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SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF SACRAMENTO

SAN JERARDO COOPERATIVE, INC., a California corporation; COMITÉ DE SALINAS, an unincorporated association; MONTEREY COASTKEEPER, a California nonprofit organization; PACIFIC COAST FEDERATION OF FISHERMEN'S ASSOCIATIONS, INC., a California nonprofit organization; INSTITUTE FOR FISHERIES RESOURCES, a California nonprofit organization; CALIFORNIA SPORTFISHING PROTECTION ALLIANCE, a California nonprofit organization; CALIFORNIA COASTKEEPER, a California nonprofit organization; THE OTTER PROJECT, a project of California Coastkeeper, and SANTA BARBARA CHANNELKEEPER, a California nonprofit organization,

Petitioners,

v.

STATE WATER RESOURCES CONTROL BOARD, a California state agency, CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, CENTRAL COAST REGION, a California state agency, and DOES 1-50, inclusive, Respondents.

Case No.

VERIFIED PETITION FOR WRIT OF MANDATE

[Code Civ. Proc. § 1094.5; Porter-Cologne Water Quality Act, Water Code § 13000 et seq.]

No trial date set

BY FAX

Action filed October 27, 2023

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Petitioners SAN JERARDO COOPERATIVE, INC., COMITÉ DE SALINAS, MONTEREY COASTKEEPER doing business as MONTEREY WATERKEEPER, PACIFIC COAST FEDERATION OF FISHERMEN'S ASSOCIATIONS, INC., INSTITUE FOR FISHERIES RESOURCES, CALIFORNIA SPORTFISHING PROTECTION ALLIANCE, CALIFORNIA COASKTEEPER doing business as CALIFORNIA COASTKEEPER ALLIANCE and THE OTTER PROJECT, and SANTA BARBARA CHANNELKEEPER petition this Court on their own behalf and on behalf of the public interest pursuant to Code of Civil Procedure section 1094.5 and Water Code section 13330 for a writ of mandate directed to Respondents STATE WATER RESOURCES CONTROL BOARD and CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, CENTRAL COAST REGION and by this verified petition allege as follows:

INTRODUCTION

1. The State Water Resources Control Board ("State Board") and California Regional Water Quality Control Board, Central Coast Region ("Regional Board"), again, have failed to address nitrate and other agricultural pollution in California's Central Coast.

2. For decades, irrigated agricultural operations in the Central Coast region of California have polluted groundwater by applying nitrogen fertilizer in excess of crop need.

3. 90% of drinking water in the region comes from groundwater. Nitrate pollution contaminates thousands of wells serving more than a hundred thousand people throughout the region.

4. In the Central Coast, a person's race predicts their access to safe, affordable drinking water. People of color and especially low-income people of color experience the rashes, vision problems, and elevated rates of cancer attributable to nitrate pollution at far higher rates than white people do. When pregnant women or infants drink high-nitrate water, it can cause methemoglobinemia, a potentially fatal condition that affects the ability of infants and fetuses to carry oxygen in their blood.

5. Additionally, irrigated agriculture operations have degraded the rivers, streams, and coastal waters of the Central Coast by discharging polluted water and planting fields up to the edge of sensitive riparian areas.

6. After more than 20 years of directing growers to improve their practices, requiring planning, tracking, and reporting of nitrogen use, and requiring growers to obtain education about the water quality impacts of their farms and how to change, the Regional Board determined that these approaches were not working.

7. During this long period of program implementation, through three general orders and dozens of opportunities for public comment, nitrogen application rates did not decline, and water quality did not improve.

8. As a result, and after being directed by the Court of Appeal to adopt an order that included a specific time schedule with measurable objectives that have a high likelihood of achieving water quality standards, the Regional Board in 2021 adopted General Waste Discharge Requirements for Discharges from Irrigated Lands Order No. R3-2021-0040 ("Ag Order 4.0").

9. Ag Order 4.0 set numeric standards and a timetable for nitrogen application and nitrogen discharge to the groundwater below farms. The limits would, for the first time, prohibit the highest applications of nitrogen. Under Ag Order 4.0, the Regional Board would now be empowered to bring enforcement actions against the 10-15% of growers who continued, against all evidence of how much fertilizer crops need, to apply extreme amounts of nitrogen to their fields. And over time, gradually, the Order would impose steadily more stringent limits on the difference between nitrogen application and nitrogen uptake, shrinking the amount of dangerous nitrogen left in the soil that can leach to groundwater. While the evidence supported even stricter standards and a faster schedule, there is no doubt that Ag Order 4.0 would address the worst pollution and put the region on a path towards cleaner water.

10. But while Ag Order 4.0 made great strides on groundwater pollution, it failed to address surface water with the same care. After Regional Board staff spent years developing a flexible and evidence-supported riparian setback program, Regional Board members directed that those provisions be removed from Ag Order 4.0. The canceled setback rules would have provided robust protections to vulnerable rivers and streams that are degraded by agricultural impacts and staff proposed findings that the program would have a "high likelihood" of achieving water quality objectives. After removal of the riparian setbacks, the final Ag Order 4.0

protected only the highly-degraded status quo. But the evidence in the record and indeed the Board's own findings show that that maintaining the 2021 status quo will not protect water quality in accordance with the law.

11. After Ag Order 4.0 was adopted, agricultural interests petitioned it to the State Board for review.

12. After sitting on the petition for two years, the State Board threw out the numeric standards for nitrogen application and discharge and failed to address the riparian setbacks issue.

13. In Order WQ 2023-0081, In the Matter of Review of General Waste Discharge Requirements for Discharges from Irrigated Lands Order No. R3-2021-0040 Issued by the California Regional Water Quality Control Board, Central Coast Region SWRCB/OCC FILES A-2751(a)-(b) ("State Board Order"), the State Board refused to acknowledge or review the extensive evidence submitted by the Regional Board (and denied a request by Petitioners to submit additional relevant, timely evidence) that previous approaches had not worked and that compliance with Ag Order 4.0's numeric standards was feasible and likely to reduce pollution.

14. The State Board based its removal of nitrogen limits on a different petition review order, issued in the Central Valley, where the Regional Board had a far less developed regulatory program and had collected much less data on growers' use of nitrogen, their management practices, and the impacts on water quality. Claiming that the prior order was "precedential" (although the portions of the order it cited explicitly referred only to the Central Valley), the State Board gutted Ag Order 4.0.

15. Based entirely on this flimsy appeal to precedent, the State Board announced that no Regional Board in the state was permitted to adopt an enforceable numeric standard until the State Board first spent a year reviewing data, then convened an expert panel, then issued guidance based on the expert panel's report. The State Board set no timetable for when this period of paralysis by analysis will end. This lengthy delay now comes in spite of the detailed factual findings in the Regional Board record—and the lived experience of residents with wells exceeding or at risk of exceeding health standards—all showing the urgent need for action now.

16. Despite removing numeric standards that the evidence in the record shows will make

steps towards addressing life-threatening pollution, the State Board claimed that its approach was "modest." So "modest," indeed, that the Board chose not to make findings on the impacts of its decision on environmental justice communities—the low-income communities of color who are affected the most by groundwater pollution and who pay exorbitantly just for access to clean drinking water. The Legislature, fed up with the State Board's refusal to acknowledge these impacts, amended the Water Code in 2022 to require environmental justice findings in just this situation. But the State Board punted the duty to make those findings to the Regional Board—after having just stripped the Regional Board of the discretion to take any substantive steps to address the water quality degradation and impacts to communities that the findings will surely include.

17. Wells in the Central Coast, including Petitioners' wells, tick higher in nitrate every year. Every year, more wells test above the legal limit. Every year, more wells approach the point, at three times the legal limit, where point of use reverse osmosis can no longer be used to treat the water. The contamination from nitrogen overapplication spreads, deepens, and intensifies, while the State Board has prohibited the Regional Board from acting.

18. The State Board Order violates the law. It violates binding state policy requiring a high likelihood that a program like Ag Order 4.0 achieve water quality standards and include a timetable with measurable objectives that is no longer than reasonably necessary. And by adding a mandatory delay to await an interminable expert panel process, it de facto amends that policy to add new requirements in violation of the procedures for amending state policy and the prohibition on underground regulations. It violates the Antidegradation Policy, which prohibits polluting high-quality waters of the state without requiring best practicable treatment and control: the numeric standards are based on the best available information, they are practicable for growers to comply with, and they will control pollution. It violates the Board's obligation to make findings assessing the impact of its decisions on environmental justice communities.

19. And Ag Order 4.0's removal of riparian setbacks, which the State Board allowed to stand and did not address, violates state policy requiring achievement of water quality standards, which all the evidence shows the setbacks are necessary to do.

20. In 2015, this Court overturned the State Board's previous attempt to water down a Central Coast Regional Board agricultural order; that ruling was upheld on appeal. In 2019, this Court issued another stipulated judgment directing the Regional Board to comply with that appellate decision.

21. Now, for the third time in a decade, members of the public come before this Court to ask for relief against state agencies who will not enforce the law and protect the people's water.

PARTIES

22. Petitioner SAN JERARDO COOPERATIVE, INC. (San Jerardo) is a corporation organized under the laws of the state of California and headquartered in Salinas, California. San Jerardo is a housing cooperative formed to provide housing to low-income farmworkers and their families. San Jerardo's property is just over 32 acres, is surrounded by irrigated farmland and is located approximately seven miles southeast of the City of Salinas. It houses approximately 64 farm workers and their families, for an approximate total of 350 people.

23. San Jerardo depends on groundwater for its water supply, and its residents learned of contamination to its water supply beginning in 1990. As a result of well water testing for nitrate contamination above drinking water standards, San Jerardo has been forced to abandon wells and seek new safe sources of water. At times, residents have relied on bottled water, and the community has successively drilled new wells to access cleaner groundwater, after abandoning contaminated wells. San Jerardo is currently dependent on water from its fourth well, which is located two miles away and uphill from homes.

24. The level of contamination in this fourth well is worsening and approaching the maximum contaminant level for nitrate in drinking water. It is likely that nitrogen discharges from the surrounding agricultural operations are responsible for contaminating the groundwater that San Jerardo relies on.

25. San Jerardo residents now pay approximately four times as much for water as before the water contamination, even after factoring in assistance provided by state and federal government.

26. Residents of San Jerardo community have developed painful rashes, vision problems

due to fumes from hot water in the shower and worry about other health impacts that may develop over longer periods of time. Residents have also developed cancer at alarming rates, which could be linked to nitrate contamination. Experts have attributed these health problems to San Jerardo residents' exposure to contaminated water.

27. Aside from the economic and health burdens, which can be more easily documented, there is a tremendous burden of stress on the community that is difficult to quantify. Examples include parents stressed over their children's health and daily struggles, having to choose between clean water and other necessities, and worry about the ability to cover the ever-increasing costs of water, as individual households and as a community. Residents are demoralized to see the health of their children and the community sacrificed for the profitability of the agricultural operations in which many of the residents work every day. And because water is a constant in their lives, San Jerardo community members are constantly reminded of the risks their families face.

28. San Jerardo and its members and officers participated actively in the process leading to the adoption of the State Board Order, including by submitting written and oral comments before both the Regional Board and the State Board.

29. San Jerardo is aggrieved by the State Board's and Regional Board's failures to adopt a water quality permit for discharges from irrigated agriculture that comply with the law and protect the beneficial use of San Jerardo's drinking water. For example and without limitation, San Jerardo and its members experience health, financial, social, and psychological harm stemming directly from nitrate pollution due to irrigated agriculture. The State Board and the Regional Board have a duty to control such pollution and their failures to do so, including by adopting the State Board Order, have directly harmed San Jerardo and its residents.

30. Petitioner COMITÉ DE SALINAS ("the Comité") is a ten-member unincorporated association comprised of residents of Monterey and Santa Cruz Counties. Both Counties are within the jurisdiction to which the State Board Order applies. Members of the Comité include people who live within communities with drinking water supplies subject to nitrate contamination and use surface waters affected by nitrate contamination. In addition to the

potential direct harm they face from nitrate contamination and the potential increase in nitrate contamination that is likely to result from the State Board's failure to regulate, Comité members are likely to be harmed by increasing costs of obtaining replacement water supplies. The Comité's members represent "environmental justice" communities; all are of Latino and/or indigenous Mexican heritage, primarily speak Spanish or Mixteco (an indigenous Mexican language) and are primarily low-income.

31. The Comité participated in the administrative process before the State Board on review of Ag Order 4.0, offering timely written and oral comments and raising concerns about the State Board's compliance with Water Code section 13149.2, which includes a requirement that the Water Board make concise programmatic finding on potential environmental justice, tribal impact, and racial equity considerations when issuing waste discharge requirements. The Comité requested that this required finding be made prior to adoption of the final Order, but the State Board failed make any findings related to the impacts of the removal of nitrate discharge and application limits on these communities.

32. The Comité's membership is uniquely harmed and aggrieved by the State Board's failure to comply with Water Code section 13149.2(c) in its adoption of the State Board Order.

33. Petitioner MONTEREY COASTKEEPER, doing business as MONTEREY WATERKEEPER ("Monterey Waterkeeper") is a non-profit corporation organized under the laws of the State of California and headquartered in Seaside, California. Monterey Waterkeeper is a member of the California Coastkeeper Alliance and is the successor to Monterey Coastkeeper, which worked for two decades to protect and restore drinkable, fishable, and swimmable waters for all in the Monterey and northern Central Coast region.

34. Monterey Waterkeeper participated actively in the process leading to the adoption of the State Board Order, including by submitting written and oral comments before both the Regional Board and the State Board.

35. Monterey Waterkeeper's members drink the groundwater, as well as kayak, fish, and otherwise recreate in the region's surface water and Monterey Bay, which receives discharges from agricultural runoff and other sources of water pollution. MWK is aggrieved by the State

Board's and Regional Board's failures to adopt a water quality permit for discharges from irrigated agriculture that complies with the law and protects water quality in the surface waters, groundwaters, and nearshore waters of the Central Coast Region.

36. Petitioner PACIFIC COAST FEDERATION OF FISHERMEN'S ASSOCIATIONS, INC. ("PCFFA") is nonprofit corporation organized under the laws of the state of California and headquartered in San Francisco, California. PCFFA is a nonprofit organization recognized by the IRS pursuant to Internal Revenue Code section 501(c)(5).

37. PCFFA is by far the largest trade organization of commercial fishing families on the West Coast and is organized as a federation of 17 local and regional commercial fishing port associations, marketing associations, and type-of-vessel owner groups representing approximately 750 family commercial fishing businesses west coast-wide, including in California, Oregon, and Washington. PCFFA's individual members generally are small- and mid-sized commercial fishing boat owners and operators, most of whom derive all or part of their income from the harvesting of Pacific salmon, including salmon that originate in the rivers and streams of the Central Coast, and which can and do spawn and rear in those rivers when there is adequate water quality to allow that to successfully happen. Many of PCFFA's individual members derive all or part of their livelihoods from fishing activities along the Central Coast of California. The livelihood and way of life of these members depends upon the health of the region's inshore or nearshore environment, which provides the nursery grounds for most of the species of fish and shellfish on which they depend. PCFFA has actively advocated for the clean water, healthy watersheds, biologically productive estuaries and wetlands, and unpolluted oceans that are critical to PCFFA's members, including advocacy around agricultural runoff, forestry and grazing impacts, oil drilling, and other threats to the coastal waters and marine ecosystems of California and the Central Coast. Agricultural discharges allowed by the State Board Order and/or Ag Order 4.0 will adversely impact the interests and livelihood of PCFFA members fishing along and in the estuaries of the Central Coast of California.

38. PCFFA participated actively in the process leading to the adoption of the State Board Order and Ag Order 4.0, including by submitting written and oral comments before both the

Regional Board and the State Board.

39. PCFFA is aggrieved by State Board's and Regional Board's failures to adopt a water quality permit for discharges from irrigated agriculture that comply with the law and protect water quality in the surface waters, groundwaters, and nearshore waters of the Central Coast Region. PCFFA and its members are harmed by poor water quality that results in poor fishery conditions. This poor water quality is traceable to the failures by the State and Regional Board to control pollution from agricultural discharges in conformance with the law. This failure includes the adoption of Ag Order 4.0 and the State Board Order.

40. Petitioner INSTITUTE FOR FISHERIES RESOURCES ("IFR") is a 501(c)(3) nonprofit, public interest, marine resources protection and conservation organization originally incorporated by PCFFA. It is a corporation organized under the laws of the state of California and headquartered in San Francisco, CA. It manages, directs, and helps fund most of PCFFA's many fisheries and habitat conservation and public education programs, including salmon restoration projects in the Klamath Basin. Throughout northern California, Oregon, and Washington, IFR also works to improve forest and agricultural land use practices generally, on both private and public lands, to lessen their impacts on salmonid spawning and rearing habitat.

41. IFR is committed to ensuring that environmental practices and policies designed to protect inland forests rivers, wetlands, estuarine, and coastal ecosystems that produce and nurture dozens of commercially fished species are adopted and fully implemented. IFR is a leader in several fisheries habitat restoration efforts, and the California coastal waters are a focus of its research and conservation work.

42. IFR participated actively in the process leading to the adoption of the State Board Order and Ag Order 4.0, including by submitting written and oral comments before both the Regional Board and the State Board.

43. IFR is aggrieved by State Board's and Regional Board's failures to adopt a water quality permit for discharges from irrigated agriculture that comply with the law and protect water quality in the surface waters, groundwaters, and nearshore waters of the Central Coast Region. IFR and its members are harmed by poor water quality that results in poor fishery

conditions. This poor water quality is traceable to the failures by the State and Regional Board to control pollution from agricultural discharges in conformance with the law. This failure includes the adoption of Ag Order 4.0 and the State Board Order.

44. Petitioner CALIFORNIA SPORTFISHING PROTECTION ALLIANCE ("CSPA") is a California 501(c)(3) non-profit corporation established in 1983 for the purpose of protecting and enhancing the state's water quality, wildlife and fishery resources and their aquatic ecosystems and associated riparian habitats and is headquartered in Berkeley, California. To further its goals, CSPA actively seeks federal and state agency implementation of environmental regulations and statutes and routinely participates in administrative, legislative, and judicial proceedings, including, where necessary, direct enforcement actions on behalf of itself and its members. CSPA has been intricately involved in efforts to regulate the egregious and persistent pollution from irrigated agriculture since the late 1990s.

45. CSPA's members reside, work and recreate throughout California, including waterways tributary to Monterey Bay and the Central Coast. Its members have been involved for decades in public education and advocacy efforts to protect and restore the beneficial uses and public trust resources of California's waterways and routinely use and enjoy the full spectrum of recreational, commercial and aesthetic activities protected by the public trust. CSPA and its members are particularly aggrieved by the continued degradation of these waterways and failure of the Water Boards to meaningfully regulate agricultural pollution in California and, specifically, the failure of the Regional Board to adequately implement and enforce requirements of the Central Coast Basin Plan.

46. CSPA participated actively in the process leading to the adoption of the State Board Order and Ag Order 4.0, including by submitting written and oral comments before both the Regional Board and the State Board.

47. CSPA is aggrieved by State Board's and Regional Board's failures to adopt a water quality permit for discharges from irrigated agriculture that comply with the law and protect water quality in the surface waters, groundwaters, and nearshore waters of the Central Coast Region. CSPA and its members are harmed by poor water quality that results in poor fishery

conditions. This poor water quality is traceable to the failures by the State and Regional Board to control pollution from agricultural discharges in conformance with the law. This failure includes the adoption of Ag Order 4.0 and the State Board Order.

48. Petitioner CALIFORNIA COASTKEEPER, doing business as California Coastkeeper Alliance ("CCKA") and The Otter Project, is a statewide voice for our waters. CCKA is a non-profit public benefit corporation organized under the laws of the State of California and headquartered in Sacramento, California. Founded in 1999, CCKA is a network of California Waterkeeper organizations working to protect and enhance clean and abundant waters throughout the state, for the benefit of Californians and California ecosystems. Collectively, CCKA and its members, including member organizations, are dedicated to the preservation, protection, and defense of the environment, and the natural resources of California watersheds and surface waters. CCKA, and its members, work to protect the health of their local water bodies and communities throughout California, as indicated by the geographic descriptors of each Waterkeeper organizational name (*e.g.*, Monterey Waterkeeper). CCKA defends and expands on local matters by advocating before decision-makers on issues and programs with statewide impact and significance. To further their goals, CCKA and CCKA's member groups actively seek Federal and State agency implementation of Federal and State environmental laws and policies, and where necessary, directly initiate administrative challenges and enforcement actions on behalf of themselves and their individual members in State and Federal courts. Additionally, The Otter Project is a program of CCKA and has been safeguarding the Southern Sea Otter along the Central Coast for over two decades. The Otter Project protects the Central Coast watersheds and coastal oceans to promote the rapid recovery of the threatened California sea otter.

49. CCKA is aggrieved by State Board's and Regional Board's failures to adopt a water quality permit for discharges from irrigated agriculture that comply with the law and protect water quality in the surface waters, groundwaters, and nearshore waters of the Central Coast Region. CCKA and its members are harmed by poor water quality that prevents their ability to safely swim and fish in the waters of the Central Coast Region. This poor water quality is

traceable to the failures by the State and Regional Board to control pollution from agricultural discharges in conformance with the law. This failure includes the adoption of Ag Order 4.0 and the State Board Order.

50. Petitioner SANTA BARBARA CHANNELKEEPER is a non-profit corporation headquartered in Santa Barbara, California. Santa Barbara Channelkeeper is a grassroots organization that works to protect and enhance the quality of waters of southern Santa Barbara County, as well as the area's natural ecosystems and human communities, for the benefit of its 900 members. It is dedicated to the preservation, protection, and defense of the environment, wildlife, and the natural resources of waters within southern Santa Barbara County. To further these goals, Santa Barbara Channelkeeper works to ensure the implementation and enforcement of the Porter-Cologne Water Quality Control Act, the Central Coast Basin Plan, and other relevant laws through a combination of policy advocacy, water quality monitoring, and community education and engagement. Santa Barbara Channelkeeper has been monitoring the watersheds of the Goleta and Carpinteria Valleys and in other nearby streams in the Central Coast Region, including at sites that are directly downstream of agricultural facilities or activities and are often polluted with concentrations of nutrients, bacteria, and suspended sediment in excess of water quality objectives. Santa Barbara Channelkeeper actively participated as a stakeholder in the development and review of the Conditional Waiver and in the State Board process that resulted in the Order; it was a named party in the State Board proceedings.

