Whitepaper: Evaluation of Proposed Dredge or Fill Procedures' Alternatives Analysis Requirements

January 28, 2019

Introduction

The draft State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures) includes a requirement for an alternatives analysis for certain categories of proposed dredge or fill projects. The alternatives analysis is designed to ensure that the project is the least environmentally damaging practicable alternative with respect to impacts to waters of the state. In preparing the 2019 revision, staff was directed to craft a new exemption from alternatives analysis for projects using an uncertified Corps General Permit, subject to certain sideboard limitations. The following whitepaper discusses the sideboards and how staff determined the potential impact of the sideboards on the number of projects that would require an alternatives analysis.

Description of the Sideboards

Staff developed the sideboards with an aim to focus staff and applicant resources on projects with the greatest threat to water quality, and to protect hard to replace resources. Specifically, proposed projects that meet the terms and conditions for an Uncertified Corps General Permit would only have to submit an alternatives analysis if the direct impacts from the discharge of dredged or fill material affected one or more of the following sideboard criteria:

a) more than two-tenths (0.2) of an acre or 300 linear feet of waters of the state;
b) habitat for rare, threatened, or endangered species;
c) wetlands or eel grass beds; or
d) Outstanding National Resource Waters or Areas of Special Biological Significance.

Following the development of the sideboards, staff completed a data analysis to estimate how many previously authorized projects would have required an alternatives analysis requirement. This data analysis is not intended to provide an exact number of projects that would be affected, and is not forward looking. Instead, the analysis is intended to give a rough approximation of the number of projects that would have been affected were the proposed 2019 revisions to the Dredge and Fill Procedures in place in 2014.

Methodology for Determining Number of Projects Impacted

Water quality certification data is housed in the California Integrated Water Quality (CIWQS) database. Data for this analysis were pulled from CIWQS for the 2,990 projects authorized by the state dredge or fill program between July 1, 2014 and June 30, 2017. In considering the data source, please note:

1. *The data represents three previous years of issued certifications and orders; therefore, the analysis may not accurately represent future projects.*
2. *The dataset was developed by pulling data from a system (CIWQS) that was not designed to provide data for this analysis. For example, the data system contains limited geospatial information about project sites.*
3. *As with any dataset, data entry errors exist. Staff minimized the effect of potential data errors by reviewing the datasets against the project files for a representative sample of projects; however, additional data entry errors still likely exist in the dataset.*

General Order and Restoration Project Exemptions

Prior to applying the sideboard criteria, staff removed from the dataset projects that would be excluded from an alternatives analysis based on one of the other exemptions in the Procedures. Specifically, 977 of the 2,990 projects were identified as exempt for the following reasons:

- 827 Projects were identified in CIWQS as enrolled under a General Order;
- 133 were identified in CIWQS as restoration projects and assumed to meet the qualifications for an Ecological Restoration and Enhancement projects; and
- 17 were classified as "mitigation projects" (e.g. mitigation banks). This category is typically reserved in CIWQS for projects that would not be expected to meet the definition of an ecological restoration and enhancement project. Although these projects may not qualify for a proposed alternatives analysis exemption, they account for less than 1% of the total analysis.

Additionally, 162 records did not contain information adequate to determine whether the project would be subject to an alternatives analysis (note: these records make approximately 5% of the analysis).

- 89 were dredge projects;
- 57 were associated with waivers, letters and other uncommon actions; and
- 16 were mining projects.

Sideboard Analysis

The proposed sideboard criteria were applied to the remaining 1,851 projects to approximate how many projects authorized during this three-year period would have triggered the alternatives analysis requirement. Note that the number of projects that trigger a given sideboard will sum to more than 1,851 because many projects trigger more than one sideboard.

