



Delta Stewardship Council

A CALIFORNIA STATE AGENCY

Economic and Fiscal Impact Analysis

Delta Plan Ecosystem Amendment

March 2024

This page left blank intentionally.

Contents

Chapter 1 Introduction	1
1.1 Overview of Proposed Regulations.....	1
1.2 Public Outreach and Input	2
1.3 Major Regulation Determination	3
1.4 Report Organization.....	3
Chapter 2 Analytic Approach and Data	5
2.1 Overview of Economic and Fiscal Impacts	5
2.1.1 Direct Impacts	5
2.1.2 Market Effects	8
2.1.3 Indirect and Induced Impacts	9
2.1.4 Fiscal Impacts	9
2.2 Baseline Economic Conditions	9
2.2.1 Covered Actions	10
2.2.2 Delta Plan Consistency Costs	10
2.2.3 Engineering, Planning, and Design Costs	11
2.2.4 Council Costs	12
2.2.5 Ecosystem Benefits	12
Chapter 3 Economic and Fiscal Impacts	15
3.1 Direct Costs	15
3.1.1 Creation of Section 5005.1	15
3.1.2 Changes to Section 5006	16
3.1.3 Changes to Section 5008	17
3.2 Direct Cost Savings	18
3.2.1 Changes to Section 5008	18
3.3 Indirect and Induced Impacts.....	19
3.3.1 Summary of Direct Impacts	19
3.3.2 Summary of Total Economic Impacts	20
3.3.3 Employment (Job) Estimated Effects.....	21
3.4 Fiscal Impacts.....	21
3.4.1 State and Local Agencies Fiscal Costs	21
3.4.2 Council Fiscal Costs.....	22
3.5 Other Economic Impacts Summary	23
3.5.1 Estimated Effects on a Typical Business and Small Business ...	23
3.5.2 Other Economic Impacts to Businesses, Individuals, Worker Safety, and the State’s Environment	24
3.6 Economic and Fiscal Impacts of the No Action Alternative.....	25
3.7 Economic and Fiscal Impacts of Regulation Alternative 1	26
3.8 Economic and Fiscal Impacts of Regulation Alternative 2	27
Chapter 4 References	29

List of Tables

Table 1. Summary of Covered Actions by Year, 2018 – 2022.....	10
Table 2. Estimated Increase in Spending on Professional Services for Environmental Consulting to Complete Appendix 3A	16
Table 3. Estimated Increase in Spending on Professional Services for Environmental Consulting to Complete Appendix 4A	16
Table 4. Estimated Increase in Spending on Professional Services for Engineering to Comply with Section 5008 Changes.....	18
Table 5. Estimated Decrease in Spending on Professional Services for Engineering to Comply with Section 5008 Changes.....	19
Table 6. Summary of Direct Impacts	19
Table 7. Total Economic Impacts due to Agencies' Cost Increase.....	20
Table 8. Total Economic Impacts due to Agencies' Cost Decrease	21
Table 9. Council Fiscal Costs.....	23

Chapter 1

Introduction

1.1 Overview of Proposed Regulations

The Sacramento-San Joaquin Delta Reform Act of 2009 (Wat. Code, § 85000 et seq.; Act) establishes the Delta Stewardship Council (Council), which is required to develop, adopt, and commence implementation of a comprehensive management plan, known as the Delta Plan, for the Sacramento-San Joaquin Delta (Delta). The Act declares it is the intent of the Legislature to provide for the sustainable management of the Sacramento-San Joaquin Delta ecosystem, provide for a more reliable water supply for the state, protect and enhance the quality of the water supply from the Delta, and establish a governance structure that will direct efforts across State agencies to develop and implement a legally enforceable Delta Plan.

The Act, among other things, requires a State or local public agency that proposes to undertake a covered action, before initiating the implementation of that covered action, to prepare a written certification of consistency with detailed findings as to whether the covered action is consistent with the Delta Plan and to submit that certification to the Council, as specified.

Current regulations implementing the Delta Plan (Cal. Code Regs., tit. 23, section 5001 et seq.) define various terms, including, among others, covered action, protection, and restoration. Existing regulations, among other actions, require habitat restoration to be carried out at appropriate elevations, protect opportunities to restore habitat, expand floodplains and riparian habitats in levee projects, and avoid introductions of and habitat improvements for invasive nonnative species.

The proposed regulatory amendments are based on policies adopted in a 2022 amendment to Delta Plan Chapter 4 (Ecosystem Amendment), which presents five core strategies to achieve the coequal goal of protecting, restoring, and enhancing the Delta ecosystem (Wat. Code, § 85054). The five core strategies are: (1) create more natural, functional flows; (2) restore ecosystem function; (3) protect land for restoration and safeguard against land loss; (4) protect native species and reduce the impact of nonnative invasive species; and (5) improve institutional coordination to support the implementation of ecosystem protection, restoration, and enhancement.

The proposed regulatory amendments would more specifically do all of the following for State and local agencies proposing covered action restoration projects in the Delta:

- Require the disclosure of contributions to ecosystem function restoration and the social benefits provided in the Delta.
- Require the disclosure of cultural, recreational, agricultural, and natural resource benefits anticipated from the completion of a covered action.
- Require, when a covered action is located in the Intertidal Elevation Band and Sea Level Rise Accommodation Band, an explanation of how the project will accommodate future marsh migration, anticipated sea level rise, and tidal inundation. If that accommodation is not possible, it would require an explanation of why the covered action does not provide that accommodation.
- Require, based on best available science, an explanation of how the covered action is designed to safeguard against levee failure should the covered action take place in the Shallow Subtidal Elevation Band or the Deep Subtidal Elevation Band, focusing on accounting for future impacts with an added safeguard to reduce flood risk in the Delta.
- Redefine the geographical range of levees for which an evaluation of alternatives to restore floodplains is required and incorporate the Stanislaus River, Cosumnes River, Middle River, Old River, and Elk Slough while updating and clarifying the language for new flood control work that includes permanent structural changes or improvements in flood control functions, while allowing for future adaptations depending on Delta needs and climate changes.
- Include new defined terms.
- Make technical, conforming changes.

1.2 Public Outreach and Input

The Council conducted targeted outreach in developing the proposed regulations and preparing the economic and fiscal impact analysis. This included outreach to State and local agencies leading projects that qualify as covered actions and preparing certifications of consistency, and businesses that provide professional services to manage or assist with this process. The Council conducted this targeted outreach in part to better understand the baseline costs for preparing certifications of consistency that are separate from (i.e., in addition to) costs associated with other required environmental disclosures, such as preparing environmental impact reports. The targeted outreach also provided estimates of the direct cost of the proposed regulations to local agencies. These direct costs form the basis of the economic impact analysis and fiscal impact analysis. Examples of direct costs attributable to the proposed regulations include staff time that would be spent preparing new documents, coordinating with Council staff to understand the new requirements, and managing other regulatory submission requirements for the covered action.

1.3 Major Regulation Determination

A Major Regulation is a proposed action, amendment, or repeal that would result in an economic impact on businesses and individuals in the State of greater than \$50 million in the 12-month period following full implementation of the regulations.¹

The economic impact of the proposed regulations includes both direct cost increases and direct cost savings for State and local agencies. This results in both increases and decreases in spending by affected agencies on professional services for environmental consulting and engineering. This shift in spending also has secondary (indirect and induced) impacts. Indirect impacts capture changes in intermediate purchases and other spending by the primary industry in other sectors of the economy. Induced impacts capture the change in expenditures by employees in the primary industry and all linked industries.