51. Santa Barbara Channelkeeper is aggrieved by State Board's and Regional Board's failures to adopt a water quality permit for discharges from irrigated agriculture that comply with the law and protect water quality in the surface waters, groundwaters, and nearshore waters of the Central Coast Region. Santa Barbara Channelkeeper and its members are harmed by poor water quality that prevents our ability to safely swim and fish in the waters of the Central Coast Region. This poor water quality is traceable to the failures by the State and Regional Board to control pollution from agricultural discharges in conformance with the law. This failure includes the adoption of Ag Order 4.0 and the State Board Order.

52. Respondent CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, CENTRAL COAST REGION ("Regional Board") is a California state agency within the California Environmental Protection Agency ("CalEPA") and is the state agency primarily tasked with regulating water quality in the Central Coast Region. On or about April 15, 2021, the Regional Board issued Ag Order 4.0, which authorizes discharges from agricultural operations to waters of the state and was prepared in response to a judicial finding in *Monterey Coastkeeper v. State Water Resources Control Board*, 28 Cal. App. 5th 342 (2018) ("*Coastkeepeer I*"), that the predecessor agricultural discharge order for the Central Coast Region was legally inadequate. A true and correct copy of the Ag Order 4.0 is attached as **Exhibit A** to this Petition.

53. Respondent STATE WATER RESOURCES CONTROL BOARD ("State Board") is a California agency within CalEPA, established under the laws and regulations of the State of California, and is charged with formulation and adoption of state policy for water quality control. The State Board also has discretionary authority to review and approve waste discharge permits and waiver orders issued by the regional boards. Following issuance of Ag Order 4.0 by the Regional Board, the State Board took up review of that order and on September 30, 2023, the State Board issued a modification in the form of the State Board Order. A true and correct copy of the State Board Order is attached as **Exhibit B** to this Petition.

JURISDICTION AND VENUE

54. Petitioners bring this Petition pursuant to Code of Civil Procedure section 1094.5 and Water Code section 13330.

55. This Court has jurisdiction over the State Board because the State Board is a California state agency with the responsibility for permitting discharges into waters of the state.

56. This Court has jurisdiction over the Regional Board because the Regional Board is a California state agency, part of CalEPA, with the responsibility for permitting discharges into waters of the state.

57. Venue is proper in the County of Sacramento pursuant to Code of Civil Procedure sections 393, 395, and 401. The State Board and the Regional Board are California state

agencies housed within the CalEPA, which is headquartered in the County of Sacramento, and the California Attorney General has its principal office in the County of Sacramento.

58. Under California law, a party aggrieved by a decision or order of the State Board or a regional board may bring an action for a writ of mandate challenging that action within 30 days of service of a final order or decision. Wat. Code section 13330(a). The State Board adopted the State Board Order on September 20, 2023, modifying some terms of Ag Order 4.0 and leaving other terms in place. The State Board served certain Petitioners with a copy of the State Board Order on September 27, 2023. This Petition is timely filed within 30 days of service of the order.

EXHAUSTION OF ADMINISTRATIVE REMEDIES

59. Petitioners have exhausted their administrative remedies. Petitioners' efforts to exhaust their administrative remedies include extensive participation at workshops and hearings at the Regional Board between 2017 and 2021 and the submission of voluminous comments during the drafting and consideration of Ag Order 4.0. For instance, Petitioners Santa Barbara Channelkeeper, The Otter Project, and California Coastkeeper Alliance submitted written comments on June 22, 2020, raising the issue that Draft Ag Order 4.0 failed to include timelines and quantifiable milestones for achieving groundwater nitrate water quality objectives and to protect all beneficial uses as required by the court in *Coastkeeper I*. Petitioners San Jerardo Cooperative, Monterey Waterkeeper, California Sportfishing Protection Alliance, Pacific Coast Federation of Fishermen's Associations, Institute for Fisheries Resources, Santa Barbara Channelkeeper, and California Coastkeeper Alliance submitted written comments on February 25, 2021. This letter raised issues regarding the Regional Board's removal from the draft order of operational setbacks to protect riparian areas, wetlands, and other surface waters, and the lack of explicit time schedules and corresponding quantifiable milestones for surface water protection under the proposed order's third-party program. These comments also urged the Regional Board to create more aggressive fertilizer nitrogen application and discharge limits and targets. Additionally on February 25, 2021, Santa Barbara Channelkeeper, Monterey Coastkeeper, the Otter Project, and California Coastkeeper alliance submitted separate, detailed comments on how the Regional Board's removal of operational setbacks to protect surface

waters was arbitrary, unlawfully lacked explicit timelines and milestones for achieving surface water quality standards, and violated the Antidegradation Policy.

60. The Regional Board held a public hearing and adopted Ag Order 4.0 on April 15, 2021. Representatives from many of Petitioners gave oral presentations substantively raising the issues raised by this Petition for Writ of Mandate.

61. On or about May 17, 2021, within 30 days of the Regional Board's adoption of Ag Order 4.0, Petitioners Monterey Waterkeeper, Santa Barbara Channelkeeper, CCKA, PCFFA, IFR, CSPA and San Jerardo filed a petition for review with the State Board ("CCKA Regional Board Petition"). The CCKA Regional Board Petition asserted, inter alia, that Ag Order 4.0 violated Key Elements 2, 3, 4, and 5 of the Nonpoint Source Policy and the Antidegradation Policy for reasons including the failure to contain adequate riparian setbacks and failure to contain sufficiently stringent limitations on nitrate discharge.

62. On or about April 19, 2022, the State Board adopted Order No. 2022-020, wherein the State Board announced that it was reviewing Ag Order 4.0 on its "own motion" pursuant to Water Code, § 13320, subdivision (a) and California Code of Regulations, title 23, section 2050.5, subdivision (c).

63. On June 16, 2023, the State Board issued a Proposed Order that purported to modify Ag Order 4.0 in certain ways. On or about August 10, 2023, within a comment period established by the State Board, all Petitioners, along with other groups, submitted comment letters to the State Board ("August 2023 Comment Letter"). The August 2023 Comment Letter raised, inter alia, violations of the Nonpoint Source Policy, Antidegradation Policy, and Water Code section 13149.2, subdivision (c) related to the State Board's removal of binding nitrogen application and discharge limits and targets, the State Board's failure to require adequate riparian setbacks, and the State Board's failures to make a finding on impacts and identify measures available to address impacts related to water quality required by Water Code section 13149.2, subdivision (c). CCKA, writing separately on August 11, 2023, raised issues related to riparian setbacks and criticized the removal of the nitrogen numeric standards and the State Board's reasoning in removing them.

64. On or about August 10, 2023, the Comité, represented by CRLA, submitted additional comments to the State Board in a letter of August 10, 2023 ("The Comité Letter"). The Comité alleges that the State Board's Order 2023-0081 violates the requirements of Water Code section 13149.2, subdivision (c). The Comité participated in the public administrative process during the State Board's review of Ag Order 4.0. The Comité Letter made written comments to the State Board that included the following: "the Board's proposed Order will eliminate certain policy tools in Ag. Order 4.0 which would have a disproportionate impact on disadvantaged communities." The Comité also provided to the State Board CalEnviroScreen data demonstrating that the communities located in the Central Coast region are disproportionately affected by cumulative pollution sources. Additionally, the Comité used data from Ag Order 4.0 findings to in tables that displayed how Latino communities are disproportionately impacted by nitrate contamination. Finally, the Comité identified state and federal tribal lands in the Central Coast region that may be disproportionately impacted by nitrate contamination.

65. The Comité contended that the State Board, pursuant to Water Code section 13149.2, subdivision (c), was required to make a finding on "how aspects of the proposed Order will impact anticipated water quality in disadvantaged or tribal communities, and should include an assessment of disproportionate impacts to these communities." Thus, the Comité submitted timely comments, participated in administrative hearings, and exhausted administrative remedies with respect to its contention that the State Board has failed to in its obligation to make findings regarding impacts to racial equity, tribal lands, and environmental justice considerations under Water Code section 13149.2, subdivision (c).

66. On or about August 11, 2023, Petitioners, among other groups, submitted a Request for Supplemental Evidence ("Request for Supplemental Evidence"). The State Board Order denied this Request.

67. On September 8, 2023 date, the State Board released a Revised Proposed Order.

68. On September 14, 2023, Petitioners submitted a supplemental comment letter ("Supplemental Comment Letter"). The State Board rejected this supplemental comment letter

and refused to make it part of the record.

69. At the State Board hearing for consideration of the State Board Order on September 20, 2023, representatives from each Petitioner gave oral presentations which collectively raised the issues brought via this Petition for Writ of Mandate.

70. Petitioners have therefore exhausted all required administrative remedies by doing any and all of: submitting written and oral comments to the Regional Board, filing a timely petition for review with the State Board, and submitting written and oral comments to the State Board. By taking each of these steps, Petitioners placed the Regional and State Boards on notice as to the issues raised in this Petition.

71. To the extent that Petitioners did not exhaust any required administrative remedy, such failure is excused by, for example and without limitation: the State Board's Order No. 2022-020, by which the State Board took up the issues raised in the CCKA Petition on its own motion; changes in the law, such as the Legislature's adoption of Water Code section 13149.2 et seq. in 2022, which postdated the Regional Board's adoption of Ag Order 4.0, thus rendering any exhaustion on that issue impossible at the time exhaustion before the Regional Board would have been required; the State Board's refusal to entertain either the Request for Supplemental Evidence or the Supplemental Comment Letter and consider the issues and evidence contained in those documents; and changes in the contents of Ag Order 4.0 and the State Board Order during the administrative review process, including substantive changes in the September final order in response to comments made in the August public comment period, which precluded comment on the final form of those orders.

72. Petitioners have therefore exhausted their administrative remedies and have no plain, speedy, or adequate remedy in the ordinary course of law. The only relief that Petitioners can obtain is through the grant of this petition for a writ of mandate.

STANDARD OF REVIEW

73. Water Code section 13330, subdivision (a) provides that aggrieved parties may seek judicial review of State Board orders and decisions and final Regional Board orders and decisions via writ of mandate. In review of State Board and Regional Board decisions or orders,

Code of Civil Procedure section 1094.5 governs the proceedings. (Wat. Code § 13330, sub. (e).)

74. Water Code section 13330, subdivision (e) further provides that the Court shall exercise its "independent judgment on the evidence" when reviewing State Board decisions or orders issued subject to Water Code section 13320. The Court reviews decisions by the Regional Board under the "independent judgment" standard when reviewing Regional Board decisions where the State Board denies review. (Wat. Code § 13330, subd. (e).) The Court reviews questions of law, including the interpretation of administrative regulations, using its independent judgment. (*Santa Clara Transp. Auth. v. Rea* (2006) 140 Cal.App.4th 1303, 1313; *Asociacion de Gente Unida por el Agua v. Central Valley Regional Water Quality Control Bd.* (2012) 210 Cal.App.4th 1255, 1268).)

LEGAL BACKGROUND

Porter-Cologne Water Quality Control Act

75. Division 7 of the Water Code, § 13000 et seq., also known by its title, "Porter-Cologne Water Quality Control Act" ("Porter-Cologne"), protects all waters of the State of California, including groundwater.

76. Porter-Cologne declares that it is the policy of the State that the "quality of all the waters of the state shall be protected for use and enjoyment by the people of the state" and that "the state must be prepared to exercise its full power and jurisdiction to protect the quality of waters in the state from degradation…." (Wat. Code § 13000.)

77. Porter-Cologne further states that all "discharges of waste into waters of the state are privileges, not rights." (Wat. Code § 13263, subd. (g).)

78. Porter-Cologne requires the Regional Board to develop a Basin Plan, subject to State Board approval, that protects the beneficial uses of water in the Central Coast region. (Wat. Code §§ 13240-13245.) The most recent Basin Plan for the Central Coast Region was adopted in 2019.

79. Drinking water and wildlife protection are two beneficial uses that the Regional Board is required to protect. To protect beneficial uses, the Basin Plan must set Water Quality Objectives ("WQOs") that specify the maximum levels of pollutants. The WQO for nitrate in

groundwater is 10 milligrams per liter (mg/L). The 10 mg/L WQO is based on the US EPA's Maximum Contaminant Level ("MCL") for nitrate. The Basin Plan also contains WQOs for toxicity, nitrate, and other pollutants in surface waters.

80. Porter-Cologne requires the Regional Board to issue permits for any discharge of waste into water, including groundwater. (Wat. Code § 13263.) Certain permits are known as Waste Discharge Requirements ("WDRs"). WDRs must prescribe requirements to meet the water quality objectives and protect the beneficial uses contained in the Basin Plan. (Wat. Code § 13263.) A regional board may issue a general WDR where discharges from different dischargers are sufficiently similar that they are more appropriately regulated under one permit. (Wat. Code § 13263, subd. (i).)

81. State law and policy favor comprehensive groundwater monitoring programs that promote human health, particularly for low-income populations. The Human Right to Water Act declares it to be state policy that "every human being has the right to safe, clean, affordable, and accessible water." (Wat. Code § 106.3.) It further requires state agencies to consider the human right to water when adopting any policy. (*Ibid.*)

82. WDRs must be consistent with the applicable Basin Plan and with state water quality policies. (Wat. Code §§ 13240, 13263.)

83. State water quality policies have the force of law and may be adopted or amended only pursuant to procedures contained in Water Code sections 13140 through 13149.2.

84. Water Code section 13147 provides that, "The state board shall not adopt state policy for water quality control unless a public hearing is first held respecting the adoption of such policy. At least 60 days in advance of such hearing the state board shall notify any affected regional boards, unless notice is waived by such boards, and shall give notice of such hearing by publication within the affected region pursuant to Section 6061 of the Government Code. The regional boards shall submit written recommendations to the state board at least 20 days in advance of the hearing."

85. Over the past decade, the California Legislature and State Water Board have passed laws and resolutions affirming all Californians' right to safe, clean, affordable, and accessible

water adequate for human consumption, cooking, and sanitary purposes. (*See* Wat. Code, § 106.3; State Water Resources Control Board Res. No. 2016-0010.)

86. In 2022, the Legislature passed Assembly Bill ("A.B.") 2108 to "facilitate the development of analyses and findings that apply environmental justice objectives, goals, and policies adopted by the state board and the regional boards in a transparent and inclusive manner," and to "[i]dentif[y] . . . measures available and within the scope of the state board or regional board's authority to address the impacts of . . . permitted activit[ies] . . . in a disadvantaged or tribal community." (Assemb. Bill 2108, Cal. State Assemb., 2021 – 2022 Leg. Sess. (Cal. 2022).)

87. Water Code sections 189.7 et seq. and 13149.2 et seq. were promulgated to implement A.B. 2108, and took effect January 1, 2023.

88. Water Code section 13149.2, subdivision (c) mandates that: "[w]hen issuing or reissuing regional or statewide waste discharge requirements or waivers of waste discharge requirements, the state board or a regional board shall make a concise, programmatic finding on potential environmental justice, tribal impact, and racial equity considerations related to the issuance." The finding "shall be based on readily available information identified by staff or raised during the public process." (Wat. Code, §13149.2, subd. (c).)

89. The finding required by Water Code section 13149.2, subdivision (c) must include: "[a] concise summary of the anticipated water quality impact in disadvantaged or tribal communities as a result of the permitted activity or facility," and "any environmental justice concerns within the scope of the state board or regional board's authority previously raised to the applicable board by interested persons with regard to these impacts." (Wat. Code §13149.2, subd. (b)(1).). The finding must also include "[i]dentification of measures available and within the scope of the state board or regional board's authority to address the impacts of the permitted activity or facility in a disadvantaged or tribal community." (Wat. Code §13149.2, subd. (b)(2).) For reissuances of WDRs, the state or regional board's finding "may be limited to considerations related to any changes to the requirements of the prior waste discharge requirements or waivers of waste discharge requirements." (Wat. Code §13149.2, subd. (c).)

The Nonpoint Source Policy

90. The State Board and regional boards consider pollution from agricultural operations to be "nonpoint source" pollution because it comes from sources distributed across the landscape rather than from a defined point such as a waste treatment facility.

91. In 2004, under the direction of the Legislature, the State Board adopted the Policy for Implementation and Enforcement of the Nonpoint Sources Pollution Control Program (Nonpoint Source Policy). (See Wat. Code §§ 13140, 13369.)

92. The approach to nonpoint source pollution taken by the Nonpoint Source Policy relies, in part, on dischargers implementing management practices that prevent or minimize the generation of nonpoint discharges.

93. In implementing a Nonpoint Source pollution control program, a regional board must "be able to determine that there is a high likelihood that the program will attain water quality requirements." If the program relies on management practice ("MP") implementation, the Regional Board "must be convinced there is a high likelihood the MP will be successful." And although "MP implementation never may be a substitute for meeting water quality requirements, MP implementation assessment may, in some cases, be used to measure nonpoint source control progress."

94. The Nonpoint Source Policy recognizes that there "instances where it will take time to achieve water quality requirements." In such cases, the Nonpoint Source Policy requires that a program "shall include a specific time schedule, and corresponding quantifiable milestones designed to measure progress toward reaching the specified requirements." Such a time schedule "may not be longer than that which is reasonably necessary to achieve an NPS implementation program's water quality objectives."

The Antidegradation Policy

95. In 1968, the State Board adopted the Statement of Policy with Respect to Maintaining High Quality of Waters in California ("Antidegradation Policy"). This policy provides that, first,

> Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the

> State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies.

96. The Antidegradation Policy further provides:

> Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.

The Administrative Procedures Act

97. Government Code sections 11340 et seq. are commonly referred to as the Administrative Procedures Act ("APA"). The APA governs the adoption of regulations by California agencies. Section 11342.600 defines a "regulation" as "every rule, regulation, order, or standard of general application or the amendment, supplement, or revision of any rule, regulation, order, or standard adopted by any state agency to implement, interpret, or make specific the law enforced or administered by it, or to govern its procedure."

98. The APA provides that "[n]o state agency shall issue, utilize, enforce, or attempt to enforce any guideline, criterion, bulletin, manual, instruction, order, standard of general application, or other rule, which is a regulation ..., unless the guideline, criterion, bulletin, manual, instruction, order, standard of general application, or other rule has been adopted as a regulation and filed with the Secretary of State pursuant to this chapter." (Gov. Code, § 11340.5, subd. (a).)

99. The APA contains specific procedures for the State Board when it adopts or amends state water quality policies. (Gov. Code § 11353.)

100. Government Code section 11353 requires that, before amending state water quality polices, the State Board must submit the revision to the Office of Administrative Law, along with a "clear and concise summary of any regulatory provisions adopted or approved as part of that action for publication in the California Code of Regulations." The State Board must submit

the administrative record, along with additions and deletions to the policy indicated by underline and strikethrough, respectively. It must include a summary of the necessity of the regulatory provision and a certification from the State Board's chief legal officer that the Board complied with the procedural requirements contained in Porter Cologne.

101. When an agency adopts a regulation without conforming to proper procedures, such a regulation is an "underground regulation" which may be held void. (E.g. *Tidewater Marine Western, Inc. v. Bradshaw* (1996) 14 Cal.4th 557, 574-75; *Malaga County Water District v. Central Valley Regional Water Quality Control Board* 58 Cal.App.5th 418, 436-440.)

Coastal Zone Act Reauthorization Amendments (CZARA)

102. The Central Coast Basin Plan states that Regional Board staff are implementing State Board program objectives related to the Coastal Zone Act Reauthorization Amendments ("CZARA"): "Implementation of the 1990 Coastal Zone Act Reauthorization Amendments, as developed by the State Board and the California Coastal Commission. This shall be enforceable Nonpoint Source Management Program to control land use and anthropomorphic activities impacts that have a significant affect [sic] on coastal waters."

103. CZARA NPS Guidance describes how the U.S. Environmental Protection Agency determines that protection of riparian and wetland areas should be included as management measures: "CZARA requires EPA to specify management measures to control nonpoint pollution from various sources. Wetlands, riparian areas, and vegetated treatment systems have important potential for reducing nonpoint pollution in coastal waters from a variety of sources. Degradation of existing wetlands and riparian areas can cause the wetlands or riparian areas themselves to become sources of non-point pollution in coastal waters. Such degradation can result in the inability of existing wetlands and riparian areas to treat nonpoint pollution."

104. The CZARA NPS Guidance document further states: "A degraded wetland has less ability to remove nonpoint source pollutants and to attenuate storm water peak flows. Also, a degraded wetland can deliver increased amounts of sediment, nutrients, and other pollutants to the adjoining waterbody, thereby acting as a source of nonpoint source pollution instead of a treatment."

STATEMENT OF FACTS

The Central Coast Region and Pollution from Agriculture

105. The Central Coast Region covers the watersheds draining to the Pacific from north of Santa Cruz to south of Santa Barbara. The Region includes Santa Cruz, Monterey, and San Luis Obispo Counties, most of San Benito and Santa Barbara Counties, and small portions of San Mateo, Santa Clara, Kern, and Ventura Counties.

106. Agricultural operations in the Central Coast produce a large portion of America's fruits and vegetables, including large portions of the country's leafy greens, strawberries, broccoli, and cauliflower.

107. But this profitable bounty comes at a cost to the residents of the Region.

108. Central Coast communities are socioeconomically, racially, linguistically, and ethnically diverse, ranging from the wealthy enclaves of Carmel and Montecito to farmworker communities in the Salinas Valley.

Agricultural Pollution in the Central Coast

109. Communities in the Central Coast Region rely on groundwater for 90 percent of their drinking water needs. Irrigated agriculture has for decades polluted that groundwater with nitrate.

110. Irrigated agriculture operations pollute groundwater by applying excessive nitrogen fertilizer to their crops and by failing to use management practices to slow or stop leaching of excess nitrogen into groundwater. Excess nitrogen in the soil leaches below the crops' root zone, where it then is converted into nitrate and migrates into groundwater.

111. Growers have for decades and continue today to discharge excessive nitrogen. There is no trend of improvement and water quality has degraded below drinking water standards in many areas and will continue to degrade unless this excessive discharge is stopped.

112. Irrigated agriculture operations pollute surface waters by using fertilizers and pesticides in amounts and using methods that allow polluted water to flow from their fields into surface waters. These waters can flow via runoff over the land surface or via drainage systems that underlie fields. Contaminants to surface waters can include nitrogen as well as pesticides

and overly warm water.

Contamination of Drinking Water in the Central Coast Region

113. Drinking water contaminated with nitrates negatively impacts both children and adults. Infants and pregnant women experience the most significant effects, including birth defects and the potentially lethal methemoglobinemia, also known as blue baby syndrome. In adults, nitrate ingestion can cause certain cancers, like colorectal cancer, and thyroid disease. Exposure to fumes from heated high-nitrate water—for example from cooking or in the shower—can cause eye irritation and vision problems. Long-term exposure is also linked with hemorrhaging in the spleen.