Notes on the access, use, and limitations of geospatial data

1. Data were accessed in December 2017 and January 2018. If queried today or in the future, many of these datasets would likely include different data points than at the time of the 2017/2018 analysis. In particular, those that are continually updated by multiple users to reflect growth in their respective bodies of science (e.g. CNDDB databases updated monthly to reflect new species occurrences).
2. For the use of geospatial data without measurable area (e.g. non- or one-dimensional data such as point or line features), a 200-foot buffer was applied; except for the project point itself. Projects are mapped as a point.
3. When referring to geospatial data, users must be aware that the digital symbolization of physical landscape features is subject to interpretative limitations. One notable limitation in this exercise is the representation of channelized streams as one-dimensional features, i.e. centerlines. While the physical features represented by those symbols are subject to widely varying widths (as measured perpendicularly to direction of flow) and two-dimensional area, the available centerline datasets are unable to convey that information.

Sideboard: Project Size

CIWQS data includes information on the total acreage and/or linear feet of impact proposed by a project. This data was filtered to identify the 834 of 1,851 projects with reported impacts ≥ 0.2 acres or ≥ 300 linear feet.

Sideboard: Waterbody Type

Project impacts are recorded in CIWQS according to a general, high level classification of water body type (e.g. Lake acres, Wetland Acres, Vernal Pool Acres etc.). To determine impacts to water body types, these impact quantity fields were used to identify projects with reported impacts to wetlands or vernal pools. In addition, geospatial data depicting eel grass beds was downloaded from the California Department of Fish and Wildlife (CDFW). The dataset is available at https://map.dfg.ca.gov/metadata/ds1503.html.

546 projects were found to have impacts to wetlands, vernal pools, or eel grass beds.

Sideboard: Discharge to Rare, Threatened or Endangered Species Habitat (Species Sideboard)

408 projects triggered the species sideboard.

To analyze the Species Sideboard, a number of geospatial datasets were collected and analyzed. Five sources of data were combined into a single layer and overlaid on top of the location data in CIWQS. Projects that intersected any of the below layers were identified as having triggered a sideboard:

- USFWS Critical Habitat https://ecos.fws.gov/ecp/report/table/critical-habitat.html
- California Natural Diversity Database (CNDDB) https://www.wildlife.ca.gov/Data/CNDDB
- NOAA Critical Habitat http://www.nmfs.noaa.gov/pr/species/criticalhabitat.htm
- Water Board Catalog of RARE Beneficial Use designations (includes application of tributary rule)
- CalFish Anadromous Fish Distribution https://www.calfish.org

Notes on Species Analysis: Using staff expertise, USFWS and CNDDB data species data were reduced from all data to critical habitat for aquatically dependent species. (Limiting the species data to those that were "aquatically dependent" served as a loose proxy for identifying habitats that were impacted directly by discharges to water features.) Also, the anadromous fish layer was used because some anadromous streams are habitat for threatened and endangered salmonids, but may not have critical habitat designated. Inclusion of the entire list likely overestimates the number of projects that would trigger the sideboards.

Impacts to Outstanding National Resource Waters or Areas of Special Biological Significance

As of this writing, there are two Outstanding National Resource Waters in California: Lake Tahoe and Mono Lake. Geospatial data for these water bodies were extracted from CDFW's lake shapefile, available here: https://map.dfg.ca.gov/metadata/ds0102.html.

Geospatial data for Areas of Special Biological Significance is available here: https://www.waterboards.ca.gov/water_issues/programs/ocean/asbs_map.shtml

27 projects were found to be within 200 feet of Tahoe and Mono Lakes and two (2) projects within 200 feet of an Area of Special Biological Significance.

Projects without Permanent Impacts to Waters of the State

202 of the 1,851 projects had no permanent impacts and did not trigger any of the sideboards described above; staff assumed these projects would be exempt from the alternatives analysis.

There were an additional 334 of 1,851 projects that had no permanent impacts, and may have been able qualify for the exemption for projects with no permanent impacts (Section IV.A.1.g.v of the draft Procedures). However, they also triggered one or more of the sideboards. Without additional site-specific information, staff conservatively assumed these projects would have triggered an alternatives analysis. This will overestimate the number of projects that require an alternatives analysis by up to 8%.