State and local agencies serving as certifying agencies for covered actions would incur an estimated total direct cost increase of up to \$500,000 annually. This cost increase would result in a corresponding increase in spending on professional services for environmental consulting and engineering. This shift in spending would also result in affected State and local agencies decreasing spending internally. The resulting net total impact² resulting from this cost increase is a decrease in total economic output of \$30,766. Additionally, the Council would incur an estimated cost increase of up to \$24,000 annually. This would be absorbed completely within the Council's budget and would not have any secondary spending impacts.

State and local agencies serving as lead agencies for covered actions would also realize a total cost savings of up to \$400,000 annually. These cost savings would result in a corresponding decrease in spending on professional services for engineering. This shift in spending would also result in affected State and local agencies increasing spending internally. The resulting net total impact resulting from the cost savings is an increase in total economic output of \$33,468.

The resulting total economic impact, including all direct costs, cost savings, and secondary impacts, is \$988,234 per year. This is a conservative (high) estimate based on the figures applied in the analysis. The estimated total economic impact, therefore, is less than \$1 million, and far below the Major Regulation threshold of \$50 million.

1.4 Report Organization

The report is structured as follows. The following chapter (2) describes the types of economic and fiscal effects attributable to the proposed regulations, and the analytic approach and data used to quantify (monetize) impacts. Chapter 2 also establishes important baseline conditions used to evaluate the fiscal and economic impacts of the proposed regulations. Chapter 3 summarizes the economic and fiscal impacts of the proposed regulations, the no action alternative and two other alternatives that the

¹ Gov. Code, section 11342.548

² The total economic impact is the sum of direct, indirect, and induced impacts.

Council considered, and the basis for selecting the preferred alternative over the three alternatives. Chapter 4 lists the references relied upon to develop the economic and fiscal impacts described in this report.

Chapter 2

Analytic Approach and Data

2.1 Overview of Economic and Fiscal Impacts

The proposed regulations would result in quantifiable and unquantifiable (i.e., non-monetized) costs and benefits for agencies implementing covered actions, professional service providers that assist State and local agencies in developing covered actions, other businesses, and the Council. The economic and fiscal impact analysis applies data from publicly available sources, targeted outreach (e.g., agency and contractor interviews), and other published studies.

The impacts of a new regulation or regulatory change may include potential direct economic impacts, market effects, fiscal impacts, and indirect and induced impacts. Direct economic impacts represent direct costs and cost savings (benefits) to affected agencies, businesses and individuals that are attributable to the regulation and can be quantified. These cost changes can, in some instances, also affect the marginal cost of producing a good or providing a service and would cause shifts in the industry supply curve. This is a market effect. Indirect and induced impacts are effects on other businesses and individuals that stem from the direct costs and cost savings, and (if applicable) market effects. The fiscal impact analysis follows the economic impact analysis by quantifying the fiscal cost of the regulation to affected State and local agencies and to the Council.

All values are reported in current (2023) dollars. Inflation indexing (when necessary) is accomplished using the Gross Domestic Product Implicit Price Deflator (GDP-IPD).³

2.1.1 Direct Impacts

Direct economic and fiscal impacts are direct costs and cost savings that are attributable to the proposed regulations and can be quantified/monetized. The direct impacts of the proposed regulations would be changes in costs of environmental disclosure and documentation to agencies proposing a covered action, as well as project engineering, planning, and design costs.

³ U.S. Bureau of Economic Analysis. 2023. Gross Domestic Product: Implicit Price Deflator [GDPDEF], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/GDPDEF>, October 28, 2023.

Some of these impacts would be passed on to private businesses and individuals by changes in spending on professional services related to the Delta Plan consistency process.

The following subsections summarize the anticipated direct economic and fiscal impacts that would result from the proposed regulations.

Changes to Section 5001, 5003, 5004, 5005, 5009, 5010, 5011, 5012, 5013, 5014, and 5015

Changes to section 5001, 5003, 5004, 5005, 5009, 5010, 5011, 5012, 5013, 5014, and 5015 include the addition of new defined terms, renumbering of other defined terms, and updated references to the new and renumbered defined terms in the proposed regulations. However, the addition of the new defined terms, renumbering of other terms, and updated references to defined terms would not cause any economic impact. Changes to definitions would not impose new costs or reduce costs on State or local agencies, or on private entities.

Changes to Section 5002(b)(2)

A minor, clarifying change to the text of section 5002(b)(2) would not impose additional costs or reduce existing costs on State or local agencies, or on private entities.

Addition of Section 5005.1

The proposed regulations would add a new section 5005.1. The purpose of this new section is to require the disclosure of ecosystem and social benefits through the completion of sections 1 and 2 of Appendix 3A of the Delta Plan.

The information required in Appendix 3A is information that is already collected by State and local agencies as part of the Delta Plan consistency process and as part of the California Environmental Quality Act (CEQA) process. This was confirmed through outreach conducted with State and local agencies that have been through the Delta Plan consistency process and reviewed the requirements for Appendix 3A. Therefore, the direct impact is the agency staff (and/or professional services) costs to complete Appendix 3A using information already collected under existing statutory and regulatory environmental requirements.

Changes to Section 5006

The proposed regulations include additions to section 5006(a)(1) and (2) that would require State and local agencies who are proposing a project that qualifies as a covered action to complete Appendix 4A. Appendix 4A requires information about conservation actions that will be implemented based on the elevation band(s) in which the covered action will take place. The direct impact is the agency staff costs to complete Appendix 4A using information already collected under existing statutory and regulatory requirements.

Changes to section 5006(a)(3) and (4) include adding mitigation measures that are required to be considered for covered actions that are located in the Intertidal Elevation Band, Sea Level Rise Accommodation Band, Subtidal Elevation Band, and/or the Deep

Subtidal Elevation Band. Specifically, State and local agencies that are proposing a project in the Intertidal Elevation Band and Sea Level Rise Accommodation Band are required to explain how the project would accommodate future marsh migration, anticipated sea level rise, and tidal inundation (or, if not possible, provide an explanation why). State and local agencies also are required to explain, based on best available science, how the project is designed to safeguard against levee failure should the project take place in the Shallow Subtidal Elevation Band or the Deep Subtidal Elevation Band. These bands are defined as part of changes to definitions in section 5001.

CEQA also requires identifying and implementing feasible mitigation measures to reduce the severity and magnitude of potentially significant environmental impacts. These must be described in a project's environmental impact report (EIR).⁴ The analysis of environmental impacts in an EIR must consider potential future conditions discussed in any plans that the proposed project is compared with.⁵ Also, an EIR must use land use plans, hazard maps and other publicly available documents when analyzing areas subject to hazardous conditions, such as floodplains.⁶ The proposed changes to sections 5006(a)(3) and (4) require mitigation to be consistent with the Delta Plan, but do not require additional actions or alter mitigation already required under CEQA.

The proposed regulations change how elevation bands are defined and where they are located. However, these are based on updated sea-level rise estimates that would still be consistent with required analysis under CEQA. Therefore, the changes to sections 5006(a)(3) and (4) would not impose additional costs on State or local agencies, or on private entities.

Changes to section 5006(b), include updating a cross reference to section 5001 and establishing an effective date for changes to the section. These changes would not impose new costs or reduce costs on State or local agencies, or on private entities.

Changes to Section 5007

The additions to section 5007 clarify which mitigation measures are required for a State or local agency to be consistent with Delta Plan policies for a certification of consistency. Changes to section 5007 also include updating a cross reference to section 5001 and establishing an effective date for changes to the section. These changes would not create or reduce costs on State or local agencies, or on private entities.

Changes to Section 5008

The changes to section 5008(a) clarify that, in the setback evaluation areas specified in Appendix 8A, levee projects are required to evaluate (and, if feasible, also incorporate) alternatives that would increase floodplains and riparian habitats. Appendix 8A replaces the levee setback evaluation under the existing regulation, which is described in Appendix 8.