114. The Regional Board found, and the State Board does not dispute, that "significant irrigation, nitrogen fertilizer and pesticide applications" are the "root cause of water quality impairment in agricultural areas. Discharges from irrigated lands have impaired and will continue to impair the quality of the waters of the state within the Central Coast region if such discharges are not controlled." Nitrogen pollution is the primary cause of widespread and severe groundwater nitrate contamination observed in the Central Coast region, making it the preeminent threat for drinking water for Central Coast communities.

115. Nitrate pollution traceable to irrigated agricultural operations is a significant source of contamination of these communities' aquifers. Agricultural operations ("growers") throughout the Region, including in Santa Clara, Santa Cruz, San Benito, and Monterey Counties, discharge nitrate pollution into groundwater every year.

116. Across the Central Coast Region, 28 percent of the over 2600 on-farm drinking wells sampled from 2012 through 2019 exceeded the MCL of 10 mg/L for nitrate. The mean nitrate concentration in all on-farm wells was 11.0 mg/L—10 percent higher than the MCL.

117. While nitrate contamination is widespread throughout the Central Coast Region, the problem is particularly acute in subbasins that serve populations with a substantial concentration of both Latino and farmworker communities. The Corralitos, Gilroy-Hollister Valley, Salinas Valley, and Santa Maria River Valley groundwater subbasins, which make up the agricultural heartland of the Central Coast, experience the worst groundwater nitrate contamination. In the

Corralitos-Pajaro Valley subbasin, 38% of wells sampled had mean concentrations that exceeded the MCL and the mean concentration was 13.1 mg/L. In the Gilroy-Hollister Valley's Llagas Area and North San Benito subbasins, 34% and 25% of wells sampled had mean concentrations that exceeded the MCL, respectively. However, in the predominantly Latino communities of the Central Coast Region, the percentage of wells-sampled that exceed state and federal standards nearly doubles. For example, the Salinas Valley East Side subbasin, 59% of wells exceeded the MCL and mean concentration was 32.1 mg/L. In the Salinas Valley Forebay subbasin, 64% of the wells exceeded the MCL and the mean concentration was 25.7 mg/L. In the Salinas Valley Upper Valley subbasin, 42% of wells sampled had mean concentrations that exceeded the MCL and the mean concentration was 16.3 Mg/L. These subbasins provide drinking water to the primarily Latino farmworker communities of Greenfield, Soledad, Gonzales, and East Salinas. Similarly, 55% of wells sampled had mean concentrations that exceeded the MCL in the Santa Maria basin and the mean concentration was 21.1 mg/L.

118. In several of these subbasins, the *average* nitrate concentration for on-farm domestic wells is two or three times the MCL.

119. Conversely, areas with the least nitrate groundwater contamination in the Central Coast Region include the predominantly white communities of Carmel, Monterey, and Paso Robles.

120. Many residents in the Central Coast rely on point of use/point of entry reverse osmosis devices to treat contaminated water. Even when well maintained (which costs time and money for these largely low-income communities), these devices lose effectiveness at nitrate concentrations above approximately 30 mg/L.

121. In several areas where nitrate levels have not yet exceeded the MCL, they are increasing. In the Salinas Valley, between 15 and 23 percent of wells show increasing nitrate trends, while only three to nine percent show decreasing nitrate trends.

122. In 2022, the California State Legislature formally recognized in Assembly Bill 2108 that race is the strongest predictor of access to clean water and sanitation. (Assemb. Bill 2108, Cal. State Assemb., 2021 – 2022 Leg. Sess. (Cal. 2022).)

123. Nitrate contamination is widespread in ground and surface water throughout the Central Coast Region but has a disproportionate adverse impact on racial and ethnic minority populations and low-income communities. "Environmental justice communities" in the Central Coast Region—communities disproportionately burdened by multiple sources of pollution and with population characteristics that make them more sensitive to pollution—experience disproportionately high concentrations of nitrates in their water supply compared to wealthier and/or whiter communities in the same region.

124. Petitioner the Comité's membership is comprised of non-white, low-income individuals that primarily speak Spanish and Mixteco, a Mexican indigenous language. The Comité's members reside in jurisdictions with disproportionately high concentrations of nitrate contamination in the domestic water supply. As a result, the Comité's members are disproportionately harmed by the high levels of nitrate contamination in their water supply.

125. Petitioners, including the Comité, use surface waters within Santa Cruz and Monterey Counties for recreational purposes, and thus are exposed to additional nitrate contamination above and beyond the nitrate load in domestic water supplies.

Agricultural Pollution of Surface Waters in the Central Coast Region

126. The State of California, pursuant to requirements of the federal Clean Water Act, 33 U.S.C. section 1313(d), develops and maintains a list of surface water bodies that are impaired because water quality is insufficient to ensure attainment of the beneficial uses of the listed waters. The 2014-2016 303(d) List identified surface water impairments for 224 waterbodies related to a variety of pollutants (e.g., salts, nutrients, pesticides/toxicity, and sediment/turbidity). Of those 224 surface water listings, 29 percent listed agriculture as a potential source of water quality impairment.

127. According to the Regional Board, nitrate pollution in surface water is "widespread in agricultural areas in the [C]entral [C]oast region", with 65 waterbodies listed as impaired for nitrate on the 2014-2016 303(d) List. Of these nitrate listings, 60 percent are located in the major agricultural watersheds of the Central Coast region: Salinas River area (15 waterbodies listed), Pajaro River (13 waterbodies), and Santa Maria River (15 waterbodies).

128. Agricultural use rates of pesticides in the Central Coast Region and associated toxicity is among the highest in the state. In a statewide study of four agricultural areas conducted by the Department of Pesticide Regulation, the Salinas study area had the highest percent of surface water sites with pyrethroid pesticides detected (85 percent), the highest percent of sites that exceeded levels expected to be toxic and lethal to aquatic life (42 percent), and the highest rate (by three-fold) of active ingredients applied.

129. The Region's Basin Plan general objective for toxicity states: "All waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in human, plant, animal, or aquatic life." According to the Regional Board, toxicity in surface water is "widespread in agricultural areas of the [C]entral [C]oast region", with 57 waterbodies on the 2014-2017 303(d) List due to toxicity (SWRCB, 2017). Of these waterbodies, 68 percent are in the major agricultural watershed of the Salinas River watershed, including the Gabilan/Tembladero Slough, Santa Maria River, and Pajaro River watersheds.

130. The Basin Plan general objective for pesticides states: "No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life." According to the Regional Board, elevated pesticide concentrations are "widespread in agricultural areas of the [C]entral [C]oast region", with 45 waterbodies on the 2014-2017 303(d) List due to elevated pesticide concentrations (SWRCB, 2017). Of these waterbodies, 71 percent are in the major agricultural areas of the lower Pajaro River, Santa Maria River, and Salinas River watersheds. Several waterbodies are on the 2014-2016 303(d) List for multiple pesticides.

131. The 2014-2016 303(d) List does not include any neonicotinoid data and has very limited pyrethroid data, and therefore does not reflect the shift in pesticide usage towards these two classes of pesticides. The Central Coast Water Board anticipates several additional listings when those data are included in the future. Data on current commercial application of pesticides indicate that neonicotinoid and pyrethroid pesticide use in the Central Coast region increasing in agricultural areas. These pesticides have been detected at toxic levels at a number of locations in

the Central Coast region in recent years. DPR data from 2010 to 2014 for Monterey and Santa Barbara Counties show an annual increase of neonicotinoid pesticides applied from 43,351 pounds applied in 2010 to 70,824 pounds applied in 2014. Peer-reviewed research also shows pyrethroid pesticides are a major source of sediment toxicity in agricultural areas of the Central Coast Region

132. Agriculture-related toxicity studies conducted in the Central Coast region since 1999 indicate that toxicity resulting from agricultural waste discharges of pesticides has caused declining aquatic insect and macroinvertebrate populations in central coast streams.

133. The Regional Basin Plan states that waters "shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses". According to the Regional Board, elevated turbidity levels are "widespread in agricultural areas of the [C]entral [C]coast region", with 55 waterbodies on the 2014-2016 303(d) List due to elevated turbidity (SWRCB, 2017). Of those waterbodies, 78 percent are in the watersheds of the Salinas River, Gabilan Creek/Tembladero Slough, Santa Maria River, and Pajaro River.

Nitrogen Usage in the Central Coast

134. Plants need nitrogen to grow. Nitrogen is an essential element and insufficient nitrogen limits plant growth and crop yield. Growers apply nitrogen fertilizer to soil in order to provide nitrogen to their crops. Nitrogen fertilizer can be synthetic fertilizer, compost, or animal manure.

135. But crops can only take up a limited amount of nitrogen. When growers apply more nitrogen than is removed through harvest, or is sequestered in wood, or is emitted to the atmosphere, the excess nitrogen can remain in the soil and over time undergo a series of chemical reactions that converts it to nitrate. The nitrate can then percolate down into groundwater where it causes contamination. Most of the nitrogen not removed via harvest or sequestered in wood leaches to groundwater; the amount lost to the atmosphere and surface water runoff is relatively lower. High-nitrogen groundwater can discharge to surface water when the water table is high enough. Growers in the Central Coast have applied and continue to apply much, much more nitrogen than their crops can absorb.

136. The amount of nitrogen left in the soil with the potential to pollute is therefore largely a function of two variables: the amount of nitrogen that a grower applies (commonly referred to as "A") and the amount of nitrogen that is removed through harvest or is sequestered in the wood of permanent crops (commonly referred to as "R).

137. As a result, a 2014 Agricultural Expert Panel and the State Board in its 2018 order regarding nitrate discharges from growers in the Central Valley, endorsed an approach to nitrate pollution control based on A and R. Beginning with its April 2018 staff report, the Regional Board also began incorporating the concepts of A and R into Ag Order 4.0.

138. The ratio of A to R (commonly denoted A/R) is a measure of nitrogen use efficiency. An A/R of 1 means that a grower is applying exactly as much nitrogen as his or her crops remove, leaving no excess in the soil. An A/R figure of 1.5 indicates that that the grower is applying 50% more nitrogen than the crops require.

139. Even more useful than the A/R ratio is the difference between the two values: A minus R, (denoted A-R). This figure gives the total amount of nitrogen left in the field. It is usually expressed in pounds per acre per year.

140. The Regional Board found that the average A-R figure in the Central Coast Region is 340 pounds per acre per year.

141. A 2012 UC Davis report commissioned by the Legislature on nitrate impacts to groundwater in the Tulare Lake Basin and Salinas Valley found that A-R figures greater than 31 pounds per acre per year have the potential to lead to exceedances of the MCL for nitrate.

142. The Regional Board adjusted this figure for higher rainfall rates in the Central Coast Region and found that an A-R figure of 50 pounds per acre per year would eventually allow the Central Coast to achieve the water quality objective for nitrate in groundwater.

143. In other words, growers in the Central Coast apply an order of magnitude more nitrogen than their crops can absorb. The vast majority of the remaining nitrogen stays in the soil and can leach to groundwater.

Need for Enhanced Riparian and Wetland Areas

144. Healthy riparian and wetland areas reduce the transport of pesticides, sediment, and

nutrients, while reducing erosion and increasing groundwater recharge. According to the Regional Board, the "*restoration* and protection of riparian and wetland areas are important for aquatic life and beneficial uses."

145. California has lost an estimated 91 percent of its historic wetland acreage between the 1780's and 1980's, the highest loss rate of any state. Similarly, since the gold rush of the mid-1800's, California lost between 85 and 98 percent of its historic riparian areas. Owners and operators of commercial irrigated agricultural operations historically removed riparian and wetland areas to plant cultivated crops.

146. The Regional Board assessed wetlands in the Central Coast region using the National Wetlands Inventory (NWI) database created by the U.S. Fish and Wildlife Service. The tables below (from Findings in Ag. Order 4.0) assesses types of riparian cover based on NWI data and summarizes the scope of wetlands located within commercial irrigated agricultural areas of the Central Coast region.

Table A.C.5-3. Central Coast Region Riparian Acreage

Riparian Cover Rank	Estimated Riparian Cover (%)	% of central coast region	Acres in central coast region[33]
3 (highest asset)	70 - 100 percent cover	1.0%	75,453
2 (medium asset)	40 - 70 percent cover	3.3%	242,061
1 (low asset)	1 - 40 percent cover	13.2%	969,593
Total riparian area in central coast region [34]			**1,287,107**
0 (non-riparian areas, no asset)	0 percent canopy cover	82.5%	6,068,728

Table A.C.5-4. Central Coast Region Riparian Acreage in Irrigated Agricultural Areas

Riparian Cover Rank	Estimated Riparian Cover (%)	% of irrigated agricultural areas	Acres in irrigated agricultural areas[35]
3 (highest asset)	70 - 100 percent cover	0.03%	160
2 (medium asset)	40 - 70 percent cover	0.3%	1,452
1 (low asset)	1 - 40 percent cover	9%	48,370
Total riparian area in irrigated agricultural areas[36]			**49,982**
0 (non-riparian areas, no asset)	0 percent canopy cover	90.1%	485,323

147. Healthy riparian areas protect water quality and reduce water quality impacts in many ways. They are effective at reducing sediment and pollutant discharges. They also provide high-quality habitat for wildlife, both aquatic and terrestrial. According to the U.S. EPA, "[w]etlands and riparian areas play a significant role in protecting water quality and reducing adverse water quality impacts associated with Nonpoint Source (NPS) pollution...wetlands and riparian areas are an important component of a combination of management measures that can be used to reduce NPS pollution. In addition, in their natural condition they provide habitat for feeding, nesting, cover, and breeding to many species of birds, fishes, amphibians, reptiles, and mammals."

148. Healthy riparian areas function to retain and recycle nutrients, thereby reducing nutrient loading to surface water or groundwater. Riparian areas trap and filter sediment and other wastes contained in agricultural runoff and reduce turbidity. Riparian areas temper physical hydrologic functions, protecting aquatic habitat by dissipating stream energy and temporarily allowing the storage of floodwaters, and by maintaining surface water flow during dry periods. Riparian areas regulate water temperature and dissolved oxygen, which must be maintained within healthy ranges to protect aquatic life. In the absence of human alteration, riparian areas stabilize banks and supply woody debris, having a positive influence on channel complexity and in-stream habitat features for fish and other aquatic organisms.

149. According to the Regional Board, "[h]eathy riparian areas are integral to healthy aquatic systems." Through their ability to filter water and accumulate sediments, riparian and wetland areas prevent organic chemicals adhered to sediment, such as pesticides, herbicides and fungicides, from entering the waters of the state. A large body of data provide evidence that in the Central Coast region, sediment-bound organic chemicals from agricultural areas are toxic to aquatic organisms. Researchers have shown that wetland treatment areas are effective ways to reduce chemical concentrations and associated toxicity.

150. According to the Regional Board, "[h]eathy riparian areas are critical to the support of steelhead trout and other sensitive and endangered species." In addition to filtering pollutants, riparian corridors maintain bank stability, shade the creek corridor, and maintain appropriate

temperatures, create instream habitat via root structure and woody debris, and serve as an important part of the instream food base by contributing leafy debris that supports aquatic insect use.

151. Many of the streams and rivers in the Central Coast region, including many in commercial irrigated agricultural areas, are designated critical habitat for steelhead trout and other protected species. These species rely on healthy aquatic habitat for spawning, rearing, and feeding. The three most important commercial irrigated agricultural areas in the region, the lower Pajaro, Salinas, and Santa Maria watersheds, are all adjacent to critical steelhead habitat.

152. According to the Regional Water Board and CZARA Guidance, "[f]unctioning riparian areas" address multiple categories of nonpoint source pollution that affect water quality (sediment, nitrogen, phosphorus, and temperature). "Degraded riparian areas have less ability to remove nonpoint source pollutants". Additionally, "degraded riparian areas can deliver increased amounts of sediment, nutrients, and other pollutants to other waterbodies", thereby acting as a source of nonpoint source pollution themselves.

Development of Regional Board Irrigated Lands Program

153. The fact that excess nitrogen and pesticide use impairs groundwater and surface water has been known for decades. Despite this, and despite the State Board and regional boards having the authority to address this contamination since at least the 1960s, they have failed to regulate these discharges in a manner that controls pollution and protects drinking water and wildlife habitat.

154. Regulation of irrigated agriculture in the Central Coast has, until the adoption of Ag Order 4.0, focused on soft measures including monitoring, reporting, and incentives to adopt management practices. Until the Regional Board adopted Ag Order 4.0, there were no numeric standards on nitrogen application or discharge.

155. On July 9, 2004, pursuant to Water Code section 13269, the Central Coast Regional Board adopted its first Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands ("2004 Waiver") in Order No. R3-2004-0117. This order, compliance with which was entirely voluntary, allowed growers the option of enrolling in the waiver program in

lieu of obtaining individual waste discharge requirements set to protect water quality.

156. The 2004 Waiver expired by its own terms in 2009. In 2008, the Regional Board began an administrative renewal process in December 2008, soliciting comments and participation from all stakeholders, including the agricultural community, and developing no fewer than five draft waivers and accompanying staff reports. The Regional Board would not adopt a new Conditional Waiver for more than four more years.

157. At the outset of this process, Regional Board staff indicated that "new requirements" were "necessary to directly address and resolve the major water quality issues associated with irrigated agriculture." (Letter from Regional Board Staff to Advisory Panel at 1 (Dec. 12, 2008).) Staff explained that while some regulated entities had improved agricultural operations to benefit water quality since 2004, "[o]ther growers are not making progress, and severe water quality problems continue." (*Id.* at 2.)

158. In an early draft of the proposed new waiver released for comment on February 1, 2010, the Regional Board included key components necessary for the waiver to be consistent with Water Code section 13269, including among others, enumerated water quality standards established in the regional Basin Plan, explicit timelines for compliance, and individual discharge monitoring requirements.

159. In a report released on February 1, 2010, Regional Board staff explained that, six years after adoption of the 2004 Waiver, there was "no direct evidence that water quality [was] improving due to the 2004 Conditional Waiver." (Preliminary Draft Staff report at 6-7 (Feb. 1, 2010).) Regional Board staff noted that many water segments throughout the region are listed as impaired under federal Clean Water Act section 303(d), nearly all beneficial uses are impacted by agricultural pollution, and these impairments remain "well documented, severe, and widespread" despite the fact that a number of dischargers had enrolled under the 2004 Waiver. (*Id.* at 4.) Regional Board staff concluded, therefore, that "[i]mmediate and effective action is necessary to improve water quality protection and resolve the widespread and serious impacts on people and aquatic life." (*Id.*) Staff determined that the 2004 Waiver "[lacked] clarity and focus," did not provide for adequate "compliance and verification monitoring," and allowed

"agricultural discharges [to] continue to severely impact water quality in most receiving waters." (*Id*. at 19.)

2012 Central Coast Agricultural Waiver ("Ag Order 2.0")

160. In March 2012, the Regional Board adopted a Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (Order No. R3-2012-0011) ("Ag Order 2.0").

161. Ag Order 2.0, as adopted by the Regional Board, was not perfect. But it contained specific monitoring requirements for three tiers of discharger and a requirement that dischargers make progress towards nitrogen balance ratios.

162. Environmental groups and agricultural interests petitioned the State Board for review of Ag 2.0.

163. The State Board issued an order in September 2013 ("Modified Order") that significantly weakened Ag Order 2.0. The State Board weakened planning requirements by stripping out requirements to provide the results of methods used to verify effectiveness and compliance. It also eliminated the nitrogen balance ratio reporting requirements the highest-risk dischargers. Importantly, the State Board added a provision that stated "Dischargers must (1) implement management practices that prevent or reduce discharges of waste that are causing or contributing to exceedances of water quality standards; and (2) to the extent practice effectiveness evaluation or reporting, monitoring data, or inspections indicate that the implemented management practices have not been effective in preventing the discharges from causing or contributing to exceedances of water quality standards, the Discharger must implement improved management practices." As a result, the State Board indicated it would not take enforcement actions against growers who made a "conscientious effort" to implement management practices, even if those practices proved ineffective.

164. Monterey Coastkeeper, San Luis Obispo Coastkeeper, California Sportfishing Protection Alliance, and Santa Barbara Channelkeeper petitioned for a writ of mandate challenging the Modified Order in Sacramento Superior Court. In 2015, the trial court found that the Modified Order violated Porte-Cologne and the Nonpoint Source Policy. The State Board appealed.

165. In 2018, the Court of Appeal issued its decision in *Coastkeeper I*. The court upheld the trial court's decision that the State Board's modified version of Ag 2.0 failed to comply with Key Element 3 of the Nonpoint Source Policy. Specifically, the Court found that the State Board's "conscientious effort" standard constituted an unlawful failure to include a specific time schedule with quantifiable milestones. *(Coastkeeper I,* 28 Cal.App.5th. at 369-70.)

2017 Central Coast Agricultural Waiver ("Ag 3.0")

166. In 2017, Ag Order 2.0 reached the end of its 5-year term and expired. The Regional Board adopted a Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (Order No. R3-2017-0002) ("Ag Order 3.0"). Ag Order 3.0 was substantially similar to Ag Order 2.0, which was found unlawful in *Coastkeeper I.*

167. The same group of petitioners, joined by the Environmental Justice Coalition for Water and Antonia Manzo, challenged the Regional Board's adoption of Ag Order 3.0 in Sacramento Superior Court in November 2017. The trial court determined that, like its predecessor Ag Order 2.0, Ag Order 3.0 did not comply with the Nonpoint Source Policy as interpreted in *Coastkeeper I*. In a stipulated judgment entered in October 2019, the court ordered the Regional Board to adopt a new agricultural order to replace Ag Order 3.0, consistent with the ruling of *Coastkeeper I*, by January 31, 2021. The court later extended this deadline to April 16, 2021.

168. Both Ag Order 2.0 (as modified by the State Board) and Ag Order 3.0 contained requirements intended to control nitrogen pollution. Growers had to enroll in the Irrigated Lands program by submitting a Notice of Intent (NOI) to comply with the Order's conditions along with information about the enrolled ranches. The NOI was required to be accurate and complete and to contain a signed statement of understanding of the conditions of the Order. Growers had to install backflow prevention devices. They were required to develop a "Farm Water Quality Plan" (Farm Plan) that detailed the farm's fertilizer and pesticide use, gave a description and time schedule of management practices to control discharge of nitrogen and pesticides and with a described those practices' effectiveness and the method used to evaluate their effectiveness. Growers were required to obtain farm water quality education and technical assistance necessary

to achieve compliance with the Order. Education was required to "focus on meeting water quality standards by identifying on-farm water quality problems, implementing pollution prevention strategies and implementing practices designed to protect water quality and resolve water quality problems to achieve compliance with this Order." All technical reports had to be submitted under penalty of perjury.

