ *Neighbors of Cuddy Mountain v. U.S. Forest Service*, 137 F.3d 1372, 1379 (9th Cir. 1998).

⁵⁴ *Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 810 (9th Cir. 1999).

⁵⁵ *See Great Basin*, 456 F. 3d at 968-69.

allow increased rail traffic at the Port of Stockton to utilize the newly dredged docks allowing more and larger ships. These connected actions must all be analyzed in one comprehensive EIS document rather than being segmented.

For instance, connected projects include:

- BNSF railway Stockton to Escalon Seven Bridges project, for which there is a pending Section 404 permitting action before the Corps.⁵⁶
- Pending Actions for Port of Stockton West Complex Dock Dredging at Docks 14-15 before the Corps.⁵⁷
- Pending Action for Port of Stockton East Complex Docks 4-11 before the Corps.⁵⁸
- On site track construction at the Port of Stockton's East Complex and West Complexes.
- Connected coal loading—there are plans to “top off” coal ships loaded at Port of Stockton at the Levin-Richmond terminal given the Port's depth restrictions.⁵⁹

C. NEPA analysis must analyze the direct, indirect and cumulative impacts of the Port of Stockton's projects

Even if the Corps violates NEPA by segmenting review the pending permits for expansion activities at the Port of Stockton, the Corps must consider all cumulative impacts including those impacts arising from all past, present and reasonably foreseeable future projects. The cumulative impacts of these projects are significant, and their existence demonstrates that the Port expansion is a major federal action significantly affecting the environment and therefore, requiring preparation of an EIS.⁶⁰ The application does not disclose which product(s) would be shipped or which industries would be utilizing these docks. Given the Port's recent pronouncements about planning to increase its exports of coal, coal is a likely commodity.

Past, present and reasonably foreseeable cumulative effects associated with this dredging include activities throughout the delta, and especially activities in Green Sturgeon critical habitat. Such activities include, but are not limited to: increased vessel traffic to and from the Port of Stockton and associated noise; the Port of Stockton on-site rail projects; offsite BNSF and UP

⁵⁶ Pending Actions before Army Corps, July 1, 2013, at 1. http://www.spk.usace.army.mil/Portals/12/documents/regulatory/pdf/final_actions/pending_actions_as-of-07-01-2013.pdf. See also San Joaquin Council of Governments presentation, June 12, 2013, p. 12-20. <http://www.sjcog.org/AgendaCenter/ViewFile/Agenda/06122013-157>

⁵⁷ Pending Actions before Army Corps, July 1, 2013, at 1. http://www.spk.usace.army.mil/Portals/12/documents/regulatory/pdf/final_actions/pending_actions_as-of-07-01-2013.pdf

⁵⁸ *Id.*

⁵⁹ *Bowie Announces Co-Investment with Galena Private Equity Resource Fund to acquire Bowie and Canyon Fuel Mines*, Yahoo Finance, June 28, 2013, <http://finance.yahoo.com/news/bowie-resources-llc-announces-co-135600928.html> See *id.* **Exh C.**

⁶⁰ See, e.g., *Thomas v. Peterson*, 753 F.2d 754 (9th Cir. 1985).

rail projects to accommodate additional trains; community impacts to increased rail traffic and its impacts on pedestrians, commuters and emergency responders; dock improvements and/or expansions at Port of Stockton; municipal stormwater and wastewater discharges; additional oil spills; ballast water discharges and invasive species introduction, and the harms associated with the loading and unloading of the commodities being shipped from the docks, such as coal (i.e., localized coal dust impacts, climate change impacts to burning the coal abroad, among other air and water quality impacts.)

D. Mitigation, Avoidance and Minimization, and Alternatives Analysis are Deficient

The Port proposes no mitigation citing that “dredging would be conducted in an area that has been historically dredged for decades” PN at 3, and App at 16. The applicant has stated that there may be temporary impacts to waters of the U.S. but no permanent impacts, such that the Port proposes some vague temporary avoidance and minimization measures but no compensatory mitigation. One of these vague avoidance measures is that “decant water will be allowed to return to the DWSC but only after all appropriate tests have indicated that the decant water meets all water quality objectives.” See App. at 16. The Applicant provides no detail about how it plans to contain or test such water, or where the water will go if it does not meet water quality objectives. Unlike previous smaller dredging projects for one or two docks, the Port’s application belies that there must necessarily be discharge “Due to the amount of material of be removed, the Port anticipates that it will be required to discharge decant water back to the DWSC.” App. at 1. Thus, the Port must provide details, contingency plans, and mitigation measures for what will happen if the decant water does not meet water quality standards.

The Corps should analyze this application as a new deepening dredge with permanent impacts since the historic dredging of the docks to -35 ft MLLW has not been adequately proven. The Port should be required to propose mitigation for the entire project, including the air and water quality impacts associated with increased rail and ship traffic, coal dust impacts, additional rail construction and wetlands destruction. These impacts are not even discussed, let alone mitigated, in these documents.

Again, without knowing more about the project’s purpose, the public interest and alternatives analysis is incomplete. The Corps cannot blindly and uncritically accept an applicant’s study of alternatives and its assertions that no practicable alternative exists. *Friends of the Earth v. Hintz*, 800 F.2d 822, 835–36 (9th Cir. 1986). It appears that the Port offered only two alternatives—the no project alternative and -45 feet MLLW. Other alternatives could have should include alternative depths such as maintaining the existing -26 ft MLLW; increased use of the existing Port of Stockton East Complex; alternate Port of Stockton properties, summarily rejected by the Port without any analysis See App. at 13.; the use of private properties in the Delta (none were identified or discussed). See App. at 13; or the use of other area ports like Port of Oakland, Port of Richmond, and the like.