⁴ Cal. Code Regs. tit. 14 section 15126.4

⁵ Cal. Code Regs. tit. 14 section 15125

⁶ Cal. Code Regs. tit. 14 section 15126.2

Most of the levee setback area shown in Appendix 8A was part of the original Appendix 8 and within one of the State Plan of Flood Control (SPFC) planning areas defined by the Central Valley Flood Protection Plan (CVFPP). The CVFPP lists increasing floodplain width and restoration of riparian habitats as key measurable objectives.⁷ Therefore, any levee projects that occur within a SPFC planning area are already required to consider alternatives that expand floodplains and riparian habitats. The proposed regulations, therefore, do not add any additional requirements to these levee projects.

Some of the levee setback area defined in Appendix 8A was neither in the area defined in Appendix 8, nor in a SPFC planning area. Certifying agencies of covered actions in the new levee setback area would incur costs under the proposed regulations because they would need to evaluate floodplain and riparian habitat alternatives that they would not have under the existing regulation.

Some of the existing levee setback area defined in Appendix 8 is neither in the new levee setback area defined in Appendix 8A, nor in a SPFC planning area. State and local agencies proposing projects that qualify as covered actions taking place in these sections of the existing levee setback area would see reduced costs because they would no longer need to evaluate alternatives that were required under the existing regulation.

Changes to section 5008(b) require that urban levee projects in the cities of Sacramento or West Sacramento evaluate alternatives that would modify all or a portion of the original levee prism to physically expand the width of the channel. Therefore, State and local agencies leading covered actions in these cities would incur costs to evaluate additional alternatives.

Changes to section 5008 clarify that the covered actions applicable to this section include the construction of a new flood control work, improvements to a flood control work, changing the level of protection of a flood control work, or adapting a flood control work for a new or different use. Under the existing regulations, covered actions applicable to this section were defined as those involving the construction of new levees or substantial rehabilitation or reconstruction of existing levees. The proposed regulations clarify the types of covered actions that apply to this policy.

Changes to section 5008(c) also include updating a cross reference to section 5001 and establishing an effective date for changes to the section. These changes would not impose new costs to State or local agencies or private entities.

2.1.2 Market Effects

If the direct impact of the proposed regulations includes a change in the costs to businesses, there could be additional market effects. Changes in business (marginal) costs, which are the costs to produce additional units of a product or service at different quantities, make up the industry supply curve. Supply curve shifts, also known as market shocks, can occur as the result of exogenous changes to marginal cost. As

⁷ Central Valley Flood Protection Plan. 2022. Conservation Strategy 2022 Update. Sacramento, CA. November 2022.

described above, the proposed regulations would modestly affect State and local agency spending on the Delta Plan consistency process. This would include spending on professional services. However, this change in spending would not affect agencies' or firms' marginal costs. It also would not constrain the services (supply quantity) that an agency or firm could provide. Therefore, there would not be market effects associated with the proposed regulation.

2.1.3 Indirect and Induced Impacts

The indirect and induced impacts (so-called multiplier effects) analysis evaluates the effect of direct changes in spending to businesses to evaluate the total impact of the proposed regulations on jobs, taxes, and value-added across the state. The total economic impact is expressed as the sum of direct, indirect, and induced impacts. Indirect impacts capture changes in intermediate purchases and other spending by the primary industry in other sectors of the economy. Induced impacts capture the change in expenditures by employees in the primary industry and all linked industries.

The Impacts for Planning and Analysis (IMPLAN) software is an input-output economic model that estimates the effects of exogenous changes in final demand within a specified geographic region. The geographic region analyzed in this case is the State of California.⁸ The model leverages a data set of national and regional economic accounts that document purchasing relationships between industries through multiple rounds of spending. The software also incorporates institutional demand and inter-institutional transfers that reflect purchases made by households and government agencies. This analysis uses the IMPLAN v3.1 model (MIG, Inc, 2016) with a California county-level 2014 dataset as the baseline year for the analysis.⁹

2.1.4 Fiscal Impacts

Fiscal impacts are changes to public agency costs and revenues associated with the regulation. In section 2.1.1, many of the direct impacts summarized will include fiscal impacts to State and local agencies. Additionally, the fiscal impacts of the proposed regulations to the Council specifically may include, for example, staff time spent processing new disclosure documents and time following up on clarifying questions from State and local agencies.

2.2 Baseline Economic Conditions

The economic impacts of the proposed regulations are measured relative to a baseline condition. The baseline condition, per the California Administrative Procedure Act

⁸ Although covered actions are focused in the Delta, agencies and firms impacted are present in and conduct work across the state.

⁹ The year of the IMPLAN dataset (2014) corresponds only to industry linkages. All dollar impact measures are in current (2023) dollars. Additional sensitivity analysis was conducted using the IMPLAN data to determine if the 2014 R3 database is appropriate and representative of expected multiplier effects. The sensitivity analysis shows that output and employment multipliers are on the higher end of the range of IMPLAN multipliers from 2012 to 2019 used to model impacts on the engineering and environmental consulting sectors. Output multipliers available since 2020 can be skewed as a result of the COVID-19 pandemic and ensuing economic effects. Therefore, using this dataset provides the best long-run representation of industry spending linkages.

guidelines, is the most cost-effective set of regulatory measures that ensure full compliance with the authorizing statute or other law being implemented.¹⁰ This ensures that the economic impacts only measure the incremental changes attributable to the regulation. The baseline condition is the no action alternative (i.e., absence of the proposed regulations). All economic impacts are measured relative to this baseline (no action).

2.2.1 Covered Actions

Information about covered actions was collected from certifications of consistency and related publicly available project planning documents.¹¹ Table 1 summarizes covered actions by year from 2018 to 2022.¹² This includes the number of covered actions each year, the number that were withdrawn or remanded,¹³ the number of appeals, the number of projects that include habitat restoration activities,¹⁴ and the number of covered actions that include levee construction and/or reconstruction.¹⁵ The most covered actions were filed in 2018 with 10 covered actions. There were two covered actions either withdrawn or remanded to the Council in 2018, 2019, and 2021. The most covered actions were appealed in 2018, when two covered actions were appealed, and there were 10 total appeals across all covered actions. The most covered actions with habitat restoration activities were in 2018 with eight covered actions. The most levee project covered actions were in 2021 and 2022, each with six.

Table 1. Summary of Covered Actions by Year, 2018 – 2022

Year	Total Covered Actions	Number Withdrawn or Remanded	Number Appealed	Number of Appeals	Number with Habitat Restoration	Number of Levee Projects
2018	10	2	2	10	8	5
2019	4	2	0	0	2	2
2020	7	0	1	3	4	1
2021	8	2	1	6	5	6
2022	7	0	0	0	4	6

The proposed regulations would not affect the number of covered actions, types of covered actions, or the likelihood of appeal, withdrawal, or remand.

2.2.2 Delta Plan Consistency Costs

The costs incurred by State and local agencies and agency consultants on the Delta Plan consistency process were estimated by interviewing agencies that have

¹⁰ Government Code of California, Title 2, Division 3, Part 1, Chapter 3.5, Article 5, §11346.3 (e)

¹¹ Delta Stewardship Council. 2023. Covered Actions. Available at: <https://coveredactions.deltacouncil.ca.gov/?page=1>

¹² Prior to 2018, there were fewer covered actions (about 2 per year). Covered actions for 2023 and beyond had not been fully reported at the time data was collected.

¹³ Including covered actions that were later accepted with or without appeal.

¹⁴ This is based on the certification of consistency response to section 5006 of the existing regulations.