169. In Ag Order 3.0, Tier 2 and 3 dischargers—those who presented the highest risk to groundwater—were required to submit Annual Compliance Forms that detailed their compliance with the order and the effectiveness of their management practices.

170. Tier 2 and 3 dischargers in addition were required to submit "Total Nitrogen Applied" reports that included ranch information, nitrogen concentrations in irrigation water, nitrogen applied in pounds per acre via irrigation water, nitrogen present in the soil, nitrogen applied via compost, crops grown, nitrogen applied in pounds per acre via fertilizer for each crop grown, crop acreage for each crop, basis for the nitrogen applied. All of this information was required to be certified that it was true under penalty of perjury.

171. Depending on which risk tier growers were classified under, growers also were required to implement management practices and undertake reporting as to surface water dischargers.

172. Ag Order 3.0 did not require growers to calculate the amount of nitrogen removed from their crops through harvest or sequestration in permanent wood.

173. Ag Order 2.0 required a small subset of Tier 3 Dischargers to develop a Water Quality Buffer Plan (WQBP) that described how they would comply with a 30-foot buffer requirement or submit an alternative proposal for a lesser setback assessing functional equivalency. These Dischargers were required to implement their plans and submit status reports on their plans under Ag Order 3.0.

Development of the 2021 Central Coast Agricultural Order ("Ag Order 4.0")

174. The Regional Board began the process of adopting Ag Order 4.0 in 2017, shortly following the adoption of Ag Order 3.0.

175. In 2018, the Regional Board staff produced a staff report that reviewed the Total

Nitrogen Applied forms received for reporting years 2014-16. The staff report concluded that growers were discharging an order of magnitude more nitrogen to groundwater than the figures recommended in the scientific literature.

176. Specifically, 40 percent of growers of the six most common crops in the Central Coast (lettuce, broccoli, spinach, cauliflower, celery, strawberries), applied more nitrogen than the high end of nitrogen application recommended by literature. When including nitrogen contained in irrigation water (because farmers often irrigate with groundwater that is contaminated with nitrate), that figure rises to 68 percent.

177. Staff concluded that

> At the current rate of nitrogen waste loading, where the average nitrogen waste loading is approximately ten times greater than the operational benchmark protective of water quality, groundwater nitrate concentrations will continue to increase. Portions of aquifers presently used for drinking water supplies will become unsafe to consume without treatment due to increasing nitrate concentrations. Water quality objectives will not be met and beneficial uses, including domestic drinking water supply, will not be protected. Nitrate avoidance and treatment costs for drinking water will continue to increase.

178. Summing up, staff wrote:

> To reduce loading, management practices such as applying fertilizer according to the crop uptake, accounting for the nitrogen present in the irrigation water and reducing fertilizer applications accordingly, maximizing the use of nitrogen mineralized from unharvested crop material, and maximizing irrigation efficiency, are necessary to reduce nitrogen loading, slow the degradation of groundwater, and advance towards achieving water quality objectives.

179. Knowing the magnitude of the task ahead, the Regional Board based its consideration of Ag Order 4.0 on extensive public participation, data analysis, and direct experience regulating growers pursuant to the previous agricultural order.

180. Between 2017 and 2021, the Regional Board provided at least 18 opportunities for public comment, including listening sessions, workshops, noticed board meetings, and opportunities for written comment. During this time, the Regional Board released at least two draft orders for public comment prior to the final order.

181. The Regional Board released its first draft Ag 4.0 in November 2019, and a second

draft in February 2020. In those draft orders, the Regional Board concluded that riparian setback requirements were necessary to protect and restore surface water quality in the Central Coast Region.

182. The Regional Board's first two draft orders established two types of setback requirements. The riparian setback requirement applied to ranches located in Riparian Priority areas with a surface waterbody on or bordering the ranch. Dischargers were given four compliance pathways to choose from to comply with the riparian setback requirement. The operational setback applied to ranches outside of Riparian Priority areas and to ranches that select the Cooperative Approach compliance pathway. The riparian setback requirement was a discharge prohibition and required implementation of management measures related to protecting and restoring riparian areas. The operational setback was only a discharge prohibition.

183. The Regional Board in the first two draft orders concluded that the discharge of waste, including nutrients and pesticides that results from growing and irrigating crops and applying agricultural chemicals in close proximity to surface waterbodies (i.e., within the setback distance) was prohibited because there was found by the Regional Board to be "a high likelihood that the discharges will cause water quality impairment."

184. The Regional Board determined that the draft orders' riparian setback requirements would have newly protected 323 miles of streams and the operational setback requirements would have newly protected 231 miles of streams, for a total of 554 miles of newly protected streams.

185. On December 10, 2020, the Regional Board eliminated the riparian setback requirements, acknowledging the importance of such protections but citing lack of time to consider the requirements given the "litigious" nature of riparian setbacks. Instead, the Regional Board directed staff to retain only a prohibition to remove or disturb riparian vegetation that was established under Ag 3.0.

186. The final Ag Order 4.0 requires dischargers with waterbodies within or bordering their ranch to maintain the status quo by only measuring and reporting must measure the current

riparian area. Unless authorized or exempted, Ag Order 4.0 prohibits the further disturbance (e.g., removal, degradation, or destruction) of existing, naturally occurring, and established native riparian vegetative cover.

187. Throughout the Regional Board's consideration of Ag Order 4.0, staff and board members were, at least with respect to nitrate discharges, consistently mindful of both the need to adopt a much stricter permit structure due to the lack of progress shown via previous approaches as well as the Court of Appeal's direction in *Coastkeeper I* to adopt a permit that contained a specific time schedule for compliance with water quality objectives along with quantifiable milestones.

188. The Regional Board adopted Ag Order 4.0 on April 15, 2021.

Ag Order 4.0's Structure and Findings

189. Unlike the previous agricultural orders, which were waivers of waste discharge requirements issued pursuant to Water Code section 13269, Ag Order 4.0 is a general WDR issued pursuant to Water Code section 13263. The principal difference between a waiver and a WDR is that a WDR is not limited to a five-year term and thus does not expire by its own terms. The Nonpoint Source Policy recognizes both waivers and WDRs as valid administrative tools to control nonpoint source pollution.

190. In other ways, Ag Order 4.0 purports to break with the past approaches to regulating agricultural discharges to groundwater in the Central Coast region. Ag Order 4.0 finds that the earlier Ag Orders:

> relied on a management practice implementation approach without clear and enforceable requirements (i.e., numeric limits and time schedules) or monitoring and reporting necessary to drive the development and implementation of effective management practices or evaluate their effectiveness with respect to reducing pollutant loading, achieving water quality objectives and protecting beneficial uses.

191. But while the previous orders were not effective in reducing discharges, they did provide data that pointed the way for future orders:

> However, the previous orders generated significant additional data documenting ongoing widespread and severe water quality degradation associated with irrigated agricultural activities. The previous orders also

> generated nitrogen application data documenting excessive applications of fertilizer nitrogen relative to published crop needs for a significant subset of central coast growers.

192. Ag Order 4.0 goes on to explain its approach to regulating growers:

> This Order takes a more meaningful and performance-based approach focused on accountability and verification of resolving the known water quality problems by establishing 1) numeric targets and limits to protect water quality (i.e., application targets and limits, discharge targets and limits, and receiving water limits), 2) time schedules to meet the numeric targets and limits, 3) monitoring and reporting to verify compliance with the numeric targets and limits, and 4) consequences for not meeting the numeric targets and limits.

193. Ag Order 4.0 contains two compliance pathways: an individual program and a third-party program. Under the individual program, growers report their compliance directly to the Regional Board and are subject to generally stricter requirements. In the third-party program, a third-party organization aids the growers in compliance with the Order's requirements by providing education, coordination, and expertise. To incentivize participation in the third-party program—which growers must pay a fee to participate in—some permit requirements are relaxed or delayed for growers who participate. Growers in the individual program are referred to as "Individual Dischargers." Growers in the third-party program are referred to as "Participating Dischargers." More than 98% of growers are Participating Dischargers.

Ag Order 4.0's Numeric Standards for Nitrogen Application

194. Since 2014, pursuant to requirements in Ag Orders 2.0 and 3.0, a significant subset of growers have been required to submit total nitrogen application ("TNA") reports to the Regional Board. Under Ag Order 2.0, 700 ranches representing 117,000 acres reported their nitrogen application between 2014 and 2016. In 2017, Ag Order 3.0 expanded the reporting requirement to 1700 ranches representing 230,000 acres—55% of all irrigated acres in the region.

195. Lettuce, broccoli, spinach, cauliflower, celery, and strawberries, in descending order, represent 75% of crops reported on the TNA reports.

196. The Central Coast Regional Board found that median nitrogen application rates had not changed over the six years for which data was collected. This was true despite the fact that

Ag Orders 2.0 and 3.0 had required growers to adopt management practices to reduce their nitrogen discharge, and if they proved ineffective, to improve those practices. Growers also were required to assess their farming practices and fertilizer use in their Farm Plans and report their nitrogen use in detail in their TNA reports, under penalty of perjury. The assessment, tracking and reporting exercise was expected to reduce over-application, but it did not. And application did not decline despite the fact that growers were required to obtain education about nitrogen impacts to water quality going back to the adoption of Ag Order 1.0 in 2004. Further, Tier 2 and 3 growers—those with the highest discharge—were also required to submit Annual Compliance Forms with additional detail on their irrigation and nitrogen management. None of these steps meaningfully reduced nitrogen application.

197. UC Davis, in collaboration with the California Department of Food and Agriculture, publishes guidelines (California Fertilization Guidelines) for fertilizer application for crops commonly grown in the Central Coast. These guidelines consider crop need, leaching rates, and potential yield. The California Fertilization Guidelines also consider the amount of nitrogen removed via harvest.

198. In the 2014-19 data, a significant subset of growers applied fertilizer nitrogen at rates well above the maximum rates recommended by the California Fertilization Guidelines.

199. The 90th and 85th percentiles of nitrogen fertilizer application between 2014 and 2019 were well above the California Fertilization Guidelines' recommended application rates, with the exception of broccoli. In other words, the top 15 percent of growers applied 296 or more pounds of fertilizer nitrogen per acre per crop of strawberries during this time period, while the recommended maximum application rate is 200 pounds. The top 15 percent of growers applied 255 or more pounds of fertilizer nitrogen per acre per crop of lettuce production during this time period, while the recommended maximum application rate is 120 to 220 pounds per year. The Regional Board also found that the 85th and 90th percentile thresholds did not meaningfully change between 2014 and 2019.

200. The 85th percentile nitrogen applications and the California Fertilization Guideline recommended ranges are presented in the following table:

	Lettuce	Broccoli	Spinach	Cauliflower	Celery	Strawberry
85th Percentile Nitrogen Application 2014-2019	275	293	245	309	360	320
California Fertilization Guidelines	120-220	170-300	80-200	200-290	200-290	200

All figures are in pounds per acre per crop.[1]

201. Based on the TNA data from 2014 to 2019, the Regional Board made the following finding in Ag 4.0:

> [F]ertilizer nitrogen application rates (AFER) have not changed significantly in response to the TNA reporting requirement alone. To make progress towards reducing nitrogen waste discharges arising from the over-application of synthetic fertilizer nitrogen and to reduce the risk of nitrogen discharge, this Order establishes fertilizer application targets and limits.

202. The Regional Board also found:

> Prior orders over the past 15 years that have relied on management practice implementation, assessment, and improvement, and have not to-date resulted in measurable progress towards achieving water quality objectives and protecting beneficial uses. Therefore, a new order that relies the same approach would not have a high likelihood of success.

203. The Regional Board thus concluded that it was appropriate to impose a numeric standard for nitrogen application. Given the high application rates as compared to the California Fertilization Guidelines, the evidence in the record showed that there was no agronomic need for these high rates. And because those guidelines incorporated consideration of nitrogen removed at harvest, the evidence showed that application at rates above the numeric standard would

[1] Many ranches in the Central Coast grow several crops per year in the same field. The application limit applies to each cropping cycle.

necessarily result in significant discharges to groundwater because crops were unlikely to absorb these high levels of nitrogen.

204. The application numeric standard is also important because Ag Order 4.0 phased in the requirement to measure and report nitrogen removed. While the highest priority growers must begin measuring nitrogen removed on their INMP beginning in 2023, the lowest priority growers would only begin measuring nitrogen removal in 2027. A numeric standard based on nitrogen applied would therefore allow for the standard to apply to the much larger portion of growers who already report their nitrogen applied under Ag Order 3.0, but who would not be required to report their nitrogen removed for several years.

205. The Regional Board set the numeric standard to exclude the highest application rates from 2014-19. The Regional Board set the initial standard at 90th percentile of nitrogen application for a given crop. Two years later, the standard tightens to the 85th percentile of nitrogen application from 2014-19.

206. The application limits for the six most common crops are presented in the following table:

	Lettuce	Broccoli	Spinach	Cauliflower	Celery	Strawberry
90th Percentile Standard	275	295	245	310	360	320
85th Percentile Standard	255	280	230	285	330	295

All figures are in pounds of nitrogen per acre per crop.

207. Because the Regional Board set the standard based on data from actual grower application over a lengthy period, it could conclude that the application standard is feasible for growers to meet. By definition, the median (i.e. 50th percentile) grower applies far less nitrogen than the 85th percentile grower.

208. But removing the largest outliers will prevent significant amounts of nitrogen from

polluting groundwater.

209. Following the imposition of the 85th percentile standard, the application limits do not become more stringent over time.

210. The timing of the imposition of the numeric standard and the consequences for violating it differ depending on whether a grower is an Individual Discharger or a Participating Discharger in the Third-Party Program.

211. For Individual Dischargers, the numeric standard functions as a "limit" and violation can result in consequences including direct enforcement. The 90th percentile limit becomes effective on December 31, 2023. Two years later, on December 31, 2025, the limit tightens to the 85th percentile.

212. For growers in the third-party program, the numeric application standard functions as a "target" and the deadlines are relaxed. The initial 90th percentile target goes into effect on December 31, 2024 and then tightens to the 85th percentile target on December 31, 2026.

213. Whereas the ultimate consequence of an Individual Discharger violating a "limit" is potential enforcement by the Regional Board, the ultimate consequence of violating a "target" for a Participating Discharger in the Third-Party Program is that violating growers are removed from the third-party program and therefore become Individual Dischargers ultimately subject to enforcement for violating the limit. But Participating Dischargers may only be removed from the Third-Party Program for violating the application target for two consecutive years.

214. The 90th and 85th percentile numeric standards apply to the six most commonly grown crops in the Central Coast. For other crops, Ag Order 4.0 set an application limit of 500 pounds per acre per crop that tightens to 480 pounds per acre per crop after two years. Over 98 percent of crops met the 500 pounds per acre per crop standard between 2014 and 2019.

215. There are exceptions to the application numeric standard. In order to incentivize use of high-nitrogen irrigation water, nitrogen in irrigation water is not counted towards the

application standard.[2] And where an operation can show that it is meeting the final discharge limit of 50 pounds per acre per year, it may continue to apply nitrogen at levels above the relevant application standard.

Ag Order 4.0's Fertilizer Nitrogen Discharge Numeric Standards

216. The Regional Board calculates nitrogen discharge by comparing the difference between nitrogen applied and nitrogen removed, or "A-R". Nitrogen that growers apply to their fields, but that is not removed at harvest or sequestered in the wood of permanent crops, is left in the soil with a risk of percolating to groundwater as nitrate.

217. Growers currently apply on average 340 more pounds of fertilizer nitrate than their crops take up and that is removed through harvest. In other words, the average grower discharges 340 pounds of nitrate into groundwater per acre, per year. This discharge rate is an order of magnitude greater than the maximum discharge rate that is necessary to protect the region's water quality—50 pounds per acre per year.

218. Due to the high application rates, high discharge rates, and the widespread and severe nature of nitrate contamination in the region, the Central Coast Board found that it was appropriate to establish enforceable nitrogen discharge limits that require growers to reduce their nitrate discharge over time to protect drinking water beneficial uses. The Regional Board also found that "at the current average nitrogen loading rate […], groundwater nitrate concentrations will continue to increase and the nitrate MCL will never be achieved".

219. Growers in the individual compliance program must meet descending interim discharge limits beginning with 500 pounds per acre per year by December 2023, and meet a final limit of 50 pounds per acre per year by December 2051. Growers in the third-party program must meet interim discharge targets of 500 pounds per acre per year by December

[2] One way to restore nitrate-contaminated groundwater is to irrigate crops with it. Crops can use nitrate in groundwater equally well as they can use nitrogen in fertilizer. Over time, the crops absorb the nitrate in the irrigation water, harvest removes that nitrogen from the field, and the concentration of nitrate in groundwater decreases. As long as fertilizer nitrogen use is not excessive, this "pump-and-fertilize" method will gradually restore water quality in polluted aquifers.

2024, 400 pounds per acre per year by December 2026, and 300 pounds per acre per year by December 2028. Ag 4.0 did not establish additional interim discharge targets or a final target for the third-party program.

220. Like the application numeric standard, the discharge numeric standards function as enforceable "limits" for Individual Dischargers and "targets" for Participating Dischargers. But even for Individual Dischargers, the standard is a nonbinding "target" through 2027 to "allow for the learning curve associated with the new monitoring and reporting requirement."

221. For Participating Dischargers, those who exceed the discharge targets for two consecutive years are subject to removal from the Third-Party Program.

222. The discharge numeric standards also include measures to incentivize more sustainable management practices. They encourage the use of compost fertilizer, which improves the soil's water holding capacity and nutrient retention capacity by allowing "discount factors" for compost. They encourage irrigation with high-nitrate groundwater, which can restore groundwater quality, by allowing growers to not count irrigation water nitrogen. They encourage organic fertilizers and soil amendments by providing a discount factor for those products. And they encourage the use of "scavenging cover crops," which take up excess soil nitrogen during the winter season and prevent leaching to groundwater by allowing growers to count scavenged nitrogen as "R" in the A-R calculation. Ag Order 3.0 allows three different methods to calculate compliance with the discharge standard, giving growers flexibility in how to approach complying with the standard.

223. The discharge standards are set at levels which most growers can achieve, at least for the first several years. For the minority of growers in the individual program, the discharge standard begins as a nonbinding target. The initial target (as calculated under Compliance Pathway 1) starts on December 31, 2023 at 500 pounds of nitrogen per acre per year, a figure which 83% of growers currently meet with no changes to their practices. That target declines to 400 pounds per year at the end of 2025, a figure which 73% of growers achieve. Only at the end of 2027, as the standard tightens again to 300 pounds per acre per year, does the standard become a binding limit. 58% of growers currently meet the limit for 2027. Only by 2051 does

the limit reach the final figure of 50 pounds per acre per year: 10% of growers currently already meet this final limit.

224. For Participating Dischargers, Ag Order 4.0 does not include a final compliance date or a timetable to reduce discharges from Participating Dischargers to 50 pounds per acre per year—a failure which Petitioners challenged in their comments before the Regional and State Boards. The discharge target begins at 500 pounds on December 31, 2024 and then declines to 300 pounds by the end of 2028.

225. Ag Order 4.0 acknowledges that the science behind managing nitrogen pollution from agricultural operations is evolving, and that the State Board may at some point convene an expert panel to address questions related to regulation of nitrogen discharge. Ag Order 4.0 states:

> If prior to 2027 or anytime thereafter an expert panel finds that another regulatory method would be more protective of water quality, or if the more protective regulatory methods are identified through other sources, the Central Coast Water Board will review the requirements of this Order and will make modifications as appropriate.

The Eastern San Joaquin Order

226. In a separate administrative process, the State Board in February 2018 adopted Order WQ 2018-0002 In the Matter of Review of Waste Discharge Requirements General Order No. R5-2012-0116 for Growers Within the Eastern San Joaquin River Watershed that are Members of the Third-Party Group Issued by the California Regional Water Quality Control Board, Central Valley Region SWRCB/OCC FILES A-2239(a)-(c) ("ESJ Order").

227. The ESJ Order reviewed a WDR for agricultural discharges in the Eastern San Joaquin region of the Central Valley that the Central Valley Regional Board had adopted in 2012.

228. In the ESJ Order, the State Board declined to require numeric standards for nitrate application or discharge, but did endorse an approach whereby grower coalitions would develop nonbinding "targets" for 36-square-mile areas.

229. The State Board has stated that all of its petition orders are precedential unless otherwise indicated. (See Gov. Code § 11425.60.)

230. The ESJ Order stated that "[m]any of the findings and directions of this order are appropriate not only for the Eastern San Joaquin Agricultural General WDRs, but also for the subsequent generations of regional water quality control board (regional water board) irrigated lands regulatory programs statewide. In the sections that follow, we indicate which of our conclusions have precedential effect and will guide irrigated lands regulatory programs statewide."

231. In other words, the ESJ Order explicitly indicated provisions that were precedential. But the ESJ Order also noted that "[h]ere, because of the significant variation in agricultural practices statewide, automatic application of all requirements endorsed in this order to all of the agricultural discharge programs statewide is inappropriate."

232. Among the requirements that the ESJ Order explicitly made precedential were requirements relating to outreach, management practice reporting, sediment and erosion control practices, irrigation management, certification of INMPs, nitrogen applied and removed reporting, nitrogen removal coefficients, definitions of certain terms, follow-up requirements for outliers, recordkeeping and monitoring requirements, and certain exemptions.

233. Other requirements in the ESJ Order were not precedential. Most importantly, these included the "Direction to Central Valley Water Board Regarding Use of Submitted Data," wherein the State Board stated that it "is premature at this point to project the manner in which the multi-year A/R ratio target values might serve as regulatory tools." Nowhere in Section 11 of the ESJ Order, the section that the State Board Order cites to justify the elimination of enforceable numeric standards, does it state that the Board's direction in Section 11 was statewide precedent.

234. As a result, the ESJ's conclusion that it was, in 2018, premature to use nitrogen A/R ratio target values as regulatory tools was directed only at the Central Valley Regional Board and was not a precedential decision with statewide effect.

Review of Ag Order 4.0 by the State Water Board

235. Environmental groups and agricultural interests timely filed a petition before the State Board to review Ag 4.0. Agricultural groups challenged, among other things, the numeric

standards for nitrate application and discharge. Environmental petitioners, including San Jerardo, MWK, CCKA, Santa Barbara Channelkeeper, PCFFA, and CSPA, among other claims, challenged removal of riparian setbacks and argued that the numeric standards should have been more stringent based on the record.