Estimate of alternatives analysis required under existing Regional Board procedures

There is no data system that tracks Water Board requests for alternative analysis and, in practice, some are done informally in the field, so no documentation would be found in the administrative file. Instead State Water Board staff consulted with the Regional Boards on general practices. This revealed that Regional Board practices vary widely, with some Regional Boards requiring an alternatives analysis for all applications, and other Regional Boards asking for an alternatives analysis only rarely, if ever. Using this survey to identify boundary conditions, staff estimated the number of alternative analysis that may currently be required based on how many projects were located in each region. Based on this, staff determined that up to 25% of the projects that may trigger a sideboard may already have been required to do some level of alternatives analysis.

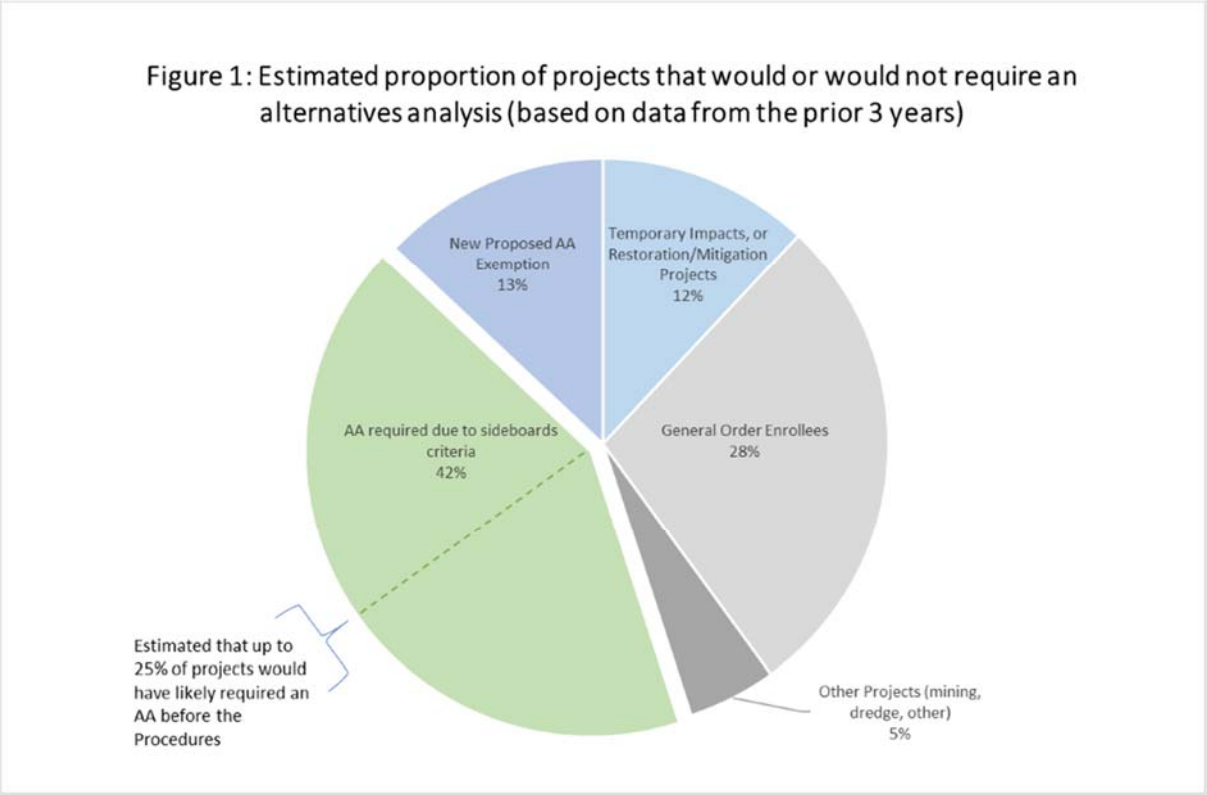

Table 1: Figure 1 Data

Figure 1 Category (Project Count)	Analysis Percentage (2,990 Projects Total)
AA required due to sideboards criteria (1,265)	**42%** (1,265)
General Order Enrollees (827)	**28%** (827)
New Proposed AA Exemption (384)	**13%** (384)
Temporary Impacts (202); Restoration (133); and Mitigation Projects (17)	**12%** (352)
Mining (16); Dredge (89); and Other (57)	**5%** (162)