¹⁵ This is based on the certification of consistency response to section 5008 of the existing regulations. If the response indicates that the project does not include any levee construction or reconstruction, then it is not included.

undertaken the process one or more times. Agency representatives indicated that costs associated with the Delta Plan consistency process are generally small compared with overall environmental documentation and disclosure costs associated with a proposed project. This is because covered actions also undertake the CEQA process, which requires many of the same analysis and disclosures as the Delta Plan as part of preparation of an EIR.

Agency representatives identified costs specific to Delta Plan consistency. These include preparing paperwork, preparing associated reports, and following up with the Council for questions and clarifications. Conservatively applying the higher end of reported estimates, the estimated cost of Delta Plan consistency determination documentation, independent of analyses also done for the EIR or other required documents, is \$60,000 to \$90,000 per covered action. The proposed regulations would cause small changes in these costs.

State and local agencies reported that another important cost consideration for Delta Plan consistency is appeals costs. When a proposed covered action is appealed, the lead agency may need to revise or complete new analyses, update/prepare new reports, and update other documentation. Agencies that have been through the appeals process estimate that this process has cost up to \$1 million. Any updates to analyses, reports, and other documentation due to Delta Plan consistency appeals also need to be updated in the accompanying CEQA documentation. Therefore, the entire cost is not attributable to Delta Plan consistency determination alone. In addition to these direct costs, agencies report that appeals can prolong project start dates and create additional costs that can add up to several million dollars.

The proposed regulations would not affect the likelihood that a covered action certification is appealed.

2.2.3 Engineering, Planning, and Design Costs

The proposed regulations could affect covered action engineering, planning, and design costs through changes to requirements for evaluating levee project alternatives. Typical engineering, design, and planning costs were estimated using budget documents for levee construction and improvement projects in the Delta region. These were also compared with general industry estimates, IMPLAN model data, and feedback from agency interviews.

Levee construction and improvement projects in the Delta region with total costs of \$15 million to \$100 million have estimated engineering, planning, and design costs in the range of \$2 million to \$5 million, or between 4 and 15 percent of total project costs.

Previous analysis¹⁶ of Delta Plan consistency costs have applied 20 percent to the combined engineering, planning, and design costs to estimate the share specific for planning levee projects, including the evaluation of alternatives. Applying 20 percent,

¹⁶ Delta Stewardship Council. 2013. Cost Analysis for Proposed Delta Plan Regulations in Support of the Economic and Fiscal Impact Statement. Sacramento, CA. April 2013.

the estimated planning costs would be between \$400,000 and \$1 million per typical levee project.

The proposed regulations would create a small change in these costs.

2.2.4 Council Costs

The Council incurs costs related to the Delta Plan consistency process, including meetings and other correspondence with State and local agencies filing consistency determinations and making recommendations. Based on previous Council budgets,¹⁷ including the time needed from engineers, lawyers, planners, environmental scientists, and executives, the estimated annual cost of processing consistency determinations is \$566,792, or \$56,679 per covered action (at 10 covered actions per year). This is the estimated total budget for 10 to 25 covered actions, so this represents a conservative, high-end baseline estimate.

The proposed regulations would create a small change in the Council's costs for processing Delta Plan consistency determinations.

In addition to the costs for processing Delta Plan consistency determinations, the Council also incurs costs related to the appeals process. The Council is responsible for administering the appeal process, including conducting a hearing on the appeal and issuing written findings that either deny the appeal or remand the matter to the State or local agency for reconsideration. As shown in Table 1, it is common for the Council to receive multiple appeals for a single covered action. The costs incurred by the Council depend on the number of appeals and the overall complexity and extent of the covered action being appealed. Based on covered actions that have been appealed over the past few years, the Council has spent between \$0.9 million and \$2.2 million per appealed covered action.

The proposed regulations would not affect the likelihood of a covered action being appealed.

2.2.5 Ecosystem Benefits

One of the intended outcomes of the proposed regulations is increasing ecosystem service benefits for new covered actions in the Delta. The proposed regulations do not require State and local agencies to develop projects that provide specific ecosystem services. Rather, the proposed regulations require agencies to consider and disclose project data and features that relate to ecosystem service values in the Delta, which may encourage projects that provide more of these benefits in the future.

A review of ecosystem service benefits and other environmental regulatory costs was conducted to illustrate these economic benefits.

Ecosystem management for both environmental and socioeconomic sustainability involves integration of quantitative and qualitative data that describe the benefits of ecosystem services to society. Effective ecosystem management is supported by consistently recording and providing information regarding ecosystem service outcomes

¹⁷ *Ibid.*

to policymakers and managers. Researchers have identified a need to improve this process in many regions, including coastal and delta ecosystems in California.¹⁸

Ecosystem service benefits are difficult to monetize because there is typically no market where ecosystem services are bought and sold. This makes it difficult to establish the value (benefits) of those services. Ecosystem service benefits are typically analyzed using alternative methods, including avoided cost (establishing avoided damages from losing ecosystem services), hedonic pricing (estimating the share of the price of a good that is sold in a market that is attributable to the economic service), or contingent valuation (survey methods to establish how individuals value ecosystem services).

If project ecosystem service benefits are analyzed, the benefits can be compared to the expected implementation costs. This can establish whether expected benefits exceed the expected costs of the project. For example, a case study of wetland rehabilitation in the McInnis Marsh in Marin County, California, shows that the increased costs of restoration are equal to 30 percent or less of the estimated benefits over a 50-year period, depending on the applied discount rate.¹⁹ A long-term assessment of the Danube Delta in eastern Europe, where development from 1960 to 1989 led to widespread ecosystem service decline, shows that recent ecological restoration efforts have delivered ecological, social, and economic benefits.²⁰

The proposed regulations do not require projects to achieve ecosystem benefits. Therefore, there is no additional cost to State and local agencies. The proposed regulations require disclosing information about project ecosystem benefits. This may encourage more projects that create ecosystem benefits. These benefits were not quantified (monetized) for this analysis because it is not possible to predict future covered actions.

¹⁸ Granek, E.F., Polasky, S., Kappel, C.V., Reed, D.J., Stoms, D.M., Koch, E.W., Kennedy, C.J., Cramer, L.A., Hacker, S.D., Barbier, E.B. and Aswani, S. 2010. Ecosystem services as a common language for coastal ecosystem-based management. *Conservation Biology* 24(1): 207-216

¹⁹ Calder, RSD; Shi, C; Mason, SA; Olander, LP; Borsuk, ME. 2019. 'Forecasting ecosystem services to guide coastal wetland rehabilitation decisions' in *Ecosystem Services*, Vol. 39: 101007. DOI: 10.1016/j.ecoser.2019.101007

²⁰ Gómez-Baggethun, E.; Tudor, M.; Doroftei, M.; Covaliov, S.; Năstase, A.; Onăra, D.F.; Cioacă, E. 2019. Changes in ecosystem services from wetland loss and restoration: An ecosystem assessment of the Danube Delta (1960–2010). *Ecosyst. Serv.* 2019, 39, 100965

This page left blank intentionally.

Chapter 3

Economic and Fiscal Impacts

3.1 Direct Costs

The direct economic impact of the proposed regulations would be small changes in environmental disclosure and documentation costs and planning and design costs to State and local agencies for covered actions. Some of the activities identified as part of the environmental disclosure and documentation costs and planning and design costs could be managed in-house by the agencies and their staff. However, agencies implementing covered actions often outsource some of these tasks to businesses providing professional services. The outreach conducted as part of this assessment confirmed that the work required to be completed for Delta Plan consistency is generally performed using professional services. Therefore, the direct economic impact of these cost changes would be changes in spending on professional services.