236. The State Board issued a draft order on June 16, 2023.

237. The State Board issued a revised draft order on September 8, 2023.

238. In addition to submitting written comments, the Comité participated in the State Board review hearing of Ag Order 4.0 held on September 20, 2023. The Comité provided oral comments stating that "any proposed changes to Ag [Order] 4.0 may have a disproportionate impact on communities of color. As a result, the Board must analyze how their proposed changes will impact these residents." The Comité's oral comment to the State Board also included a request that the State Board "direct the regional board to make programmatic findings on all changes in the Ag Order 4.0, not just those diverging from the ESJ Order."

239. During the hearing, State Board Member Sean Maguire suggested that he did not have a "solid" understanding of the impact that the State Board's proposed Order 2023-0081 would have on environmental justice and disadvantaged communities, which have high concentrations of non-white and/or low-income residents. State Board Member Dorene D'Adamo stated that, in future Orders, the State Board must "better include [racial equity] in the narrative [of State Board Orders]." State Board Member Laurel Firestone agreed that the State Board needed to "do better" at "capturing environmental justice concerns."

240. During the hearing, and at the direction of State Board Member Dorene D'Adamo, State Board staff drafted an amendment to the State Board's proposed Order 2023-0081 which stated that the State Board is "deeply concerned about the serious consequences of nitrate contamination on the health of communities, and [the State Board] share[s] their strong desire to move as quickly as possible to restore their groundwater quality." However, State Board Member Laurel Firestone ultimately rejected the impromptu statement stating, "adding a few lines would [not] do justice to [acknowledging the agricultural industry's role in nitrate contamination, considering that] race [is] actually the biggest determinant in terms of nitrogen or

nitrate contamination of wells." At Board Member Laurel Firestone's and other Board Member's direction, State Board staff removed their suggested statement on "the health of communities" and moved forward with adopting the final order without such statement.

The State Board Order

241. The State Board adopted its final order—the State Board Order--on September 20, 2023. The State Board Order does not contain enumerated findings of fact or conclusions of law.

242. In the State Board Order, the State Board largely eliminated the numeric standards for nitrogen application and discharge. The State Board prohibited the Regional Board from using the numeric standards as the basis for enforcement actions or for removal from the third-party program. The Regional Board was further prohibited from using the numeric standards as the basis for "implementing additional or improved management practices, or increased monitoring or reporting."

243. As to the application numeric standard, the Regional Board was permitted to use it solely for "for the limited purpose of requiring additional education for those growers who exceed the target."

244. Likewise, the State Board disallowed the Regional Board from using the nitrogen discharge numeric standards "for any… purpose" other than requiring growers who exceed them to undergo additional education and having their irrigation and nutrient management plan ("INMP") certified by a "qualified professional." Under the ESJ Order, such certification can be done by the grower him or herself after taking a training course.

245. The rationale for the State Board's remand of Ag Order 4.0's enforceable numeric standards was that Ag Order 4.0 failed to comply with the precedential elements of the ESJ Order.

246. The State Board found that the application numeric standard restricting growers to the 90th and then 85th percentiles of nitrogen application was inconsistent with the State Board's statement in the ESJ Order that, "[i]f we move forward with a new regulatory approach in the future, we expect to do so only after convening an expert panel." It further concluded that because the application standard did not explicitly consider nitrogen removed, "does not provide

meaningful insight into the amount of nitrogen left in the soil with potential to reach groundwater. As such, there is not a clear connection between the amount of fertilizer nitrogen applied and impacts on water quality."

247. The State Board allowed the Regional Board to conduct education for growers that do not comply with application limits. And it directed the development of "interim milestones" based on "properly calculated" A/R ratios and A-R differences. But it forbade the Regional Board from using those interim milestones as enforceable regulatory limits.

248. As to the discharge standards, the State Board found that the use of discharge standards rooted in the A-R difference was a "new regulatory approach" forbidden by the ESJ Order. The Regional Board was therefore prohibited from using the discharge standard for any purpose other than requiring education and certification of the INMP.

249. As a result, the State Board Order stripped Ag Order 4.0 of its enforceable numeric standards and their associated timelines for implementation.

250. The State Board announced an intention to convene an "expert panel" to provide recommendations to the State Board regarding the use of A and R data in the future. But it was clear that it would not, and no Regional Board in the state was allowed to use A and R figures for regulatory enforcement of nitrogen discharges in the meantime. The State Board allowed up to a year for an initial staff review of existing statewide nitrogen data before convening any "expert panel."

251. The State Board did not set a timetable for the completion of the "expert panel's" work.

252. Nor did the State Board announce a timeframe for any precedential guidance to Regional Boards based on the "expert panel's" report.

253. The State Board justified its decision to strip out the enforceable numeric standards for nitrogen by stating that "the science supporting our irrigated lands regulatory program is, as thoroughly explained in Order WQ 2018-0002, still evolving and we have not yet identified a metric that directly correlates to ongoing practices ceasing to cause or contribute to exceedances of nitrate water quality objective in groundwater that can be used as a regulatory tool."

254. The State Board Order does not admit or acknowledge that the application and discharge numeric standards will prevent significant nitrogen discharges, nor that the Regional Board intends to revisit them after any expert panel convened by the State Board issues its report. Nor does the State Board Order acknowledge that by definition, the vast majority of growers comply with the application numeric standard and the initial discharge numeric standards already.

255. The State Board Order, therefore, permits discharge at rates unlimited by any numeric standard, indefinitely, until an expert panel tells it what it already knows: that current rates of nitrogen overapplication are poisoning the water and need to stop and that many growers can feasibly reduce their application right now but are choosing not to do so.

256. The State Board Order did not include any of the findings outlined in Water Code section 13149.2, subdivsion (c). The Order specifically acknowledged the State Board both received and reviewed the Comité's and other Petitioners' comments during the public process regarding these obligations.

257. In the State Board Order, the State Board acknowledged the requirements of Water Code sections 189.7 and 13149.2, subdivision (c), but dismissed them as inapplicable. The State Board contended, in a footnote, that these mandates did not apply to the Order due to the Order's "modest" nature compared to Order WQ 2018-0002, the ESJ Order. Neither in this footnote nor in the final Order did the Board support its contention that the legislature intended Water Code section 13149.2, subdivision (c), to apply only to Orders characterized as "modest." The State Board stated that, had Water Code section 13149.2, subdivision (c), been in effect prior to its ESJ Order, the State Board would have had to make findings in the ESJ Order pursuant to Water Code section 13149.2(c).

258. The State Board further asserts that because the Board "remand[s]… [Ag Order 4.0] to be consistent with orders [the State Board] adopted prior to the effective date of Assembly Bill 2108" and because the Order "review[s] (and largely uphold[s]) portions of [Ag Order 4.0] that were adopted by the Regional Board prior to the effective date of Assembly Bill 2108," that the requirements of Water Code section 13149.2, subdivision (c), do not apply. The State Board

provides no rationale for its interpretation that 13149.2 subdivision (c), does not apply to orders it modifies to comply with other State Board orders made prior to the passage of AB 2108.

259. The State Board Order further alleged that "[b]ecause [the State Board is] exercising [their] Water Code section 13320 discretion to not revisit [their] prior precedential direction or amend [Ag Order 4.0]" that the State Board is "not engaging in the permitting process or issuing or reissuing waste discharge requirements," so Water Code section 13149.2, subdivision (c), did not apply. Again, the Board failed to provide support for this statutory interpretation. Nowhere does the State Board provide an explanation for why an order that removes enforceable limits as a policy tool for a Regional Board and directs specific revisions would not be subject to either section 13149.2 subdivision (b) or (c) and the requirements to make findings regarding racial equity tribal lands and environmental justice considerations. Water Code section 13149.2 does not explicitly remove the section 13320 review portion of the waste discharge requirements process from application of the section 13149.2 mandate to identify impacts and measures to address them, and make findings concerning environmental justice, tribal impacts and racial equity considerations.

260. Although the State Board asserted that Water Code section 13249.2, subdivision (c), did not apply to its Order, the State Board directed the Regional Board to conduct such an analysis. However, in its final Order, the State Board inappropriately limited the scope of the Regional Board's duty to make findings undersection 13249.2, subdivision (c) beyond the limitations permitted by statute. Rather than limiting the Regional Board's Water Code section 131492.2, subdivision (c) finding to "changes to the requirements of the prior waste discharge requirements," as is permissible under the Water Code, the State Board instructed the Regional Board to only conduct a section 13149.2, subdivision (c) analysis on "changes to the requirements in the existing [Ag Order 4.0] that go beyond what is needed to comply with [the ESJ Order]." In doing so, the State Board's Order improperly and preemptively limited the Regional Board's section 13149.2, subdivision (c) analysis and programmatic finding to the alternative water supply program, the monitoring of 1,2,3-TCP, and the requirements on impermeable surfaces.

261. The State Board's improper narrowing of the Regional Board's section 13149.2, subdivision (c), duty to make findings is outside the scope of the authority granted to it by the statute.

262. The State Board's failure to conduct a Water Code section 13149.2, subdivision (c), analysis in its Order and improper restrictions on the Regional Board's future analysis and findings have a disproportionate adverse impact on non-white and low-income populations, including but not limited to the Comité's and San Jerardo's membership. Petitioners, including specifically the Comité and San Jerardo, did not consent to State Board's conduct.

FIRST CAUSE OF ACTION

(Administrative Mandate for Violation of Nonpoint Source Policy Key Elements 2 and 3—Asserted by All Petitioners Against Respondent State Board)

263. Petitioners incorporate by reference and reallege the paragraphs set forth above.

264. A Regional Board or the State Board may issue Waste Discharge Requirements only if they are consistent with the applicable Basin Plan. (Wat. Code section § 13263.) And Basin Plans must conform with state water policies. (Wat. Code § 1340.) The applicable Basin Plan incorporates the Nonpoint Source Policy.

265. The Nonpoint Source Policy's Key Element 2 requires that a Regional Board "be able to determine that there is a high likelihood that the program will attain water quality requirements."

266. Key Element 3 requires a "specific time schedule, and corresponding quantifiable milestones designed to measure progress toward reaching the specified requirements."

267. Such a time schedule "may not be longer than that which is reasonably necessary to achieve an NPS implementation program's water quality objectives."

268. By stripping out the numeric application and discharge standards and their associated timelines from Ag Order 4.0, the State Board Order has violated the Nonpoint Source Policy.

269. The Regional Board made extensive findings that the numeric application and discharge standards were necessary to reduce nitrogen discharge into waters of the state, to slow the degradation of water quality, and to ultimately achieve water quality objectives. The

Regional Board based its findings that the program would have a "high likelihood of success" on the presence of the numeric standards and timetables.

270. Without those enforceable numeric standards, and the corresponding timetables for their implementation, the program is unlikely to succeed in achieving water quality objectives.

271. Without those enforceable numeric standards and the corresponding timetables, the WDRs for irrigated agriculture in the Central Coast do not contain a time schedule and quantifiable milestones "designed to measure progress toward reaching the specified requirements."

272. As a result, by stripping out the numeric standards and their associated timelines and prohibiting the Regional Board from replacing them, the State Board committed a prejudicial abuse of discretion by failing to proceed in the manner required by law.

273. The State Board did not make findings that the remaining regulatory tools available to the Regional Board—education and certification of the INMP—will have a high likelihood of success. In fact, the evidence shows the opposite: that many years of education, tracking and reporting nitrogen application under penalty of perjury, and similar soft measures had no effect on nitrogen discharge and that water quality continued to worsen.

274. As a result, the State Board Order committed a prejudicial abuse of discretion by issuing an order not supported by findings, and what findings exist are not supported by the evidence.

275. The State Board, further, violated Key Element 3 of the Nonpoint Source Policy by failing to require a time schedule that is "no longer than reasonably necessary" to achieve water quality objectives.

276. Ag Order 4.0's numeric standards are practicable. The final application limit is set at the 85th percentile of nitrogen application by grower. This means that 85 percent of growers are capable of achieving the limit. More than half of growers are currently achieving the discharge standard through 2028 with no change to their management practices.

277. By failing to include a time schedule in the State Board Order that is "no longer than reasonably necessary," the State Board has committed a prejudicial abuse of discretion by failing

to proceed in the manner required by law.

278. And the State Board Order is not supported by findings that the time schedule is "no longer than reasonably necessary." To the extent that the State Board Order is supported by findings that any time schedule is "no longer than reasonably necessary, such findings are not supported by the evidence. As a result, the State Board has committed a prejudicial abuse of discretion.

279. The State Board has stripped out the "quantifiable milestones" from Ag Order 4.0 and has prohibited the Regional Board from replacing them with different quantifiable milestones until the State Board completes an expert panel process at some unknown time in the future and then, after another unknown period of time, issues further guidance. This violates Key Element 3's requirement that a pollution control program contain "quantifiable milestones."

280. The State Board cites no evidence that the application and discharge limits are not reasonably achievable. Its reasoning for rejecting the numeric standards is largely based on failure to comply with the ESJ Order.

281. The State Board's failure to include quantifiable milestones is a failure to proceed in the manner required by law and is therefore a prejudicial abuse of discretion.

282. The State Board denied Petitioners' request for supplemental evidence, which included evidence that nitrogen application rates did not improve following the 2021 adoption of Ag Order 4.0 and that achieving the numeric standards according to the timeline in Ag Order 4.0 continues to be practicable. The State Boad prejudicially abused its discretion by denying this request, which contained relevant evidence that was properly submitted to the Board.

283. Petitioners have no other remedy at law.

SECOND CAUSE OF ACTION

(Administrative Mandate for Unlawful Amendment of Nonpoint Source Policy Key Element 3 and Promulgation of Void Underground Regulation, violation of Water Code sections 13147 and 13149.2 and Government Code sections 11340.5 and 11353—Asserted by All Petitioners Against Respondent State Board)

284. Petitioners incorporate by reference and reallege the paragraphs set forth above.

285. Water Code section 13147 requires that before adopting a state water policy, the State

Board must, inter alia, give 60 days' notice to Regional Boards, give notice by publication within any region affected by the proposed policy, and holding a hearing.

286. Government Code section 11340.5 states that no "state agency shall issue, utilize, enforce, or attempt to enforce any guideline, criterion, bulletin, manual, instruction, order, standard of general application, or other rule, which is a regulation as defined in Section 11342.600, unless the guideline, criterion, bulletin, manual, instruction, order, standard of general application, or other rule has been adopted as a regulation and filed with the Secretary of State pursuant to this chapter."

287. Government Code section 11353 provides for special procedures for the adoption or revision of state water policy, including submittal to the Office of Administrative Law. A policy or a revision to a policy "shall not become effective unless and until the regulatory provisions are approved by" the Office of Administrative Law.

288. Water Code section 13149.2, subdivision (b), requires that, before amending state water policy, the State Board must include "(1) A concise summary of the anticipated water quality impact in disadvantaged or tribal communities as a result of the permitted activity or facility, and any environmental justice concerns within the scope of the state board or regional board's authority previously raised to the applicable board by interested persons with regard to these impacts." It must also identify "measures available and within the scope of the state board or regional board's authority to address the impacts of the permitted activity or facility in a disadvantaged or tribal community."

289. By prohibiting the Regional Board, or any Regional Board, from imposing regulatory requirements for nitrogen discharge from irrigated agriculture, the State Board has unlawfully amended the Nonpoint Source Policy without complying with the required procedures or including the required information.

290. The Nonpoint Source Policy requires pollution control programs such as Ag Order 4.0 to meet its five Key Elements, including a high likelihood that the program will achieve water quality objectives, and a time schedule with quantifiable milestones that is no longer than reasonably necessary to achieve water quality objectives.

291. But the State Board has interposed a new procedural requirement: that before addressing nitrate discharges—discharges which negatively affect hundreds of thousands of Californians, including Petitioners—Regional Boards must await State Board "precedential guidance." Such guidance may only issue after 1) a staff review of data that will take up to 12 months; 2) an expert panel process of unknown and unlimited duration; 3) a State Board process of unknown and unlimited duration to review the expert panel's report and generate precedential guidance.

292. None of these steps are contained in or contemplated by the Nonpoint Source Policy.

293. The State Board Order therefore amends the Nonpoint Source Policy by prohibiting Regional Boards from adopting waste discharge requirements that control pollution using numeric standards, no matter how much evidence a Regional Board collects showing the urgency of the need for a numeric standard, the failure of alternative methods, and the practicability of meeting the proposed numeric standard.

294. The State Board justifies its action by pointing at the purportedly "precedential" ESJ Order.

295. But the ESJ Order was based upon a significantly different and less-developed administrative record. Here, unlike during the ESJ Order process, the Regional Board has gathered data and found that measures such as reporting, education, and other soft measures have not been effective in reducing nitrogen discharges.

296. And the ESJ Order did not, by its own terms, give precedential direction to the Central Coast Board prohibiting it from adopting regulatory numeric standards for nitrogen application and discharge.

297. By unlawfully amending the Nonpoint Source Policy, the State Board Order prejudicially abused its discretion by failing to proceed according to law because it failed to comply with the procedural requirements of Water Code sections 13147, 13149.2, and Government Code section 11353 before doing so.

298. Petitioners have no other remedy at law.

THIRD CAUSE OF ACTION

(Administrative Mandate for Violation of the Antidegradation Policy, asserted by all Petitioners against the State Board)

299. Petitioners incorporate by reference and reallege the paragraphs set forth above.

300. The Antidegradation Policy requires that discharges of waste to high quality waters must be governed by waste discharge requirements that result in the "best practicable treatment or control" (BPTC) of the discharge "necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained."

301. Ag Order 4.0 is a waste discharge requirement for a discharge of waste to high quality waters.

302. The Regional Board found that the numeric standards for nitrogen application and discharge were the BPTC for nitrate pollution. This is because the numeric standards and the associated time schedules are achievable and are calculated to prevent pollution and achieve water quality objectives.

303. The Regional Board further found that the numeric standards would, in time, reduce pollution and nuisance and would result in the highest water quality consistent with maximum benefit to the people of the State.

304. The State Board made no antidegradation findings when adopting the State Board Order.

305. It made no findings nor cited any evidence that the remaining requirements of Ag Order 4.0 after modification by the State Board Order would prevent pollution or nuisance.

306. It made no findings nor cited any evidence that the remaining requirements of Ag Order 4.0 after modification by the State Board Order would result in the highest water quality consistent with the maximum benefit to the people of the state.

307. It made no findings nor cited any evidence that the remaining requirements of Ag Order 4.0 after modification by the State Board Order would result in BPTC for nitrate pollution.

308. The State Board Order therefore violates the Antidegradation Policy. By violating the Antidegradation Policy, the State Board has prejudicially abused its discretion by failing to proceed according to law. It has also prejudicially abused its discretion by failing to make findings that support the decision, and to the extent that it makes findings, they are not supported by evidence.

309. Petitioners have no other remedy at law.

FOURTH CAUSE OF ACTION

(Violations of California Water Code Section 13263 and Nonpoint Source Policy Key Element 2, asserted by all Petitioners against the Central Coast Regional Board)

310. Petitioners incorporate by reference and reallege each and every allegation contained in the paragraphs set forth above as though fully set forth herein.

311. A Regional Board or the State Board may issue Waste Discharge Requirements only if they are consistent with the applicable Basin Plan. (Wat. Code § 13263.) And Basin Plans must conform with state water policies. (Wat. Code § 1340.) The applicable Basin Plan incorporates the Nonpoint Source Policy.

312. The Nonpoint Source Policy's Key Element 2 requires "a description of the MPs [management practices] and other program elements that are expected to be implemented to ensure attainment of the implementation program's stated purpose(s)." Element 2 also requires the Central Coast Regional Board "must be able to determine that there is a high likelihood that the program will attain water quality requirements."

313. The objectives of Ag Order 4.0 are to protect and restore beneficial uses and achieve water quality objectives specified in the Basin Plan for commercial irrigated agricultural areas in the Central Coast region by: i) Minimizing nitrate discharges to groundwater, ii) Minimizing nutrient discharges to surface water, iii) Minimizing toxicity in surface water from pesticide discharges, iv) Protecting riparian and wetland habitat, and v) Minimizing sediment discharges to surface water. Additionally, Ag Order 4.0's stated objectives are to comply with the State's NPS Policy, relevant court decisions, and other relevant statutes and water quality plans and policies, including total maximum daily loads in the Central Coast region.

314. According to the Regional Board, "[r]iparian areas play an important role in achieving numerous water quality objectives established in the Basin Plan to protect specific beneficial uses. These include water quality objectives related to: a. Natural receiving water temperature, b. Dissolved oxygen levels, c. Suspended sediment load, d. Settleable material concentrations, e. Chemical constituents, and f. Turbidity."

315. Because the Regional Board stripped the Riparian Area Management Plan ("RAMP") requirements out of the WDRs, Ag Order 4.0 lacks the management practices necessary to ensure attainment of the Order's stated purposes, ensure water quality objectives will be achieved, or be protective of the region's beneficial uses.

316. The Regional Board made extensive findings that riparian setbacks were necessary to reduce nutrient, pesticide, and sediment discharges into waters of the state, to prevent the degradation of water quality, and to ultimately achieve water quality objectives.

317. On December 10, 2020, the Regional Board members directed staff to remove the RAMP requirements and to replace them with the inadequate management practices required in previous Ag Order 3.0. The Regional Board members' explanation for why Staff should remove the RAMP requirements was because the Regional Board lacked the time necessary to decide on the final RAMP provisions.

318. The Regional Board made findings that prior agricultural orders over the past 15 years "have not to-date resulted in measurable progress towards achieving water quality objectives and protecting beneficial uses. Therefore, a new order that relies on the same approach would not have a high likelihood of success."

319. The Regional Board made extensive findings that existing riparian habitat where agricultural land use is prevalent was poor. Table A.C.5-4 "Central Coast Region Riparian Acreage in Irrigated Agricultural Areas" showed that 90.1 percent (485,323 acres) of irrigated agricultural areas in the region had 0 percent riparian cover, and 9 percent (48,370 acres) had low riparian cover. Only 0.33 percent (1,612 acres) had medium or high riparian cover.

320. Alternatively, the Regional Board failed to make the necessary findings that the final management practices, specifically the requirement to maintain the status quo level of riparian

protection, will result in water quality improvements, are sufficient to ensure that water quality objectives will be achieved and maintained or will be protective of the beneficial uses consistent with the Central Coast's Basin Plan.

321. In adopting Ag Order 4.0, the Central Coast Regional Board violated Water Code section 13263 by failing to adopt requirements consistent with the Central Coast water quality control plan, including the NPS Policy, and by failing to adopt requirements that are in the public interest such that Ag Order 4.0 does not ensure that water quality objectives would be achieved and maintained.