E. The Corps must properly analyze Fish, Wildlife, ESA and Critical Habitat Issues

The studies cited by the Port for endangered species impacts are outdated, going back to the 1990s and early 2000s, and should be re-done to reflect current conditions. The Jones and Stokes study, on which the Port principally relies for endangered species information, is dated over ten years ago, 2003. *See* App. at 6 and accompanying documents. These studies cite even older survey information. For instance, the application cites the 2003 Jones and Stokes study referring to 2001 bird surveys that showed the presence of 7 species of birds. *See, e.g.*, App. at 8. Most importantly, the critical habitat designation for Green Sturgeon occurred in October 2009 (74 FR 52300 October 9, 2009). Most studies cited pre-date this designation.

The project area contains at least 5 threatened or endangered species, including: Sacramento River winter-run Chinook salmon, endangered (June 28, 2005, 70 FR 37160); Central Valley spring-run Chinook salmon, threatened (June 28, 2005, 70 FR 37160); Central Valley steelhead, threatened (January 5, 2006 71 FR 834), Central Valley steelhead designated critical habitat (September 2, 2005, 70 FR 52488); and Southern DPS of North American green sturgeon (*Acipenser medirostris*), threatened (April 7, 2006, 71 FR 17757). *See* NMFS Biological Opinion, July 7, 2006. Because this study is over 7 years old, subsequent development in the delta has occurred in this timeframe, and additional critical habitat was designated for the Green Sturgeon in 2009 after the Biological Opinion was issued, the Corps should reinitiate consultation for a new biological opinion. The public notice indicates that consultation will occur. PN at 3. However, the Application attaches 2003, 2006, and 2010 documents which make it unclear whether the Port and Corps are relying on these older documents or reinitiating consultation. A new consultation should occur, and the public should be given the opportunity to comment on that Biological Opinion.

The application does refer to a number of impacts on Green Surgeon and their critical habitat. *See* App. at 7-12. But even this information is deficient. The application discusses possible contaminants that have been found in area sediments that would have an adverse impact on green sturgeon during dredging, and their food sources. *See* App. at 9. This section refers to studies done for a previously planned dredge at other docks, some of which are not at issue in this permit (i.e., Docks 14-15.) Those studies revealed elevated aluminum and manganese levels, with manganese leachate between 55-610 micrograms/liter.

However, there is no discussion of the impacts of mercury or PCBs on the listed species or their habitat, both of which were found in sediments in the Port's own more recent study of Docks 16-20. *See* Durkin Report at Table 1. Both contaminants have significant adverse impacts on fish species. Mercury is a powerful neurotoxin and bioaccumulates in the food chain, which can particularly impact important aquatic species, such as fish, resulting in fish consumption advisories, which have been issued in 48 states.⁶¹ PCBs found in sediments can contaminate

⁶¹ Jaffe, Daniel et al., *Export of Atmospheric Mercury from Asia*, Atmospheric Environment 39 (2005) 3029-3038. *See id.* at **Exh. F**.

fish, and travel up the food chain to humans that eat fish. High levels of exposure can cause skin, eye, nerve problems, and cancer in humans, and liver digestive, nerve, developmental, immune system, and reproductive impacts in animals.⁶² These mercury and PCB impacts must be analyzed for endangered and threatened species, as well as for fish that are consumed by humans.

The Application also makes a blanket statement—without citation to any study or authority—assuming that there is only a short term risk to dredging in terms of sedimentation, visibility, dissolves oxygen, and the like and that there are no lingering impacts to dredging of the magnitude that it proposes here. *See App.* at 10. However, studies conducted on water bodies like the Columbia River, show otherwise and conclude that many impacts are more long-term in nature: “Potential cumulative and long-term effects of dredging include delayed detrimental responses of biota to changes in habitat, water quality, and other conditions that may occur after the actual dredging activity. For instance, contaminant mobilization, contaminant leaching, bioaccumulation, and trophic transfer through the food web can occur during or as a result of the dredging or disposal of contaminated sediments but may not be immediately manifested in exposed biota.”⁶³

The Corps must also include in its public interest analysis a consideration of the impacts of in-water work and above-water structures on endangered and threatened species and their habitats, as well as the project’s impacts on water quality, fishing, and recreation. In addition, as discussed above, fugitive emissions of coal dust, discharge of stormwater and discharge of wastewater all pose threats to water quality, fish habitat and bioaccumulation of toxics and heavy metals in prey for these species. The Corps must also consider these issues in conducting its public interests analysis.

V. Conclusion

For all of the foregoing reasons, the Army Corps should reject this application to, at minimum, provide more recent information about this project and to allow the public the opportunity to comment on the NEPA documents associated with this process.

If you have any comments or questions, please contact me at the number below.

⁶² CA Office of Environmental Health Hazard Assessment, PCBs in Fish, <http://oehha.ca.gov/fish/pcb/>. **Exh. G.**

⁶³ *See* Nightengale and Simenstad. *Dredging Activities: Marine Issues*, July 13, 2001. <http://wdfw.wa.gov/publications/00055/wdfw00055.pdf> at p. 4, **Exh. H.**

Sincerely,

A handwritten signature in black ink, appearing to read 'Jessica Yarnall Loarie', with a long horizontal flourish extending to the right.

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On behalf of Sierra Club and California Sportfishing Protection Alliance