To consider the maximum potential impact on private businesses and individuals, this assessment assumes that all changes in State and local agency costs would cause a corresponding change in spending on professional services for environmental consulting and engineering. Agency cost changes also result in changes to internal agency spending, and this is quantified under agency fiscal costs.

3.1.1 Creation of Section 5005.1

The proposed regulations require State and local agencies to complete Appendix 3A using information already collected under existing statutory and regulatory environmental requirements. Based on outreach conducted, it is estimated that it would take approximately eight hours of staff (or professional services provider) time to complete Appendix 3A. Some agency representatives indicated that there could be additional effort required to ask clarifying questions to Council staff about the information required and how it should be presented. This analysis conservatively applies an additional eight hours of staff (or professional services provider) time to allow for this. Some agency representatives also indicated that there can be issues with formatting and some technical troubleshooting required to successfully complete forms like this, especially the first time. Therefore, an additional eight hours of staff (or professional services provider) time is added to allow for troubleshooting. The labor cost is valued at \$250 per hour assuming that providers of professional services of varying billable rates would be responsible for completing these tasks, with \$250 per hour falling on the higher end for this type of work based on industry standards.

Table 2 summarizes the direct costs (and resulting increase in spending) for completing Appendix 3A. It summarizes the cost per covered action, and total cost per year. The total cost per year assumes 10 covered actions. This is based on the findings in Table 1 in section 2.2.1 that historically there are up to 10 covered actions per year.

Table 2. Estimated Increase in Spending on Professional Services for Environmental Consulting to Complete Appendix 3A

Description	Hours per Covered Action	Potential Cost per Covered Action	Potential Total Annual Cost
Inputting information to form Appendix 3A	8	\$2,000	\$20,000
Follow up with Council for clarification	8	\$2,000	\$20,000
Formatting and other technical issues	8	\$2,000	\$20,000
Total	24	\$6,000	\$60,000

Therefore, the direct cost of section 5005.1, applying conservative (high) estimates for time and cost, is an increase in spending by State and local agencies on professional services for environmental consulting of \$60,000.

3.1.2 Changes to Section 5006

The proposed regulations require agencies to complete Appendix 4A using information already collected under existing statutory and regulatory requirements. Based on outreach to agencies, a small amount of additional time would be required to complete Appendix 4A. Most information is already gathered and provided as part of the existing Delta Plan certification of consistency process and under CEQA. The analysis conservatively applies an additional eight hours to complete Appendix 4A, and eight hours for any follow-up clarification needed with Council staff. Based on the relative length of Appendix 4A, no additional time for formatting issues or technical troubleshooting is anticipated.

Table 3 summarizes the direct costs (and resulting increase in spending) for completing Appendix 4A. It summarizes the cost per covered action, and total cost per year. The total cost per year assumes 10 covered actions. This is based on the findings in Table 1 in Section 2.2.1 that historically there are up to 10 covered actions per year. Professional services costs are estimated at \$250 per hour.

Table 3. Estimated Increase in Spending on Professional Services for Environmental Consulting to Complete Appendix 4A

Description	Potential Spending per Covered Action	Potential Total Annual Spending
Inputting information to form Appendix 4A	\$2,000	\$20,000
Follow up with Council for clarification	\$2,000	\$20,000
Total	\$4,000	\$40,000

Therefore, the direct cost of the changes to section 5006 is an increase in spending by State and local agencies on professional services for environmental consulting of \$40,000.

3.1.3 Changes to Section 5008

The proposed regulations would require State and local agencies to evaluate levee alternatives that would increase floodplains and restore riparian habitat. As discussed in Section 2.1.1, this would apply to covered actions involving construction of a new flood control work, improvements to a flood control work, changing the level of protection of a flood control work, or adapting a flood control work for a new or different use. The proposed regulations only apply to covered actions that take place in the new levee setback evaluation area specified in Appendix 8A but are outside of the existing levee setback evaluation area specified in Appendix 8, and outside of a SPFC area.

The change in area between Appendix 8 and 8A is small and an even smaller area is outside of an SPFC. This analysis estimates that up to one additional covered action per year would be required to evaluate levee alternatives that would increase floodplains and restore riparian habitat. In Section 2.2.3 of this report, it was estimated that planning costs are between \$400,000 and \$1 million per typical levee project in the Delta region. Previous analysis²¹ of fiscal and economic impacts of the Delta Plan estimated that the additional evaluation of alternatives that increase floodplains and restore riparian habitat could increase planning costs by up to 20 percent. This applies a conservative estimate of a 20 percent increase in planning costs to the higher end of estimated planning costs. The evaluation of additional alternatives, therefore, could increase costs by \$200,000.

Based on feedback from outreach conducted with State agencies that have led covered actions involving flood control works, \$200,000 would represent a conservative (high) estimate for the added costs of evaluating additional alternatives. Many covered actions have already considered (and potentially would implement) an alternative that increases the floodplain and restores riparian habitat independent of the requirements in the proposed regulations. In addition, an agency is only required to implement these alternatives if they are feasible. Many alternatives are quickly deemed infeasible for considerations such as financial constraints or proximity of the project to residential structures. However, to consider the maximum potential economic impact of the proposed regulation, \$200,000 per covered action is applied for this evaluation.

Agencies leading covered actions involving flood control work in the cities of Sacramento and West Sacramento would be required to evaluate levee alternatives that would modify all or a portion of the original levee prism to physically expand the width of the channel. Based on the number of covered actions including flood control works occurring in Sacramento and West Sacramento from 2018 to 2022, this is estimated to affect up to one covered action per year. Certifications of consistency for levee projects in these areas have noted that proximity to residential and other structures generally makes other alternatives infeasible. However, for consistency and to consider the

²¹ Delta Stewardship Council. 2013. Cost Analysis for Proposed Delta Plan Regulations in Support of the Economic and Fiscal Impact Statement. Sacramento, CA. April 2013.

maximum potential economic impact of the proposed regulation, \$200,000 per covered action is applied for this evaluation.

Table 4 summarizes the economic impact of this proposed regulation.

Table 4. Estimated Increase in Spending on Professional Services for Engineering to Comply with Section 5008 Changes

Description	Potential Spending per Covered Action	Potential Total Annual Spending
Additional evaluations of alternatives to increase floodplains and restore riparian habitat	\$200,000	\$200,000
Additional evaluations for projects in Sacramento or West Sacramento	\$200,000	\$200,000
Total		\$400,000

Therefore, based on the estimated affected covered actions, and the estimated cost per covered action to perform additional evaluation, the total cost of the changes to section 5008 is an increase in spending by State and local agencies on professional services for engineering of \$400,000.

3.2 Direct Cost Savings

State and local agencies proposing covered actions would also save costs (and decrease spending on professional services for environmental consulting and engineering).

3.2.1 Changes to Section 5008

State and local agencies would save costs because some covered actions would no longer require evaluating levee alternatives that would increase floodplains and restore riparian habitat. As discussed in section 2.1.1, this would apply to covered actions involving construction of a new flood control work, improvements to a flood control work, changing the level of protection of a flood control work, or adapting a flood control work for a new or different use. It would apply to covered actions that take place in the existing levee setback evaluation area specified in Appendix 8, but outside of the new levee setback evaluation area specified in Appendix 8A, and outside of a SPFC area.

The difference between levee setback evaluation areas in Appendix 8 and Appendix 8A (and outside of a SPFC area) is small. This analysis estimates that up to two covered actions per year would not need to evaluate levee alternatives that would increase floodplains and restore riparian habitat under the proposed regulations. As described in section 3.1.3 of this report, the evaluation of additional alternatives is conservatively estimated to cost \$200,000 per covered action. Table 5 summarizes the economic impact.