322. The Central Coast Regional Board's unlawful adoption of Ag Order 4.0 constitutes a prejudicial abuse of discretion, does not comply with the laws as alleged, is unsupported by findings or evidence, and is actionable under California Water Code section 13330 and California Code of Civil Procedure section 1094.5. Petitioners have no other adequate remedy at law.

FIFTH CAUSE OF ACTION

(Administrative Mandate for violation of Water Code 13149.2, asserted by all Petitioners against the State Board)

323. Petitioner hereby realleges and incorporates by reference the preceding paragraphs in their entirety.

324. California Water Code section 13149.2, subdivision (c) mandates that "[w]hen issuing or reissuing regional or statewide waste discharge requirements or waivers of waste discharge requirements, the state board or a regional board shall make a concise, programmatic finding on potential environmental justice, tribal impact, and racial equity considerations related to the issuance."

325. The State Board, in issuing the State Board Order, reissued a waste discharge requirement because the Order: (1) Made significant amendments to the Central Coast Regional Board's initial waste discharge requirement; and (2) Prohibited all regional boards from implementing "any other new regulatory approach focused on nitrogen impacts to water quality."

326. The finding required by Water Code section 13149.2, subdivision (c) must include: [a] concise summary of the anticipated water quality impact in disadvantaged or tribal communities as a result of the permitted activity or facility," and "any environmental justice concerns within the scope of the state board or regional board's authority previously raised to the applicable board by interested persons with regard to these impacts." (Wat. Code §13149.2, subd. (b)(1) and (c).)

327. The finding must also include "[i]dentification of measures available and within the scope of the state board or regional board's authority to address the impacts of the permitted activity or facility in a disadvantaged or tribal community." (Wat. Code §13149.2, subd. (b)(2) and (c).)

328. The finding "shall be based on readily available information identified by staff or raised during the public process." (Wat. Code §13149.2, subd. (c).)

329. For reissuances of waste discharge requirements, the state or regional board's finding "may be limited to considerations related to any changes to the requirements of the prior waste discharge requirements or waivers of waste discharge requirements." (Wat. Code §13149.2, subd. (c).)

330. In adopting the State Board Order, the State Board was required to comply with California Water Code section 13149.2, subdivision (c).

331. In adopting the State Board Order, the State Board failed to comply with Water Code section 13149.2, subdivision (c) because it:

a. Failed to make a concise, programmatic finding on potential environmental justice considerations related to the reissuance of Ag Order 4.0.

b. Failed to make a concise, programmatic finding on potential tribal impact considerations related to the reissuance of Ag Order 4.0.

c. Failed to make a concise, programmatic finding on potential racial equity considerations related to the reissuance of Ag Order 4.0

332. In adopting the State Board Order, the State Board further failed to comply with Water Code section 13149.2, subd (c) because it:

a. Failed to include a concise summary of the anticipated water quality impact in disadvantaged or tribal communities as a result of the reissuance of Ag Order 4.0.

b. Failed to include any the environmental justice concerns raised by Petitioner the Comité or other Petitioners or members of the public during the public process related to reissuance of Ag. Order 4.0.

333. The State Board's adoption of the State Board Order without such finding constitutes a prejudicial abuse of discretion, because the State Board failed to proceed in the manner required by law and issued an order that is not supported by required findings, and is therefore actionable under California Water Code section 13330 and California Code of Civil Procedure section 1094.5.

334. The State Board further violated Water Code section 13149.2, subdivision (c) by, in the State Board Order, improperly restricting the Regional Board's future Water Code section 13149.2, subdivision (c) finding to "changes to the requirements in the existing [Ag Order 4.0] that go beyond what is needed to comply with [the ESJ Order]." This action exceeds the State Board's authority to limit a regional board's Water Code section 13149.2, subdivision (c).

335. The State Board's limitation of the Regional Board's Water Code section 13149.2 finding constitutes a prejudicial abuse of discretion, because the State Board failed to proceed in the manner required by law and issued an order that is not supported by required findings, and is therefore actionable under California Water Code section 13330 and California Code of Civil Procedure section 1094.5.

336. Petitioners, including specifically the Comité's membership, were harmed by the State Board's actions because they were deprived of knowing and understanding how the changes the State Board made to Ag Order 4.0 will impact the drinking water quality in the areas of Central Coast region most impacted by nitrate contamination.

337. Petitioners have no other adequate remedy at law.

PRAYER FOR RELIEF

WHEREFORE, Petitioners pray for relief as follows:

338. That the Court issue a writ of mandate requiring the State Board to vacate and set

aside the State Board Order, or the provisions and findings of the State Board Order challenged herein, and to readopt them only in conformance with the law;

339. That the Court issue a writ of mandate requiring the State Board to, when readopting vacated provisions and findings, include:

a. A specific time schedule, and corresponding quantifiable milestones designed to measure progress toward reaching water quality objectives that is no longer than reasonably necessary to achieve those objectives, in conformance with the Nonpoint Source Policy.

b. A clear statement that the ESJ Order does not prohibit the imposition of enforceable numeric standards for nitrate application or discharge where the record supports such numeric standards.

c. Provisions that provide for BPTC for any discharge of nitrogen from irrigated agricultural operations in the Central Coast region and makes all required findings and be in compliance with the Antidegradation Policy.

d. Necessary findings in any State Board orders and any pursuant regional board orders required to comply with 13149.2 et seq.

340. That the Court issue a writ of mandate requiring the Regional Board to vacate and set aside provisions of Ag Order 4.0 related to protecting riparian and wetland habitat and to readopt an waste discharge requirements with a stated purpose of protecting and enhancing riparian and wetland habitat and that provide riparian area management requirements that include the management practices necessary to ensure attainment of this stated purpose, ensures water quality objectives will be achieved, and be protective of the region's waters' beneficial uses.

341. That the Court award Petitioners their costs and expenses, including reasonable attorneys' fees according to law.

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342. That the Court grant any other such relief as the Court deems proper.

Respectfully submitted,

Dated: October 27, 2023

CALIFORNIA COASTKEEPER

By: Sean Bothwell
Drevet Hunt

Attorneys for Petitioners Monterey Waterkeeper, California Coastkeeper Alliance, The Otter Project, and Santa Barbara Channelkeeper

Dated: October 27, 2023

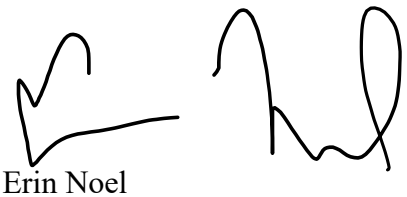
ENVIRONMENTAL LAW FOUNDATION

By: Nathaniel Kane

Attorneys for Petitioners San Jerardo Cooperative, Inc., Pacific Coast Federation of Fishermen's Associations, Institute for Fisheries Resources, and California Sportfishing Protection Alliance

Dated: October 27, 2023

CALIFORNIA RURAL LEGAL ASSISTANCE



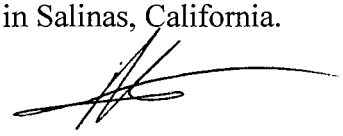
By: Erin Noel
Elias Rodriguez

Attorneys for Petitioners Comité de Salinas

VERIFICATION

I, Manuel Barrera, declare:

1. I am the President of the Comité de Salinas, a Petitioner here. I make this verification of my own knowledge. I hereby verify that the factual matters stated in VERIFIED PETITION FOR WRIT OF MANDATE are known to me personally and that they are true or that I believe them to be true.
2. I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct and that this verification was executed this 26th day of October in Salinas, California.

By: 

Manuel Barrera

VERIFICATION

1. I am Ileana Miranda, General Manager of San Jerardo Cooperative, Inc., a Petitioner here. I have my professional office in Salinas, CA.

3. I have read the foregoing Verified Petition for Writ of Mandate and know the contents thereof. I am informed and believe that the factual allegations therein are true and on that ground allege that the matters stated therein are true.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct.

Executed this 27th day of October at Salinas, California.

Ileana Miranda

VERIFICATION

1. I am Chelsea H. Tu, Executive Director of Monterey Coastkeeper (DBA Monterey Waterkeeper), a Petitioner here. I have my professional office in Seaside, California.

3. I have read the foregoing Verified Petition for Writ of Mandate and know the contents thereof. I am informed and believe that the factual allegations therein are true and on that ground allege that the matters stated therein are true.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct.

Executed this 27th day of October at Seaside, California.

Chelsea H. Tu

October 27, 2023

VERIFICATION

1. I am Ted Morton, Executive Director of Santa Barbara Channelkeeper, a Petitioner here. I have my professional office in Santa Barbara, California.

3. I have read the foregoing Verified Petition for Writ of Mandate and know the contents thereof. I am informed and believe that the factual allegations therein are true and on that ground allege that the matters stated therein are true.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct.

Executed this 27th day of October at Santa Barbara, California.

Ted Morton

October 27, 2023

VERIFICATION

1. I am Chris Shutes, Executive Director of California Sportfishing Protection Alliance, a Petitioner here. I have my professional office in Berkeley, CA.

3. I have read the foregoing Verified Petition for Writ of Mandate and know the contents thereof. I am informed and believe that the factual allegations therein are true and on that ground allege that the matters stated therein are true.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct.

Executed this 27th day of October at Berkeley, California.

Chris Shutes

October 27, 2023

VERIFICATION

1. I am an attorney at law duly admitted and licensed to practice before the courts of this State. I have my professional address at 1222 Preservation Park Way, Suite 200, Oakland, California 94612, County of Alameda.

2. I am attorney of record for Petitioners Pacific Coast Federation of Fishermen's Associations (PCFFA) and Institute for Fisheries Resources (IFR). My California State Bar number is 279394.

3. Petitioners PCFFA and IFR are nonprofit corporations headquartered in the City and County of San Francisco, California and are therefore absent from the county where I have my office.

4. I have read the foregoing Verified Petition for Writ of Mandate and know the contents thereof. I am informed and believe that the factual allegations therein are true and on that ground allege that the matters stated therein are true.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct.

Executed this 27th day of October at Oakland, California.

Nathaniel Kane

October 27, 2023

VERIFICATION

1. I am Sean Bothwell, Executive Director of California Coastkeeper and The Otter Project, Petitioners here. I have my professional office in Sacramento, CA.

3. I have read the foregoing Verified Petition for Writ of Mandate and know the contents thereof. I am informed and believe that the factual allegations therein are true and on that ground allege that the matters stated therein are true.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct.

Executed this 27th day of October at Sacramento, California.

Sean Bothwell

October 27, 2023

EXHIBIT A

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

GENERAL WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES FROM IRRIGATED LANDS

ORDER NO. R3-2021-0040

April 15, 2021

ORDER

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THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, CENTRAL COAST REGION FINDS:

Part 1, Section A. Findings

Background and Purpose

1. As described in the Water Quality Control Plan for the Central Coastal Basin (Basin Plan), the central coast region of California represents approximately 7.2 million acres of land. There are approximately 540,000 acres of irrigated land and approximately 3,000 agricultural operations that may be generating wastewater that falls into the category of discharges of waste from irrigated lands.

2. The central coast region has more than 17,000 miles of surface waters (linear streams/rivers) and approximately 4,000 square miles of groundwater basins that are, or may be, affected by discharges of waste from irrigated lands. Of the nine hydrologic regions in the state, the central coast region is the most groundwater dependent region with approximately 86% of its water supply being derived from groundwater.

3. The State Water Resources Control Board (State Water Board) and Regional Water Quality Control Boards (Regional Water Boards) are the principal state agencies with primary responsibility for the coordination and control of water quality for the health, safety and welfare of the people of the state pursuant to the Porter-Cologne Water Quality Control Act (Porter-Cologne Act, codified in Water Code Division 7). The legislature, in the Porter-Cologne Act, directed the state, through the Water Boards, to exercise its full power and jurisdiction to protect the quality of the waters in the state from degradation and to attain the highest water quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible, and considering precipitation, topography, population, recreation, agriculture, industry, and economic development (Water Code section 13000).

4. Since the issuance of the first Agricultural Order in 2004 and subsequent Agricultural Orders in 2012 and 2017, the California Regional Water Quality Control Board, Central Coast Region (Central Coast Water Board) has compiled additional and substantial empirical data demonstrating that water quality conditions in agricultural areas of the region continue to be severely impaired or polluted by waste discharges from irrigated agricultural operations and activities that impair beneficial uses. The main impacts from irrigated agriculture in the central coast region are nitrate discharges to groundwater and associated drinking water impacts, nutrient discharges to surface water, pesticide discharges

and associated toxicity, sediment discharges, and degradation of riparian and wetland areas and the associated impairment or loss of beneficial uses.

5. The objectives of this Order are:

   a. Protect and restore beneficial uses and achieve water quality objectives specified in the Basin Plan for commercial irrigated agricultural areas in the central coast region by:
      i. Minimizing nitrate discharges to groundwater,
      ii. Minimizing nutrient discharges to surface water,
      iii. Minimizing toxicity in surface water from pesticide[1] discharges,
      iv. Protecting riparian and wetland habitat, and
      v. Minimizing sediment discharges to surface water.
   b. Effectively track and quantify achievement of 5.a.i through 5.a.v over a specific, defined time schedule.
   c. Comply with the State's Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program (NPS Policy), the State Antidegradation Policy, relevant court decisions such as those pertaining to Coastkeeper *et al* lawsuits, the precedential language in the Eastern San Joaquin Watershed Agricultural Order, and other relevant statutes and water quality plans and policies, including total maximum daily loads in the central coast region.

6. This Order regulates discharges of waste from irrigated lands by requiring individuals subject to this Order to comply with the terms and conditions set forth herein to ensure that such discharges do not cause or contribute to the exceedance of any regional, state, or federal numeric or narrative water quality objectives or impair any beneficial uses in waters of the state and of the United States.

7. Water Code section 13260(a) requires that any person discharging waste or proposing to discharge waste that could affect the quality of the waters of the state, other than into a community sewer system, must file with the appropriate Regional Board a report of waste discharge (ROWD) containing such information and data as may be required by the Central Coast Water Board, unless the Central Coast Water Board waives such requirement.

8. Water Code section 13263(a) requires the Central Coast Water Board to prescribe waste discharge requirements (WDRs), or waive WDRs, for the discharge. The requirements must implement the Basin Plan and must take into

[1] A pesticide is any substance intended to control, destroy, repel, or otherwise mitigate a pest. The term pesticide is inclusive of all pest and disease management products, including insecticides, herbicides, fungicides, nematicides, rodenticides, algicides, etc.

consideration the beneficial uses to be protected and the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Water Code section 13241.

9. Water Code section 13263(b) states that, in prescribing requirements, the Central Coast Water Board need not authorize the utilization of the full waste assimilation capacities of the receiving waters.

10. Water Code section 13263(e) states that for WDRs, "Upon application by any affected person, or on its own motion, the regional board may review and revise requirements. All requirements shall be reviewed periodically."

11. This Order does not create a vested right to discharge; all discharges are a privilege, not a right, as described in Water Code section 13263(g).

12. Water Code section 13263(i) authorizes the Central Coast Water Board to prescribe general WDRs for a category of discharges if the Central Coast Water Board finds or determines that all the criteria listed below apply to the discharges in that category. Discharges associated with irrigated agricultural operations that will be regulated under this Order are consistent with these criteria and therefore a general order is appropriate.

    a. The discharges are produced by the same or similar operations.
    b. The discharges involve the same or similar type of waste.
    c. The discharges require the same or similar treatment standards.
    d. The discharges are more appropriately regulated under general WDRs than individual WDRs.

13. Water Code section 13243 authorizes the Central Coast Water Board, in WDRs, to specify certain conditions or areas where the discharge of waste, or certain types of waste, will not be permitted.

14. Water Code section 13267(a) authorizes the Central Coast Water Board to, in establishing or reviewing waste discharge requirements, or in connection with any action to any plan or requirement authorized by the Porter-Cologne Act, investigate the quality of any waters of the state within the region. The monitoring and reporting requirements as set forth in Attachment B are established under Water Code section 13267(b).

15. Water Code section 13267(c) authorizes the Central Coast Water Board or its authorized representatives to, in conducting an investigation of the quality of waters of the state within the region, inspect the facilities of the Discharger upon consent, issuance of a warrant, or in an emergency affecting public health or safety, to ascertain compliance with this Order and to ascertain whether the

purpose of the Porter-Cologne Act are being met. Inspections under Water Code section 13267(c) include sampling and monitoring.

16. Water Code section 13304 authorizes the Central Coast Water Board to, upon making the requisite findings, issue a cleanup and abatement order (CAO) that requires Dischargers to provide emergency and long-term alternative water supplies or replacement water service, including wellhead treatment, to each affected public water supplier or private well owners. A CAO is a separate action from this Order; this Order does not require Dischargers to provide alternative water supplies or replacement water.

Public Participation Process

17. In August 2017, Central Coast Water Board staff held a series of listening sessions throughout the central coast region to solicit stakeholder input on potential improvements to the previous agricultural order. The Central Coast Water Board discussed the input received from stakeholders during the September 2017 board meeting.

18. In February 2018, the Central Coast Water Board published an initial study to begin soliciting input related to environmental review for the California Environmental Quality Act (CEQA), in preparation for developing a draft Environmental Impact Report (EIR). A 73-day public comment period was held for the initial study. In March 2018, Central Coast Water Board staff held a series of public CEQA scoping meetings throughout the region. Input received during the public comment period and public scoping meetings has been considered in the development of the draft EIR.

19. In March and May 2018, Central Coast Water Board meetings included informational items dedicated to a review of water quality conditions associated with agricultural activities and discharges. The March 2018 informational item focused on surface water quality conditions and agricultural discharges and the May 2018 informational item focused on groundwater quality conditions and nitrate impacts to groundwater. Both informational items incorporated presentations from several outside speakers.

20. In September 2018, the Central Coast Water Board's public meeting was dedicated to a workshop for agricultural order stakeholders. Panels of agricultural, environmental, and environmental justice representatives gave presentations to the board in response to a series of questions staff proposed:

    a. What can growers and the regional board do to demonstrate quantifiable progress to minimize nitrate discharge to groundwater to achieve water quality objectives?

b. What can growers and the regional board do to demonstrate quantifiable progress to minimize nutrient discharge to surface waters to achieve water quality objectives?
c. What can growers and the regional board do to demonstrate quantifiable progress to minimize toxicity in surface waters from pesticide discharges to achieve water quality objectives?
d. What can growers and the regional board do to ensure that riparian and wetland habitat is protected due to agricultural activities and discharges?
e. What can growers and the regional board do to demonstrate quantifiable progress to minimize sediment discharge to achieve water quality objectives?
f. How can the regional board use discharge permit requirements to ensure current and future affordable, safe, and clean water for drinking and environmental uses?

21. In November 2018, the Central Coast Water Board published a set of five conceptual options tables that serve as the Central Coast Water Board's framework to address the questions posed in the September 2018 meeting. The Central Coast Water Board reviewed and discussed the options tables during its public meeting in November, and a 64-day written public comment period was subsequently held to solicit detailed stakeholder input. Central Coast Water Board staff held a series of outreach meetings throughout the region during the comment period.

22. In March 2019, after the 64-day public comment period, the Central Coast Water Board published updated versions of the five conceptual options tables. During the public meetings in March and May 2019, the Central Coast Water Board discussed the updated tables and received additional stakeholder comment.

23. In September 2019, during its public meeting, the Central Coast Water Board held a workshop focused on co-managing food safety and environmental protection, the role of riparian vegetation in water quality and beneficial use protection, and Discharger experiences with food safety challenges.

24. On February 21, 2020, the Central Coast Water Board published the draft Order and draft EIR and began a 45-day public comment period. The comment period was extended twice and closed on June 22, 2020.

25. In June 2020, Central Coast Water Board staff conducted three outreach meetings, which included presentations of the draft Order and draft EIR, and a question and answer session for attendees. These outreach meetings were conducted virtually via the Zoom platform, due to the COVID-19 pandemic.

26. Beginning on September 10, 2020 and continuing to January 8, 2021, the Central Coast Water Board held 10 days of Board meetings to receive oral comments

from the public and to discuss the draft Order. During these meetings, three of which were devoted entirely to receiving public comment and Board engagement with stakeholders, the Board deliberated on the draft Order using a consensus-based approach through which they directed staff on the development of a revised Order.

27. On January 26, 2021, the Central Coast Water Board circulated a revised draft Order for a 30-day public comment period that closed on February 25, 2021. Central Coast Water Board staff subsequently considered the public comments and developed a proposed Order for Board consideration during an April 14-15, 2021, public hearing.

28. The Central Coast Water Board, in a public hearing held on April 14-15, 2021, has heard and considered all comments pertaining to the discharge and proposed Order.

29. After considering all comments pertaining to this General Permit during a public hearing on April 14-16, 2021, this Order was found consistent with the findings in this Part 1 and Attachment A.

30. Any person aggrieved by this action of the Central Coast Water Board may petition the State Water Board to review the action in accordance with California Water Code section 13320 and title 23 California Code of Regulations sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., within 30 calendar days of the date of adoption of this Order at the following address, except that if the thirtieth day following the date of adoption falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day:

    State Water Resources Control Board
    Office of Chief Counsel
    P.O. Box 100, 1001 I Street
    Sacramento, CA 95812-0100

    Or by email at **waterqualitypetitions@waterboards.ca.gov**

    For instructions on how to file a petition for review, see **http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml**.

Scope of Order

Irrigated Lands and Agricultural Discharges Regulated Under this Order

31. This Order regulates (1) discharges of waste from commercial irrigated lands, including, but not limited to, land planted to row, vineyard, field and tree crops where water is applied for producing commercial crops; (2) discharges of waste from commercial nurseries, nursery stock production, and greenhouse operations with soil floors that do not have point source-type discharges and are not currently operating under individual WDRs; and (3) discharges of waste from lands that are planted to commercial crops that are not yet marketable, such as vineyards and tree crops.

32. Discharges from irrigated lands regulated by this Order include discharges to surface water and groundwater, through mechanisms such as irrigation return flows, percolation, tailwater, tile drain water, stormwater runoff flowing from irrigated lands, stormwater runoff conveyed in channels or canals resulting from the discharge from irrigated lands, and runoff resulting from frost control or operational spills. These discharges can contain wastes that could affect the quality of waters of the state and impair beneficial uses.

33. This Order also regulates agricultural activities such as the removal or degradation of riparian vegetation resulting in the loss or degradation of instream beneficial uses.

Dischargers Regulated Under this Order

34. This Order regulates both landowners and operators of commercial irrigated lands on or from which there are discharges of waste or activities that could affect the quality of any surface water or groundwater or result in the impairment of beneficial uses (Dischargers). Dischargers are responsible for complying with the conditions of this Order. Both the landowner and the operator of the irrigated agricultural land are Dischargers under this Order. The Central Coast Water Board will hold both the landowner and the operator liable for noncompliance with this Order, regardless of whether the landowner or the operator is the party to enroll under this Order.

35. For the purposes of this Order, irrigated lands producing commercial crops are those operations that have one or more of the following characteristics:

    a. The landowner or operator has obtained a pesticide use permit from a local County Agricultural Commissioner;

b. The crop is sold, including but not limited to 1) an industry cooperative, 2) a harvest crew/company, or 3) a direct marketing location, such as certified Farmers Markets;
c. The federal Department of Treasury Internal Revenue Service for 1040 Schedule F Profit or Loss from Farming is used to file federal taxes.

36. The electronic Notice of Intent (eNOI) serves as a report of waste discharge (ROWD) for the purposes of this Order.

37. The Central Coast Water Board recognizes that certain limited resource growers[2] (as defined by the U.S. Department of Agriculture) may have difficulty achieving compliance with this Order. The Central Coast Water Board will prioritize assistance for these growers, including but not limited to technical assistance, grant opportunities, and necessary flexibility to achieve compliance with this Order (e.g., adjusted monitoring, reporting, or time schedules).

Agricultural Dischargers Not Covered Under this Order and Who Must Apply for Individual Waste Discharge Requirements

38. This Order does not cover point source-type discharges from commercial nurseries, nursery stock production, greenhouses, or other operations. This Order does not cover discharges of waste from fully contained greenhouse operations (i.e., those that have no groundwater discharge due to impermeable floors but may have other discharges associated with the operation). These operations must either eliminate all such discharges of waste or submit a ROWD to apply for individual WDRs as set forth in Water Code section 13260.

Enforcement for Noncompliance

39. The State Water Board's Water Quality Enforcement Policy (Enforcement Policy) describes progressive enforcement action for violations of WDRs when appropriate. However, the Enforcement Policy recommends formal enforcement as a first response to more significant violations. Progressive enforcement is an escalating series of actions that allows for the efficient and effective use of enforcement resources to 1) assist cooperative Dischargers in achieving compliance; 2) compel compliance for repeat violations and recalcitrant violators; and 3) provide a disincentive for noncompliance. Progressive enforcement

[2] The term "Limited Resource Farmer or Rancher" means a participant:
- With direct or indirect gross farm sales not more than the current indexed value in each of the previous two years, and
- Who has a total household income at or below the national poverty level for a family of four, or less than 50 percent of county median household income in each of the previous two years.

A Self-Determination Tool is available to the public and may be completed on-line or printed and completed hardcopy at the USDA website: **Limited Resource Farmer/Rancher Self Determination Tool**.

actions may begin with informal enforcement actions such as a verbal, written, or electronic communication between the Central Coast Water Board and a Discharger. The purpose of an informal enforcement action is to quickly bring the violation to the Discharger's attention and to give the Discharger an opportunity to return to compliance as soon as possible. The highest level of informal enforcement is a Notice of Violation.

40. The Enforcement Policy recommends formal enforcement actions for the highest priority violations, chronic violations, and/or threatened violations. Violations of this Order that will be considered a priority include, but are not limited to:

    a. Failure to obtain required regulatory coverage;
    b. Failure to achieve numeric limits;
    c. Falsifying information or intentionally withholding information required by applicable laws, regulations, or an enforcement order;
    d. Failure to monitor or provide complete and accurate information as required;
    e. Failure to pay annual fees, penalties, or liabilities; and
    f. Failure to submit required reports on time.

41. Water Code section 13350 provides that any person who violates WDRs may be 1) subject to administrative civil liability imposed by the Central Coast Water Board or State Water Board in an amount of up to $5,000 per day of violation, or up to $10 per gallon of waste discharged; or 2) subject to civil liability imposed by a court in an amount of up to $15,000 per day of violation, or up to $20 per gallon of waste discharged. The actual calculation and determination of administrative civil penalties must be consistent with the Enforcement Policy and the Porter-Cologne Act.

Additional Findings and Regulatory Considerations

42. Attachment A to this Order, incorporated herein, includes additional findings that further describe the Water Board's legal and regulatory authority; compliance with CEQA requirements; applicable plans and policies adopted by the State Water Board and the Central Coast Water Board that contain regulatory conditions that apply to the discharge of waste from irrigated lands; and the rationale for this Order, including descriptions of the environmental and agricultural resources in the central coast region and impacts to water quality and beneficial uses from agricultural discharges.

43. The Central Coast Water Board encourages Dischargers to participate in third-party groups or programs (e.g., certification program, watershed group, water quality coalition, monitoring coalition, or other third-party effort) to facilitate and document compliance with this Order. Third-party programs can be used to implement outreach and education, monitoring and reporting, management practice and/or water quality improvement projects. Regionally scaled third-party

programs addressing multiple Order requirements are preferred to provide economies of scale to reduce Discharger costs, maximize effectiveness, and streamline Water Board oversight; however, watershed- or basin-scale third-party programs of limited scope may be appropriate under certain circumstances and should be coordinated to the extent practicable for consistency and effectiveness. Commodity group certification programs may also be effective in facilitating compliance with this Order. Dischargers participating in an Executive Officer approved third-party program may be subject to permit fee reductions or alternative compliance pathways that substantively comply with this Order.

44. The Central Coast Water Board acknowledges that it will take time to develop meaningful and effective third-party programs that facilitate compliance with this Order. The Order considers this by allowing an initial grace period for the phasing in of various requirements. The phasing in of various requirements is also intended to allow Water Board staff time to develop online reporting tools and templates and to conduct outreach and education to help Dischargers and service providers come up to speed on the new requirements.

45. Third-party programs are discussed in **Part 2, Section A**. The Central Coast Water Board will provide more detailed third-party expectation documents and/or third-party program requests for proposals (RFPs) to inform and solicit third-party program proposals for Executive Officer consideration.

46. The Executive Officer may make non-substantive changes to the Order to correct typographical errors or to maintain consistency within the Order or between the Order and its Attachments, e.g., to conform changes made during the Order development process that were inadvertently not carried through the entire Order. The Board will provide public notice of the non-substantive changes.

IT IS HEREBY ORDERED that Order No. R3-2017-0002 is terminated as of the effective date of this Order except for the purposes of enforcement, and that pursuant to Water Code sections 13260, 13263, and 13267, Dischargers enrolled in this Order, their agents, successors, and assigns, must comply with the following terms and conditions to meet the provisions contained in Water Code Division 7 and regulations, plans, and policies adopted thereunder.

Part 2, Section A. Enrollment, Fees, Termination, General Provisions, and Third-Party Programs

1. This Order is effective upon adoption by the Central Coast Water Board.

2. Except where stated otherwise, all requirements of this Order apply to all Dischargers.

Enrollment

3. Enrollment in this Order requires the submittal of the electronic Notice of Intent (eNOI) pursuant to Water Code section 13260. Submittal of all other technical reports pursuant to this Order is required pursuant to Water Code section 13267. Failure to submit technical reports or the attachments in accordance with the time schedules established by this Order or Monitoring and Reporting Program (MRP), or failure to submit a complete technical report (i.e., of sufficient technical quality to be acceptable to the Executive Officer), may subject the Discharger to enforcement action pursuant to Water Code sections 13261, 13268, or 13350. Dischargers must submit technical reports in the format specified by the Executive Officer.

4. Dischargers who are not currently enrolled in the existing agricultural order must submit to the Central Coast Water Board a complete eNOI prior to discharging. Upon submittal of a complete and accurate eNOI, the Discharger is enrolled under this Order, unless otherwise informed by the Executive Officer.

5. Dischargers who were enrolled in Order R3-2017-0002 as of the effective date of this Order are automatically enrolled in this Order. Within 120 days of Order adoption, enrolled Dischargers must update their eNOI.

6. In the case where an operator may be operating for a period of less than 12 months, the landowner must submit the eNOI. In all other cases, either the landowner or the operator must submit the eNOI. Both the landowner and the operator are Dischargers and considered a responsible party for compliance with the requirements of this Order.

7. **Prior to any discharge or commencement of activities that may cause a discharge**, including land preparation prior to crop production, any Discharger

proposing to control or own a new operation or ranch that has the potential to discharge waste that could directly or indirectly reach waters of the state and/or affect the quality of any surface water and/or groundwater must submit an eNOI.

8. **Within 60 days** of any change in operation or ranch information, the Discharger must update the eNOI.

9. **Within 60 days** of any change in control or ownership of an operation, ranch, or land presently owned or controlled by the Discharger, the Discharger must notify the succeeding owner and operator of the existence of this Order.

10. **Within 60 days** of acquiring control or ownership of an existing operation or ranch, the succeeding Discharger must submit an eNOI.

11. Dischargers must submit all the information required in the eNOI form, including but not limited to the following information for the operation and individual ranch:

    a. Assessor parcel numbers (APNs) covered by enrollment,
    b. Landowner(s),
    c. Operator(s),
    d. Contact information,
    e. Third-party program membership,
    f. Location of operation, including specific ranch(es),
    g. Map with discharge locations and groundwater wells identified,
    h. Type and number of groundwater wells located on ranch parcels,
    i. Total and irrigated acreage,
    j. Crop types grown,
    k. Irrigation system type,
    l. Discharge type,
    m. Chemical use,
    n. Slope,
    o. Impermeable surfaces,
    p. Presence and location of any waterbodies on or adjacent to the ranch.
    q. Status of drinking water notification to well users

12. Dischargers or groups of Dischargers seeking regulatory requirements tailored to their specific operation, ranch, geographic area, or commodity may submit an ROWD to obtain an individual order and MRP, or request the development of a general order for a specific type of discharge (e.g., commodity-specific general order). This Order remains applicable to those Dischargers until the Central Coast Water Board adopts such an individual order, MRP, or general order, and, if applicable, the Dischargers are enrolled in the general order.

13. Dischargers seeking enrollment in this Order must submit a statement of understanding of the conditions of this Order and MRP signed by the Discharger

(landowner or operator) with the eNOI. If the operator signs and submits the electronic NOI, the operator must provide a copy of the complete NOI form to the landowner(s).

14. Coverage under this Order is not transferable to any person except after the succeeding Discharger's submittal to the Central Coast Water Board of an updated eNOI and approval by the Executive Officer.

Fees

15. Dischargers must pay a fee to the State Water Resources Control Board in compliance with the fee schedule contained in Title 23 California Code of Regulations.

16. Dischargers must pay any relevant third-party program fees (e.g., Surface Water Third-Party Monitoring Program (aka Cooperative Monitoring Program or CMP) necessary to comply with monitoring and reporting conditions of this Order or they must comply with monitoring and reporting requirements individually.

17. For Dischargers who choose to participate in a third-party program, failure to pay third-party program fees voids a selection or notification of the option to participate in the third-party program and hence requires Dischargers to immediately comply with individual groundwater protection and/or surface water protection requirements.

Termination

18. **Immediately**, if a Discharger wishes to terminate coverage under this Order for the operation or an individual ranch, the Discharger must submit a complete Notice of Termination (NOT), in a format specified by the Executive Officer. Termination from coverage is the date the termination request is approved, unless specified otherwise. All discharges must cease before the date of termination, and any discharges on or after the date of termination are violations of this Order, unless covered by other WDRs or waivers of WDRs. All required monitoring and reporting are due **within 60 days of the termination or March 1 following the termination date**, whichever is sooner, unless otherwise directed by the Executive Officer.

General Provisions

19. The unauthorized discharge of any waste not specifically regulated by this Order, is prohibited.

20. The discharge of waste at a location or in a manner different from that described in the eNOI is prohibited.

21. Dischargers must comply with the Monitoring and Reporting Program (MRP), incorporated herein as Attachment B.

22. All forms, reports, documents, and laboratory data must be submitted to the Central Coast Water Board electronically through the State Water Board's database systems (e.g., GeoTracker, CEDEN,[3] etc.).

23. Dischargers are defined in this Order as both the landowner and the operator of irrigated agricultural land on or from which there are discharges of waste from irrigated agricultural activities that could affect the quality of any surface water or groundwater. The Central Coast Water Board will hold both the landowner and the operator liable for noncompliance with this Order.

24. The Executive Officer may propose, and the Central Coast Water Board may adopt, individual WDRs for any Discharger at any time.

25. The Central Coast Water Board or the Executive Officer may, at any time, terminate applicability of this Order with respect to an individual Discharger upon written notice to the Discharger.

26. Noncompliance with requirements in this Order is grounds for enforcement action and/or termination of coverage for waste discharges under this Order, subjecting the Discharger to enforcement under the Water Code for further discharges of waste to surface water or groundwater.

27. The fact that it would have been necessary to halt or reduce the permitted discharge activity to maintain compliance with this Order is not a defense for the Discharger's violations of this Order.

28. Provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order will not be affected.

29. Upon the Central Coast Water Board's or Executive Officer's request and within a reasonable timeframe, Dischargers must submit any information required to determine compliance with this Order or to determine whether there is cause for modifying or terminating this Order.

30. Under authority of Water Code section 13267(c), the Discharger must allow the Central Coast Water Board, or an authorized representative, upon consent or other documents as may be required by law, to do the following:

    a. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this Order,

[3] CEDEN is the California Environmental Data Exchange Network.

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order,
c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order, and
d. Collect samples from and monitor waters of the state within or bordering property subject to this Order, at reasonable times for the purposes of assuring compliance with this Order or as otherwise authorized by the Water Code. The sampling and monitoring may include and is not limited to domestic and irrigation wells, surface receiving waters, and edge of field discharges to surface waters.

31. This Order may be reopened to address changes in statutes, regulations, plans, policies, or case law that govern water quality requirements for the discharges regulated herein.

Order Effectiveness Evaluation

32. To facilitate an adaptive management process to inform modifications to the Order, the Central Coast Water Board will receive annual updates from its staff and, as appropriate, third party groups or programs during public meetings regarding the implementation of this Order. The purpose of the updates is to evaluate and report out on individual discharger and third-party group compliance; identify successes, challenges, and emerging science and management practices; consider potential Order modifications as may be appropriate at five-year intervals; and generally inform the Board and public regarding the Order's effectiveness towards achieving the stated objectives.

Third-Party Programs

33. Dischargers may comply with portions of this Order by participating in third-party groups or programs (e.g., certification program, watershed group, water quality coalition, monitoring coalition, or other third-party effort) approved by the Executive Officer. In this case, the third-party will assist individual Dischargers in achieving compliance with this Order, including implementing water quality improvement projects and required monitoring and reporting as described in the MRP. Compliance with the requirements of this Order is still required for all members of the third-party program; however, the third-party may propose modified monitoring and reporting for approval by the Executive Officer. Third-party program proposals will be evaluated on a case-by-case basis relative to their ability to document compliance with this Order as part of a request for proposal process and as further informed by a forthcoming third-party expectations document.

34. Interested persons may seek discretionary review by the Central Coast Water Board of the Executive Officer's approval or denial of the following work plans:

    - Third-party program groundwater quality trend monitoring and reporting.
    - Third-party program surface receiving water quality trend monitoring and reporting.
    - Individual and third-party program follow-up surface receiving water implementation.

35. Interested persons seeking discretionary review by the Central Coast Water Board must submit their request in writing no later than 30 days from the date of the Executive Officer's approval or denial of the work plans noted above.

36. This Order includes specific provisions and an alternative compliance pathway for third-party programs that will also be subject to a third-party request for proposal process and Executive Officer review and approval. Dischargers participating in a third-party administered alternative compliance pathway program, and that remain in good standing as defined in this Order and/or Executive Officer approved third-party work plan, are subject to the third-party program requirements in lieu of individual requirements as specified. The third-party alternative compliance pathway program's assessment and evaluation for groundwater protection and the regional groundwater quality trend monitoring program described in **Part 2, Section C.1** must be closely aligned and coordinated such that they are effectively measuring the objectives the programs are trying to achieve.

37. Third-party program proposals must include and identify specific membership eligibility requirements, for approval by the Executive Officer, to evaluate whether third-party program members are in good standing. Members that are not in good standing with the membership eligibility requirements lose their membership and must immediately comply with individual groundwater protection and/or surface water protection requirements. At a minimum, third-party program proposals must include membership eligibility requirements and follow-up consequences that are triggered, including revocation of membership eligibility, to address the following scenarios where members are no longer in good standing:

    a. Non-payment of fees
    b. Non-submittal of information
    c. Non-participation in education/outreach or site visits
    d. Failure to implement / adapt management practices

38. Consistent with the Water Board's Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program (NPS Policy), the ineffectiveness of a third-party program through which a Discharger participates in nonpoint source control efforts cannot be used as a justification for lack of individual

discharger compliance. Dischargers continue to be responsible for complying with this Order individually.

39. Dischargers who elect to join one or more third-party programs to facilitate compliance with this Order must retain their membership with the third parties in good standing. If the Discharger does not meet the requirements of membership in a particular third-party program, then the Discharger is responsible for complying with all requirements in this Order individually. If the Discharger is in good standing of another third-party program for another purpose, that third-party program's requirements still apply. For example, a Discharger may no longer be a member in good standing of the third-party alternative compliance pathway program but could still be a member in good standing for a third-party surface receiving water quality trend monitoring and reporting program. For this example, Dischargers may become eligible to rejoin the third-party alternative compliance pathway program by demonstrating compliance with individual groundwater protection requirements.

40. Dischargers who elect to join an approved third-party program must notify the approved third-party program administrator of their election to participate in the third-party program within 60 days of: 1) approval of the third-party program, and/or 2) the Discharger's enrollment in this Order, whichever is later.

41. The third-party program administrator must notify the Central Coast Water Board of Dischargers electing to participate within 90 days of the third-party program approval, and then provide member participation updates on a quarterly basis thereafter. At a minimum, participating Discharger information provided to the Central Coast Water Board must include operation enrollment information (e.g., AW numbers and operation names) and ranch enrollment information (e.g., GeoTracker AGL numbers and ranch names) in a format specified by the Executive Officer.

42. Third-party programs must meet the following minimum criteria:

    a. Effectiveness of scale and scope – The program must be of sufficient scale and scope relative to its intended purpose to maximize Discharger participation, implementation effectiveness and Order compliance. Although regionally scaled programs are preferred, watershed- or basin-scale programs will be considered as needed to address localized water quality issues.
    b. Clearly stated goals and objectives – The program must have meaningful and clearly stated goals, objectives, and associated performance metrics relevant to the Order requirements that are the focus of the program.
    c. Management and administration – The program must have a well-defined and robust governance and administrative structure with clearly defined roles and responsibilities.

d. Capacity and expertise – The program must demonstrate sufficient technical, managerial, and financial capacity to successfully achieve its goals and objectives.
e. Physical presence – The program should have a physical presence in the central coast region, including staff and a headquarters, that can assist its members on a continual and as-needed basis. If the third-party program administrator does not have or plan to have a physical presence in the region, they must demonstrate they can effectively establish, maintain, and engage with core membership without a headquarters in the central coast region.
f. Transparency and accountability – The program must provide regular assessments of its performance relative to its stated goals and objective based on meaningful performance metrics. This includes reporting of water quality data and farm-level data as needed to document compliance with this Order.
g. Membership and fee accounting – The program must track and provide ongoing accounting of its Discharger membership and fees to document Discharger compliance.
h. Data management – The program must upload data as required by this Order to the Water Boards' various data management systems (e.g., CEDEN, GeoTracker, etc.).
i. Member requirements – The program must have clearly stated and enforced Discharger membership eligibility requirements and report out on them as needed to document compliance.
j. Coordination – The program must consider and coordinate with other third-party programs/groups or local entities as may be appropriate to create consistency; leverage the efforts, infrastructure and expertise of others; and streamline the program to maximize effectiveness (e.g., coordination with Groundwater Sustainability Agencies [GSAs], flood control management agencies, watershed restoration and management entities, etc.).
k. Continuing education – The program must include continuing education opportunities as appropriate either directly through the program or through coordination with other third-party programs/groups or local entities to ensure its members obtain technical skills and assistance necessary to achieve compliance with the limits established in this Order. In the instance of third-party monitoring programs, membership outreach and education should be implemented to inform members about the monitoring results relative to meeting specific water quality objectives, numeric targets, numeric interim quantifiable milestones, or numeric limits.
l. Specific project plan documents – The program must have a detailed work plan including a Quality Assurance Project Plan (QAPP) and Sampling and Analysis Plan (SAP) as may be appropriate based on the program goals and objectives and associated Order requirements.

43. The Central Coast Water Board's review of third-party program proposals will consider the criteria outlined above relative to overall program effectiveness, with an emphasis on approving programs that can effectively assist their members in complying with the requirements of this Order.

Part 2, Section B. Planning, Education, Management Practices, and CEQA

Farm Water Quality Management Plan (Farm Plan)

1. Dischargers must develop, implement, and update as necessary a Farm Water Quality Management Plan (Farm Plan) for each ranch. A current copy of the Farm Plan must be maintained by the Discharger and must be submitted to the Central Coast Water Board upon request. At a minimum, the Farm Plan must include the discrete sections listed below. Additional details regarding each section are included in subsequent sections of this Order. Certain elements included in the Farm Plan must be reported on; however, in general, the Farm Plan is a planning and recordkeeping tool used by Dischargers to manage various aspects of their agricultural operation.

    a. Irrigation and Nutrient Management Plan (INMP)
    b. Pesticide Management Plan (PMP)
    c. Sediment and Erosion Management Plan (SEMP)
    d. Water Quality Education
    e. CEQA Mitigation Measure Implementation

2. The INMP, PMP, and SEMP sections of the Farm Plan must include information on management practice implementation and assessment. Elements of the INMP are reported on in the Total Nitrogen Applied report or INMP Summary report. Elements of all the sections listed above are reported on in the Annual Compliance Form (ACF). Additional information on the monitoring and reporting requirements related to each of these sections is included in the MRP.

3. Where required by the Executive Officer based on groundwater quality or surface water quality conditions or exceedances of the numeric targets, numeric interim quantifiable milestones, or numeric limits established in this Order, the Farm Plan must incorporate ranch-level groundwater or surface water discharge monitoring information described in the MRP. The ranch-level groundwater and surface water discharge monitoring must be designed and implemented to inform improved management practices to protect groundwater and surface water quality.

4. Dischargers must maintain all records related to compliance with this Order for a minimum of ten years. Records include, but are not limited to, monitoring information, calculations, management practice implementation and assessment, education records, and all required reporting and information used to submit

complete and accurate reports. Third parties that have been approved by the Executive Officer to assist Dischargers with complying with this Order, for example in the form of water quality monitoring, must also maintain all records for a minimum of ten years. Records must be submitted to the Central Coast Water Board upon request or as required by this Order or an approved work plan.