Table 5. Estimated Decrease in Spending on Professional Services for Engineering to Comply with Section 5008 Changes

Description	Potential Spending per Covered Action	Potential Total Annual Spending
Fewer evaluations of alternatives to increase floodplains and restore riparian habitat	(\$200,000)	(\$400,000)
Total		(\$400,000)

Therefore, based on the estimated number of covered actions, and the estimated cost savings per covered action, the total cost savings of the changes to section 5008 is a decrease in spending by agencies on professional services for engineering of \$400,000.

3.3 Indirect and Induced Impacts

The total economic impact is the sum of the direct, indirect, and induced impacts. Indirect and induced (secondary) economic impacts include other changes in spending resulting from the direct impacts of the proposed regulations. Indirect impacts are changes in business-to-business spending, and induced impacts are changes in spending related to changes in income. Indirect and induced impacts were estimated using the IMPLAN multiplier models.

3.3.1 Summary of Direct Impacts

The estimated direct costs and cost savings of the proposed regulations were described in earlier sections of this report. Table 6 summarizes the direct impacts.

Table 6. Summary of Direct Impacts

Description	Direct Impact
Increase in spending on professional services for environmental consulting to complete Appendix 3A	\$60,000
Increase in spending on professional services for environmental consulting to complete Appendix 4A	\$40,000
Increase in spending on professional services for engineering for additional evaluations	\$400,000
Total direct costs	\$500,000
Decrease in spending on professional services for engineering for fewer evaluations	(\$400,000)
Total direct cost savings	(\$400,000)

The IMPLAN model was used to estimate secondary impacts. Changes in spending on professional services for environmental consulting are modeled using IMPLAN Sector 455 “Environmental and other technical consulting services.” Changes in spending on professional services for engineering are modeled using IMPLAN Sector 449 “Architectural, engineering, and related services.”

State and local agencies could respond to the increased/decreased costs by: (i) increasing/decreasing ratepayer revenue, (ii) increasing/decreasing spending on other professional services, or (iii) increasing/decreasing other agency spending. This economic impact analysis considers a change in other agency spending. That is, the additional costs of professional services are offset by decreasing agency expenditures in other areas. These impacts are modeled using IMPLAN Sector 523 “Other state government enterprises” and IMPLAN Sector 526 “Other local government enterprises.” A 50/50 split in spending changes between State and local agencies is applied in this analysis because about half of covered actions have State agencies as lead agencies and about half have local agencies.

3.3.2 Summary of Total Economic Impacts

Table 7 summarizes the results of the IMPLAN analysis and total economic impacts resulting from the increase in State and local agency costs. The increase in spending on professional services for environmental consulting related to completion of Appendix 3A (\$60,000 annually) and completion of Appendix 4A (\$40,000 annually) results in a total (direct, indirect, plus induced) increase in economic output of \$232,927. The increase in spending on professional services for engineering (\$400,000 annually) results in a total increase in economic output of \$887,431. Agencies decrease spending in other areas to cover the additional costs. This results in a direct decrease in internal spending of \$500,000, and a total decrease in economic output of \$1.151 million. The total economic impact is a decrease in economic output of \$30,766.

Table 7. Total Economic Impacts due to Agencies' Cost Increase

	Impact Type	Employment	Labor Income	Value Added	Output
Professional Services for Environmental Consulting Spending Increase	Direct Effect	1	\$79,099	\$59,112	\$100,000
	Indirect Effect	0.3	\$19,804	\$27,404	\$45,288
	Induced Effect	0.5	\$29,366	\$52,011	\$87,639
	Total Effect	1.7	\$128,269	\$138,527	\$232,927
Professional Services for Engineering Spending Increase	Direct Effect	2	\$238,058	\$226,371	\$400,000
	Indirect Effect	1.2	\$88,419	\$118,838	\$196,129
	Induced Effect	1.6	\$97,575	\$172,868	\$291,302
	Total Effect	4.8	\$424,052	\$518,076	\$887,431
Government Agencies' Cost Increase	Direct Effect	-2	(\$208,145)	(\$184,595)	(\$500,000)
	Indirect Effect	-1.7	(\$129,714)	(\$186,141)	(\$349,052)
	Induced Effect	-1.6	(\$101,173)	(\$179,255)	(\$302,072)
	Total Effect	-5.3	(\$439,032)	(\$549,991)	(\$1,151,124)
Total Impacts from Agencies' Cost Increase	Direct Effect	1	\$109,012	\$100,888	\$0
	Indirect Effect	-0.2	(\$21,491)	(\$39,899)	(\$107,635)
	Induced Effect	0.5	\$25,768	\$45,624	\$76,869
	Total Effect	1.2	\$113,289	\$106,612	(\$30,766)

Table 8 summarizes the results of the IMPLAN analysis showing total economic impacts resulting from the decrease in State and local agency costs. The direct decrease in spending on professional services for engineering (\$400,000) results in a total decrease in economic output of \$887,431. State and local agencies increase spending in other areas by \$400,000, and the total increase in economic output is \$920,899. The total economic impact is an increase in economic output of \$33,468.

Table 8. Total Economic Impacts due to Agencies' Cost Decrease

	Impact Type	Employment	Labor Income	Value Added	Output
Professional Services for Engineering Spending Decrease	Direct Effect	-2	(\$238,058)	(\$226,371)	(\$400,000)
	Indirect Effect	-1.2	(\$88,419)	(\$118,838)	(\$196,129)
	Induced Effect	-1.6	(\$97,575)	(\$172,868)	(\$291,302)
	Total Effect	-4.8	(\$424,052)	(\$518,076)	(\$887,431)
Government Agencies' Cost Savings	Impact Type	Employment	Labor Income	Value Added	Output
	Direct Effect	1.6	\$166,516	\$147,676	\$400,000
	Indirect Effect	1.4	\$103,772	\$148,913	\$279,242
	Induced Effect	1.3	\$80,938	\$143,404	\$241,658
Total Effect	4.2	\$351,226	\$439,993	\$920,899	
Total Impacts from Agencies' Cost Increase	Impact Type	Employment	Labor Income	Value Added	Output
	Direct Effect	-0.4	(\$71,542)	(\$78,695)	\$0
	Indirect Effect	0.2	\$15,353	\$30,075	\$83,113
	Induced Effect	-0.3	(\$16,637)	(\$29,464)	(\$49,644)
Total Effect	-0.6	(\$72,826)	(\$78,083)	\$33,468	

3.3.3 Employment (Job) Estimated Effects

As displayed in Tables 7 and 8, the increase in State and local agency costs results in an increase of 1.2 full-time equivalent (FTE) jobs in the state. The decrease in State and local agency costs results in a decrease of 0.6 FTE jobs in the state. Therefore, the net employment impact would be an increase of 0.6 FTE jobs.

3.4 Fiscal Impacts

The proposed regulations would create fiscal impacts in two ways. First, they would change costs for State and local agencies that serve as lead agencies for covered actions. Second, they would affect Council costs.

3.4.1 State and Local Agencies Fiscal Costs

State and local agencies leading covered actions would both incur costs and save costs as a result of the proposed regulations. Previously, these cost changes were estimated as changes in spending on professional services for environmental consulting and engineering.

Cost increases to agencies include an estimated \$6,000 per covered action to complete Appendix 3A and an additional \$4,000 per covered action to complete Appendix 4A. Assuming 10 covered actions could occur annually, this equals a total increase in costs across affected agencies of \$100,000 per year. An estimated two covered actions each year would include flood control work that would require additional evaluation of alternatives. At an estimated additional cost of \$200,000 per covered action, this would result in an additional increase in costs for affected agencies of \$400,000 per year. The total increase in costs for affected agencies, therefore, is \$500,000 per year, with each affected agency experiencing a cost increase of between \$8,000 and \$208,000 per year.

It is also estimated that two other covered actions per year would no longer be required to conduct additional evaluation of alternatives for flood control work. Therefore, these affected agencies would each save \$200,000 per covered action, or \$400,000 in total. The total cost savings for affected agencies, therefore, is \$400,000 per year, with each affected agency experiencing a cost savings of \$200,000 per year.

The average total cost of a covered action is \$41.3 million. Therefore, a change in costs of \$8,000 to \$208,000 would represent a change of 0.02 to 0.5 percent of the average total cost of a covered action. Most of the potential cost increase to affected agencies (\$200,000) is attributable to evaluating alternatives for flood control work. This assumes that alternatives are fully considered to demonstrate feasibility. Many alternatives would be rejected because they are not financially feasible. In these instances, the evaluation and determination that alternatives are not feasible would be straightforward and result in a cost increase much lower than \$200,000.

The proposed regulations would only affect covered actions that had a Notice of Preparation, Mitigated Negative Declaration, or Negative Declaration published after the effective date of the proposed regulation, or two years following the effective date if published prior. Therefore, new fiscal costs would only be incurred by projects qualifying as covered actions that have not yet started or are early in the planning stages. These new fiscal costs would be included as State and local agencies are considering projects that would be covered actions. They would not be required for existing covered actions or those that are already far along in the CEQA process. The additional costs are small relative to the total average covered action costs. This was confirmed in interviews with State and local agency representatives.

Fiscal costs are expected to be absorbed within existing budgets for affected State and local agencies. In any instance where local agencies would need to recover costs to move forward with a covered action, there are different mechanisms and authorities that grant them this ability. This would apply to cities, counties, special districts, school districts, and private water utilities, which are the local entities who could incur fiscal costs under the proposed regulation.

3.4.2 Council Fiscal Costs

The Council would also incur fiscal costs for reviewing documents including completed Appendix 3A and Appendix 4A. However, the Council also is expected to realize cost savings as a result of Appendix 3A and Appendix 4A being included with certifications of

consistency, as these documents would expedite the collection of information that previously would have been collected through multiple documents (or not at all). Therefore, Council fiscal costs and cost savings associated with Appendix 3A and Appendix 4A are expected to be largely offset. The fiscal impact to the Council to review additional alternatives considered for flood control projects is expected to be mostly or entirely offset by flood control projects that would no longer be required to consider alternatives under the proposed regulations.

Council fiscal costs would also include the additional time needed for communicating with State and local agencies that have clarifying questions about Appendix 3A and Appendix 4A. In previous sections of this report, it was estimated that State and local agencies (and/or their professional services providers) would require up to eight hours each for Appendix 3A and Appendix 4A for Council staff to follow up on clarifying questions. Table 9 summarizes the increase in fiscal costs associated with this additional effort. A rate of \$150 per hour is applied because it is at the high end of the range of costs²² for Council staff that work on Delta Plan consistency determinations.

Table 9. Council Fiscal Costs

Description	Hours per Covered Action	Potential Cost per Covered Action	Potential Total Annual Cost
Follow-up clarification for agencies regarding Appendix 3A	8	\$1,200	\$12,000
Follow-up clarification for agencies regarding Appendix 4A	8	\$1,200	\$12,000
Total	16	\$2,400	\$24,000

The quantified fiscal impact on the Council, therefore, is \$24,000 per year. This will be absorbed within the existing budget and by existing staff.

3.5 Other Economic Impacts Summary

This section summarizes typical impacts to a business and small business, and effect on worker safety, health, and the environment.

3.5.1 Estimated Effects on a Typical Business and Small Business

As summarized in previous sections of this report, the economic impact of the proposed regulations is an increase in spending on professional services for environmental consulting of \$8,000 per covered action per year, an increase in spending on professional services for engineering of \$200,000 for two covered actions per year, and a decrease in spending on professional services for engineering of \$200,000 for two covered actions per year. Therefore, the potential cost to an affected engineering firm

²² Costs include salary, benefits, and operating expenses. Based on 2023 Council budget documents.

(including any small businesses) is up to \$200,000 in foregone revenue per affected covered action, although some engineering firms would have no costs and could realize an increase in revenue of \$200,000 per covered action. For environmental consulting firms, there would be no costs incurred, and a typical firm would have an increase in revenue of \$8,000 per covered action. These impacts are not expected to be substantial enough to result in the creation or elimination of businesses.

The number of firms affected would depend on several factors, namely how many covered actions use professional services for environmental consulting and/or engineering, the number of subcontractors, and whether or not these firms work on multiple covered actions. From 2018 to 2022,²³ there were 36 covered actions submitted to the Council. If each covered action used a different environmental consulting firm, then up to 36 environmental consulting firms would be impacted. Over the same period, there were 20 covered actions that included levee construction or reconstruction. Using this as a proxy, up to 20 engineering firms could be impacted. Therefore, up to 56 businesses could be affected in total. A review of covered action documents shows that many of the same firms have worked on multiple covered actions over the years, and some firms may be able to provide professional services for both engineering and environmental consulting, so these estimates would be on the high end of the potential range.

The share of impacted firms that are small businesses is expected to be similar to the share of employment by small businesses²⁴ in California. In California, 47 percent of all employed individuals work at a small business.²⁵ The reported percentage of firms that are small businesses is higher than this; however, this does not represent the relative workload of small businesses versus larger businesses. Therefore, relative employment is used to estimate the percentage of small businesses that would be affected.

3.5.2 Other Economic Impacts to Businesses, Individuals, Worker Safety, and the State's Environment

The proposed regulations would not affect the ability of businesses in the state to compete by making it more costly to produce goods or services. The services provided by these businesses for the tasks affected by the proposed regulations are specific to California and will be performed by firms working solely in or otherwise with an already heavy presence in the state. The proposed regulations are also not expected to affect the cost of doing business, but rather only spending on professional services.

The proposed regulations do not require additional business reports or the use of specific technologies or equipment. New reporting requirements would only be for State and local agencies pursuing covered actions in the future. As discussed in section 3.2, the potential cost of the additional reporting required for consistency determinations is

²³ Prior to 2018, there were fewer covered actions (about 2 per year), and covered actions had not been fully submitted for 2023 and beyond at the time this information was gathered. Based on this, and the conservative assumptions made about how this relates to total businesses impacted, this period was deemed representative.

²⁴ "Small business" is a business with fewer than 100 employees.

²⁵ U.S. Census Bureau. 2023. Statistics of U.S. Businesses, 2021 County Business Patterns. Available at: <https://www.census.gov/programs-surveys/susb.html>.

\$100,000 per covered action, although this is a conservative (high) estimate. The proposed regulations also require additional evaluation of flood control work in some instances. Performance standards were not considered because the proposed regulations would not substantially change evaluation requirements already in place for most flood control projects.

The proposed regulations may encourage the expansion of businesses in the state. The net direct impact on businesses providing environmental consulting services is an increase in revenue of \$100,000 annually and on businesses providing professional services for engineering is \$0. The small net increase in spending could encourage some modest expansion.

The proposed regulations would provide benefits to the state's environment that were not monetized. As described in section 2.2.5 of this report, ecosystem service benefits may outweigh costs for some projects. However, effective ecosystem management requires consistent accounting of the benefits created by projects, which is not always achievable by agencies. The proposed regulations would not affect the number of covered actions, type of covered actions, or the timing of covered actions, and, therefore, would not directly affect the value of the ecosystem service benefits provided. However, by creating a better system of accounting for these benefits, the proposed regulations may provide benefits to society through overall more effective ecosystem management that were not monetized (quantified).

The proposed regulations would benefit the health and welfare of California residents and protect the environment because they encourage actions that protect existing ecosystems, restore ecosystems, and enhance working or urban landscapes that provide habitat resources to species. These approaches can reestablish ecological processes in natural communities to make them more resilient to land conversion and climate change.

3.6 Economic and Fiscal Impacts of the No Action Alternative

Under the No Action Alternative, the existing regulations would be retained. The Council would take no action to amend sections 5001, 5002, 5003, 5004, 5005, 5006, 5007, 5008, 5009, 5010, 5011, 5012, 5013, 5014, and 5015; and would not add section 5005.1. The existing Delta Plan Regulations, as last amended in 2024,²⁶ would continue to be in effect and implemented. (i.e., the new and revised policies included in the amendment to Chapter 4 of the Delta Plan [Ecosystem Amendment], as adopted in June 2022, would not be implemented).

The No Action Alternative would result in no economic impacts. Under the proposed regulations, there would be a small net increase in spending on professional services for environmental consulting. Therefore, the No Action Alternative would not lessen any adverse impact on businesses, including small businesses. The No Action Alternative

²⁶ Amendment of Cal. Code Regs., tit. 23, sections 5001, 5012.

would result in no fiscal costs. However, it would not be as effective at meeting the core strategies that form the basis for the proposed regulations. Specifically, the No Action Alternative would not be as effective as the proposed regulations in: creating more natural, functional flows; restoring ecosystem function; protecting land for restoration and safeguarding against land loss; and protecting native species and reducing the impact of nonnative invasive species. Therefore, the No Action Alternative was eliminated from consideration.

3.7 Economic and Fiscal Impacts of Regulation Alternative 1

Under Alternative 1, the Council would modify policies to reduce the occurrence of new ecosystem restoration projects on existing agricultural working lands or on lands suitable for farming (lands designated as Prime Farmland, Farmland of Statewide and Local importance, and Unique Farmland). This alternative would reduce the impacts of ecosystem restoration projects on agricultural working lands in the Delta compared to the proposed regulations. Specifically, Alternative 1 would change the following proposed regulations:

- Amend Section 5005.1 – Alternative 1 would revise section 5005.1 and Appendix 3A to specifically exclude covered actions that would restore ecosystems on existing agricultural working lands in the Delta from the Ecosystem Restoration tier requirements specified in proposed section 5005.1.
- Amend Section 5007 – Alternative 1 would revise section 5007 to clarify the standards for mitigating significant adverse impacts to the opportunity to restore habitat in the six Priority Habitat Restoration Areas (PHRAs) shown in Appendix 5; and would use different criteria to identify the PHRAs by excluding lands suitable for farming (Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance) from the PHRAs identified in proposed section 5007.
- Amend Section 5008 – Alternative 1 would revise section 5008, which requires levee project covered actions to consider alternatives to increase floodplains and riparian habitat, to exclude consideration of setback levees that would impact or encroach upon existing agricultural working lands. Setback levees would not be precluded elsewhere.

Alternative 1 would significantly limit the number, size, type, and location of restoration projects contributing to a comprehensive approach to ecosystem protection, restoration, and enhancement in the Delta as compared to the proposed regulations. Alternative 1 could result in fewer covered actions occurring due to the reduction in the occurrence of new ecosystem restoration projects on existing agricultural working lands or on lands suitable for farming. This would result in substantially less spending on professional services for environmental consulting and engineering and decreased revenue for businesses relative to the proposed regulations. Alternative 1 could create long-term benefits for the agricultural sector by allowing more farmland to stay in production.

Alternative 1 could result in a decrease in fiscal costs as a result of fewer covered actions occurring. However, it would not be as effective at meeting the core strategies that form the basis for the proposed regulations. Specifically, Alternative 1 would not be as effective as the proposed regulations in: creating more natural, functional flows; restoring ecosystem function; protecting land for restoration and safeguarding against land loss; and protecting native species and reducing the impact of nonnative invasive species.

Alternative 1 would not lessen any adverse impact on small businesses or be less burdensome and equally effective in achieving the purposes of the regulation in a manner that achieves the purposes of the Act being implemented. Therefore, Alternative 1 was eliminated from consideration.

3.8 Economic and Fiscal Impacts of Regulation Alternative 2

Under Alternative 2, the Council would revise a policy to disincentivize restoration associated with channel widening and other flood management (levee project) activities. Specifically, Alternative 2 would update the following proposed regulation:

- Remove Section 5008 – Alternative 2 would remove section 5008, which requires levee projects to consider alternatives to increase floodplains and riparian habitat. This Alternative would not require levee projects undergoing the Delta Plan consistency review process to provide an evaluation of, and where feasible incorporate, alternatives to increase floodplains and riparian habitats.

Alternative 2 would result in a substantial decrease in spending on professional services for engineering. Alternative 2 would also result in a decrease in fiscal costs because State and local agencies would spend less. However, it would not be as effective at meeting the core strategies that form the basis for the proposed regulations. Alternative 2 would afford significantly fewer opportunities, when compared to the proposed regulations, to restore waterside riparian channel margin habitat or reconnect Delta river channels to their historic floodplains. Reconnecting floodplains is critical to establishing the natural ecosystem functions described in the Delta Reform Act.

Alternative 2 would not be as effective as the proposed regulations in: creating more natural, functional flows; restoring ecosystem function; protecting land for restoration and safeguarding against land loss; and protecting native species and reducing the impact of nonnative invasive species. Therefore, Alternative 2 was eliminated from consideration.

Alternative 2 would not lessen any adverse impact on small businesses or be less burdensome and equally effective in achieving the purposes of the regulation in a manner that achieves the purposes of the Act being implemented. Therefore, Alternative 2 was eliminated from consideration.

This page left blank intentionally

Chapter 4 References

- Calder, R.S.D., C. Shi, S.A. Mason, L.P. Olander, and M.E. Borsuk. 2019. 'Forecasting ecosystem services to guide coastal wetland rehabilitation decisions' in *Ecosystem Services*, Vol. 39: 101007. DOI: 10.1016/j.ecoser.2019.101007
- Central Valley Flood Protection Plan. 2022. Conservation Strategy 2022 Update. Sacramento, CA. November 2022.
- Delta Stewardship Council. 2023. Covered Actions. Available at: <https://coveredactions.deltacouncil.ca.gov/?page=1>
- Delta Stewardship Council. 2013. Cost Analysis for Proposed Delta Plan Regulations in Support of the Economic and Fiscal Impact Statement. Sacramento, CA. April 2013.
- Gómez-Baggethun, E., M. Tudor, M. Doroftei, S. Covaliov, A. Năstase, D.F. Onăra, E. Cioacă. 2019. Changes in ecosystem services from wetland loss and restoration: An ecosystem assessment of the Danube Delta (1960–2010). *Ecosyst. Serv.* 2019, 39, 100965
- Granek, E.F., S. Polasky, C.V. Kappel, D.F. Reed, D.M. Stoms, E.W. Koch, C.J. Kennedy, L.A. Cramer, S.D. Hacker, E.B. Barbier, and S. Aswani. 2010. Ecosystem services as a common language for coastal ecosystem-based management. *Conservation Biology* 24(1): 207-216
- U.S. Bureau of Economic Analysis. 2023. Gross Domestic Product: Implicit Price Deflator [GDPDEF], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/GDPDEF>, October 28, 2023.
- U.S. Census Bureau. 2023. Statistics of U.S. Businesses, 2021 County Business Patterns. Available at: <https://www.census.gov/programs-surveys/susb.html>

This page left blank intentionally.