Continuing Education

5. Dischargers must attend outreach and education events annually to obtain technical skills and assistance necessary to achieve compliance with the numeric targets, numeric interim quantifiable milestones, and numeric limits established by this Order. Outreach and education events should focus on meeting water quality objectives and protecting beneficial uses by identifying water quality problems, implementing pollution prevention strategies, and implementing management practices and assessment designed to protect water quality and beneficial uses and resolve water quality problems to achieve compliance with this Order. Records of participation in continuing education must be maintained in the Farm Plan and submitted to the Central Coast Water Board upon request.

6. Dischargers who exceed the fertilizer nitrogen application targets or limits, nitrogen discharge targets or limits, numeric interim quantifiable milestones, or surface receiving water limits must complete additional relevant water quality education sufficient to fully inform the implementation of additional or improved management practices and assessment to avoid future exceedances.

7. A copy of this Order and MRP must be kept at the ranch for reference by operating personnel. Key operating and site management personnel must be familiar with the content of both documents.

Management Practice Implementation and Assessment

8. Dischargers must implement management practices and assessment, as necessary, to improve and protect water quality, protect beneficial uses, achieve compliance with applicable water quality objectives, achieve the numeric targets, numeric interim quantifiable milestones, and numeric limits established in this Order. Management practices implementation and assessment must be documented in the appropriate section of the Farm Plan (e.g., irrigation and nutrient management practices and assessment must be documented in the INMP section of the Farm Plan). Dischargers must report on management practice implementation and assessment in the ACF, as described in the MRP. Dischargers may demonstrate management practice effectiveness at ranch-level or watershed-scale.

CEQA Mitigation Measure Implementation, Monitoring, and Reporting

9. Impacts and mitigation measures identified in CEQA Mitigation Monitoring and Reporting Program (MMRP) are set forth in the Final Environmental Impact Report (FEIR) at Appendix D, which is incorporated by reference. Mitigation measures identified in the FEIR for this Order are required to be implemented as described in Appendix D unless exempted by another law or regulation. These mitigation measures will substantially reduce environmental effects of the project. The mitigation measures included in this Order have eliminated or substantially lessened all significant effects on the environment, where feasible. Where noted, some of the mitigation measures are within the responsibility and jurisdiction of other public agencies. Such mitigation measures can and should be adopted, as applicable, by those other agencies.

10. Dischargers must report on mitigation measure implementation electronically in the Annual Compliance Form (ACF), as described in the MRP.

Part 2, Section C.1. Groundwater Protection

1. Dischargers may not be subject to all provisions of **Part 2, Section C.1** if they are members in good standing with the third-party alternative compliance pathway program included within **Part 2, Section C.2**.

Phasing

2. Ranches are assigned the Groundwater Phase Area of the groundwater basin where the ranch is located based on the relative level of water quality and beneficial use impairment and risk to water quality. All ranches are assigned a Groundwater Phase Area of 1, 2, or 3. Groundwater Phase 1 areas represent greater water quality impairment and higher risk to water quality relative to Groundwater Phase 2 and 3 areas.

3. The requirements and implementation schedules for groundwater protection are based on the groundwater phase areas, listed in **Table C.1-1** and shown on the maps in **Figure C.1-1**.

4. In the event that a ranch spans multiple Groundwater Phase areas, the ranch will be assigned the earlier phase. For example, a ranch that spans both Groundwater Phase 1 and Groundwater Phase 2 areas will be assigned to Groundwater Phase 1.

5. The Groundwater Phase Area assigned to each ranch will be displayed on the ranch eNOI in GeoTracker.

Irrigation and Nutrient Management Plan

6. Dischargers must develop and implement an Irrigation and Nutrient Management Plan (INMP) that addresses both groundwater and surface water. This section applies to the groundwater related INMP requirements and the surface water related INMP requirements are contained within **Part 2, Section C.3** of this Order. The INMP is a section of the Farm Plan and must be maintained in the Farm Plan and submitted to the Central Coast Water Board upon request. Summary information from the INMP must be submitted in the INMP Summary report. At a minimum, the elements of the INMP related to groundwater protection must include:

    a. Monitoring and recordkeeping necessary to submit complete and accurate reports, including the ACF, Total Nitrogen Applied (TNA) report, and INMP Summary report.
    b. Planning and management practice implementation and assessment that results in compliance with the fertilizer nitrogen application limits in **Table C.1-2** and the nitrogen discharge targets and limits in **Table C.1-3**.
    c. Descriptions of all irrigation, nutrient, and salinity management practices implemented and assessed on the ranch.
    d. When INMP certification is required, e.g., as a follow-up action or as a consequence for not meeting the quantifiable milestones and time schedules below, the INMP certification shall include the following:

        The person signing this Irrigation and Nitrogen Management Plan (INMP) certifies, under penalty of law, that the INMP was prepared under his/her direction and supervision, that the information and data reported is to the best of his/her knowledge and belief, true, accurate, and complete, and that he/she is aware that there are penalties for knowingly submitting false information. The qualified professional signing the INMP may rely on the information and data provided by the Discharger and is not required to independently verify the information and data.

        The qualified professional signing the INMP below further certifies that he/she used sound irrigation and nitrogen management planning practices to develop irrigation and nitrogen application recommendations and that the recommendations are informed by applicable training to minimize nitrogen loss to surface water and groundwater. The qualified professional signing the INMP is not responsible for any damages, loss, or liability arising from subsequent implementation of the INMP by the Discharger in a manner that is inconsistent with the INMP's recommendations for nitrogen application. This certification does not create any liability or claims for environmental violations.

Qualified professional certification:
"I, _____, certify this INMP in accordance with the statement above."

_____ (Signature)

The discharger additionally agrees as follows:

"I, _____, Discharger, have provided information and data to the certifier above that is, to the best of my knowledge and belief, true, accurate, and complete, that I understand that the certifier may rely on the information and data provided by me and is not required to independently verify the information and data, and that I further understand that the certifier is not responsible for any damages, loss, or liability arising from subsequent implementation of the INMP by me in a manner that is inconsistent with the INMP's recommendations for nitrogen application. I further understand that the certification does not create any liability for claims for environmental violations."

Quantifiable Milestones and Time Schedules

7. As shown in **Table C.1-2**, the fertilizer nitrogen application limits go into effect December 31, 2023.

8. As shown in **Table C.1-3**, the nitrogen discharge targets go into effect December 31, 2023 and nitrogen discharge limits go into effect December 31, 2027.

Fertilizer Nitrogen Application Limits

9. Dischargers must not apply fertilizer nitrogen ($\mathbf{A_{FER}}$) at rates greater than the limits in **Table C.1-2.** Compliance with fertilizer nitrogen application limits is assessed for each specific crop reported in the TNA report or INMP Summary report.

Nitrogen Discharge Targets and Limits

10. This Order requires Dischargers to submit information on nitrogen applied (**A**) and nitrogen removed (**R**). This Order also establishes nitrogen discharge targets and limits based on the calculation of nitrogen applied minus nitrogen removed (**A-R**) using the formulas below. Nitrogen must not be discharged at rates greater than the targets and limits in **Table C.1-3**. Compliance with nitrogen discharge targets and limits is assessed annually for the entire ranch in the INMP Summary

report through one of the **three compliance pathways** shown below. Compliance with all pathways is not required.

Compliance Pathway 1:

A_{FER} + (C x A_{COMP}) + (O x A_{ORG}) + A_{IRR} – R = Nitrogen Discharge

OR

Compliance Pathway 2:

A_{FER} + (C x A_{COMP}) + (O x A_{ORG}) = R

OR

Compliance Pathway 3:

A_{FER} + (C x A_{COMP}) + (O x A_{ORG}) – R = Nitrogen Discharge

In all formulas, R = R_{HARV} + R_{SEQ} + $R_{SCAVENGE}$ + R_{TREAT} + R_{OTHER}

a. **A_{FER}** is the amount of fertilizer nitrogen applied in pounds per acre.
b. **C** is the compost discount factor used to represent the amount of compost nitrogen mineralized during the year that the compost was applied.
c. **A_{COMP}** is the total amount of compost nitrogen applied in pounds per acre.
d. **O** is the organic fertilizer discount factor used to represent the amount of nitrogen mineralized during the first 12 weeks in the year it was applied.
e. **A_{ORG}** is the total amount of organic fertilizer or amendment nitrogen applied in pounds per acre.
f. **A_{IRR}** is the amount of nitrogen in pounds per acre applied in the irrigation water estimated from the volume required for crop evapotranspiration (ET) or volume of water applied.
g. **R** is the amount of nitrogen removed from the field through harvest, sequestration, or other removal methods, in pounds per acre.
h. **R_{HARV}** is the amount of nitrogen removed from the field through harvest or other removal of crop material.
i. **R_{SEQ}** is the amount of nitrogen removed from the field through sequestration in woody materials of permanent or semi-permanent crops.
j. **$R_{SCAVENGE}$** is the amount of nitrogen credited as removed from the field through nitrogen scavenging cover crops utilized during the wet/rainy season, nitrogen scavenging high carbon amendments during the wet/rainy season, or high carbon woody materials applied as mulch to the crop ground surface.
k. **R_{TREAT}** is the amount of nitrogen removed from the ranch through a quantifiable treatment method (e.g., bioreactor).

l. **R_{OTHER}** is the amount of nitrogen removed from the ranch through other methods not previously quantified.

11. The Central Coast Water Board encourages the use of irrigation water nitrogen as a method of reducing the amount of fertilizer nitrogen applied to crops. The use of irrigation water nitrogen is typically referred to as "pump and fertilize" and is incentivized through compliance pathway 2 and 3 in **Table C.1-3**. The amount of irrigation water nitrogen is not used in the compliance calculation in these compliance pathways. The amount of irrigation water nitrogen must be reported regardless of the compliance pathway.

12. The Central Coast Water Board encourages the use of compost to improve soil health, nutrient and carbon sequestration, and water holding capacity consistent with the state's Healthy Soils Initiative. All compost nitrogen (**A_{COMP}**) applied to the ranch must be reported in the TNA report or INMP Summary report; however, the use of compost is incentivized through the option for Dischargers to use a compost "discount" factor (**C**). Dischargers may use the compost discount factor provided by the Central Coast Water Board in the MRP or may determine their own discount factor. The discounted compost nitrogen must, at a minimum, represent the amount of compost mineralized during the year the compost was applied to the ranch. If the Discharger uses their own compost discount factor, they must maintain records of the method used to determine the compost discount factor in the Farm Plan, and these records must be submitted to the Central Coast Water Board upon request.

13. The Central Coast Water Board encourages the use of organic fertilizers and amendments to improve soil health, nutrient and carbon sequestration, and water holding capacity consistent with the state's Healthy Soils Initiative. All organic fertilizer and amendment nitrogen (**A_{ORG}**) applied to the ranch must be reported in the TNA report or INMP Summary report; however, the use of organic fertilizers and amendments is incentivized through the option for Dischargers to use an organic fertilizer "discount" factor (**O**). Dischargers may use the organic fertilizer discount factor associated with the products C:N ratio, provided by the Central Coast Water Board in the MRP. The discounted organic fertilizer nitrogen must, at a minimum, represent the amount of organic fertilizer mineralized during the first 12 weeks the organic fertilizer was applied to the ranch. The Discharger must maintain records of the organic products used and their associated C:N ratios in the Farm Plan, and these records must be submitted to the Central Coast Water Board upon request. The following products are not eligible to receive an organic fertilizer discount: a) products with no organic compounds (long chain carbon) molecules, such as conventional fertilizer, slow release fertilizers, b) products that do not depend on microbial mineralization to release nitrogen to mineral form to make it available for crop uptake, c) products without

C:N ratio information available, and d) organic liquid fertilizers that are in the liquid and/or emulsified form (excluding organic foliar applications).

14. The amount of **crop material** removed through harvest or other methods ($\mathbf{R_{HARV}}$) must be calculated using the formula described below. Dischargers must either use the crop-specific conversion coefficient values found in the MRP or develop their own conversion coefficient values following the approved method in the MRP. If Dischargers develop their own conversion coefficient, they must maintain information on the method used in the Farm Plan, and these records must be submitted to the Central Coast Water Board upon request.

    R_{HARV} = Conversion Coefficient x Material Removed

    a. The **Conversion Coefficient** is a crop-specific coefficient used to convert from units of material removed per acre to units of nitrogen removed per acre.
    b. **Material Removed** is the amount of nitrogen-containing material removed from the field, in units of pounds per acre.

15. The amount of nitrogen removed through **sequestration** in woody material of permanent or semi-permanent crops ($\mathbf{R_{SEQ}}$) must be estimated by the Discharger. Dischargers must maintain records detailing how they estimated the amount of nitrogen sequestered in their permanent crops. These records must be maintained in the Farm Plan and submitted to the Central Coast Water Board upon request.

16. The Central Coast Water Board encourages Dischargers to implement best management practices that reduce nitrogen leaching in the wet/rainy season and improve soil healthy. Dischargers may claim a nitrogen scavenging credit ($\mathbf{R_{SCAVENGE}}$) one time per year for each ranch acre by utilizing any of the four options provided by the Central Coast Water Board in the MRP. The total acres receiving the nitrogen scavenging credit may not exceed the ranch acres. Dischargers electing to claim the nitrogen scavenging credit must ensure that their cover crop, high carbon amendment, or high carbon woody materials meets the definitions of a nitrogen scavenging cover crop, nitrogen scavenging high carbon amendment, or high carbon woody materials as noted in the MRP and Definitions. Substantiating records for this credit must be maintained in the Farm Plan and submitted to the Central Coast Water Board upon request.

17. The Central Coast Water Board encourages Dischargers to develop and implement innovative methods for removing nitrogen from the environment to improve water quality. Dischargers may use treatment methods (e.g., bioreactors) on their ranch by participating in collective treatment programs or

systems[4] to remove nitrogen from groundwater or surface water and may count this towards their nitrogen removal (**R**) value if they are able to quantify the amount of nitrogen removed from ranch discharge to groundwater or surface water. This quantified removal through treatment or other innovative methods must be reported as $\mathbf{R_{TREAT}}$. Dischargers electing to account for this nitrogen removal must monitor the volume and concentration of water entering and exiting the ranch or collective treatment system and calculate the amount of nitrogen removed. These records must be maintained in the Farm Plan and submitted to the Central Coast Water Board upon request.

18. If Dischargers remove additional nitrogen through means other than removing crop material ($\mathbf{R_{HARV}}$), sequestration ($\mathbf{R_{SEQ}}$), scavenging credit ($\mathbf{R_{SCAVENGE}}$), or treatment methods ($\mathbf{R_{TREAT}}$), they must quantify and report this additional removal as $\mathbf{R_{OTHER}}$. Dischargers must maintain records detailing how they calculated $\mathbf{R_{OTHER}}$. These records must be maintained in the Farm Plan and submitted to the Central Coast Water Board upon request.

19. The discharge of nitrogen in excess of the nitrogen discharge **targets** in **Table C.1-3** may result in additional requirements, including obtaining additional education, INMP certification by a qualified professional, implementing additional or improved management practices, and increased monitoring and/or reporting.

20. The discharge of nitrogen in excess of the nitrogen discharge **limits** in **Table C.1-3** may result in additional requirements, including obtaining additional education, INMP certification by a qualified professional, implementing additional or improved management practices, increased monitoring and reporting, and/or progressive enforcement actions.

21. Dischargers who apply more fertilizer nitrogen ($\mathbf{A_{FER}}$) than the fertilizer nitrogen application limits in **Table C.1-2** to any specific crop **and** who are able to demonstrate compliance with the **final** nitrogen discharge limits, as shown in **Table C.1-3**, are exempt from the fertilizer nitrogen application limit.

22. Dischargers who can quantifiably demonstrate that their ranches pose no threat to surface water quality or groundwater quality may submit a technical report to the Executive Officer for review. If approved, the Discharger is not required to conduct the nitrogen application (**A**) or removal (**R**) monitoring and reporting or to submit the INMP Summary report, regardless of what Groundwater Phase area the ranch is in. The technical report must demonstrate that nitrogen applied at the ranch does not percolate below the root zone in an amount that could

[4] Collective treatment programs or systems may be installed or implemented outside the ranch boundaries at a downstream or downflow collective discharge point from multiple ranches to remove nitrogen from groundwater or surface water from each ranch participating in the collective treatment program or system.

degrade groundwater and does not migrate to surface water through discharges, including drainage, runoff, or sediment erosion. Dischargers must provide the Executive Officer with annual updates to confirm that the exemption is still applicable. Failure to provide sufficient annual updates confirming that the exemption is still applicable will result in an immediate reinstatement of the requirement to submit the INMP Summary report for applicable Dischargers. Dischargers electing to use this approach are still eligible to participate in the third-party alternative compliance pathway for groundwater protection.

23. Dischargers who can quantifiably demonstrate that their ranch is achieving the **final** nitrogen discharge limits , as shown in **Table C.1-3,** are not required to submit the nitrogen removal (**R**) reporting in the INMP Summary report, regardless of what Groundwater Phase area the ranch is in. Example situations where this may apply include participation in an approved third-party program that certifies that the Discharger is meeting the final discharge limit and will continue to do so for the duration of the Discharger's participation in the approved third-party program, or by submitting a technical report, subject to Executive Officer review, that quantifies the amount of nitrogen discharge based on the volume and nitrogen concentration of all discharges from the ranch. In these situations, confirmation of membership in the approved third-party program or Executive Officer approval of a submitted technical report constitute compliance with the nitrogen removed (**R**) reporting requirement in the INMP Summary report. This exemption only applies to removal (**R**) in the INMP Summary report; all other requirements, including the TNA report, still apply as described in this Order. Dischargers must provide the Executive Officer with annual updates to confirm that the exemption is still applicable. Failure to provide sufficient annual updates confirming that the exemption is still applicable will result in an immediate reinstatement of the requirement to submit the nitrogen removal (R) reporting information in the INMP Summary report for applicable Dischargers. Dischargers electing to use this approach are still eligible to participate in the third-party alternative compliance pathway for groundwater protection.

24. Dischargers, groups of dischargers or commodity groups who can quantify the amount of nitrogen discharged from their ranch or for specific crops or via specific management practices by directly monitoring it at the points of discharge can propose an alternative monitoring methodology to comply with the nitrogen discharge targets and limits, in lieu of using the A-R compliance formulas. Example situations where this may apply includes greenhouse, nursery, container production or intensive crop production where irrigation and drain water is captured and allows for direct monitoring of discharges. For these types of situations, it may be easier to monitor nitrogen discharge than to calculate the amount of nitrogen removed at harvest for each one of the many different crops and plants being grown. Dischargers must submit a request to the Executive

Officer with a technical report of the methodology proposed to quantify nitrogen discharges. The methodology must include enough information to quantify the amount of nitrogen discharged and confirm compliance with the nitrogen discharge targets and limits, as shown in **Table C.1-3** or **Table C.2-2** (for Dischargers participating in the Third-Party Alternative Compliance Pathway Program for Groundwater Protection described in **Part 2, Section C.2**). Acceptable methodologies must include direct measurements of the volume and nitrogen concentration of the water discharged from each ranch per acre and year. Executive Officer approval of the method(s) must be granted before the discharger begins reporting nitrogen discharge based on the proposed methodology. Dischargers who obtain Executive Officer approval to directly monitor their nitrogen discharge from their ranches will not be required to submit nitrogen removal (R) reporting in the INMP Summary report. Dischargers electing to use this approach are still eligible to participate in the third-party alternative compliance pathway program for groundwater protection.

25. The initial 2027 nitrogen discharge limits, as shown in **Table C.1-3** will be re-evaluated based on Discharger reported nitrogen applied and removed data, new science, and management practice implementation and assessment before becoming effective.

Monitoring and Reporting

26. Dischargers must report on management practice implementation and assessment electronically in the **ACF**, as described in the MRP.

27. Dischargers must record and report total nitrogen applied to all crops grown on the ranch, electronically in the TNA report form, as described in the MRP.

28. Dischargers must track and record the following elements of the INMP Summary report that are not included in the TNA report: total nitrogen removed from the ranch and information on irrigation water application and discharge volumes. Dischargers must submit this information electronically in the INMP Summary report form as described in the MRP.

29. The INMP Summary report contains the same nitrogen application information as the TNA report, plus additional information related to nitrogen removed and irrigation management. **Therefore, the INMP Summary report satisfies the TNA report requirement and an additional TNA report is not required to be submitted when the INMP Summary report is submitted to the Central Coast Water Board**.

30. Dischargers must conduct **irrigation well monitoring and reporting prior to the start of groundwater quality trend monitoring and reporting**, either individually or as part of a third-party effort, as described in the MRP.

31. Dischargers must conduct **on-farm domestic well monitoring and reporting**, either individually or as part of a third-party effort, as described in the MRP.

32. Dischargers must conduct **groundwater quality trend monitoring and reporting**, either individually or as part of a third-party effort, as described in the MRP. This requirement applies to all Dischargers enrolled in this Order, regardless of how many wells are currently present on their ranch.

    a. Dischargers who elect to perform groundwater quality trend monitoring and reporting as part of a **third-party** effort must form or join a third-party. The third-party must submit a work plan for Executive Officer review by the dates and covering the areas specified in the MRP unless it is associated with the Third-Party Alternative Compliance Pathway for Groundwater Protection described in **Part 2, Section C.2**. The work plan must be approved by the Executive Officer prior to implementation. Once approved by the Executive Officer, the work plan must be implemented.
    b. Dischargers who elect to perform groundwater quality trend monitoring and reporting individually must submit a work plan for Executive Officer review, by the date specified in the MRP, based on their ranch location. The work plan must be approved by the Executive Office prior to implementation. The work plan must describe how the ranch-level groundwater quality trend monitoring program will evaluate groundwater quality trends over time and assess the impacts of agricultural discharges on groundwater quality. Once approved by the Executive Officer, the work plan must be implemented. Dischargers without a well on their property may comply with individual ranch-level groundwater quality trend monitoring and reporting requirements by implementing one of the options specified in the MRP.

33. When required by the Executive Officer based on groundwater quality data or significant and repeated exceedance of the nitrogen discharge targets or limits, Dischargers must complete **ranch-level groundwater discharge monitoring and reporting**, either individually or as part of a third-party effort as described in the MRP. Water Board staff will coordinate with Dischargers prior to the Executive Officer invoking this requirement to determine if non-compliance is the result of unforeseen or uncontrollable circumstances and to provide the Discharger with 90-day advanced notice of the forthcoming requirement. When ranch-level groundwater discharge monitoring and reporting is required, a work plan, including a SAP and QAPP, must be submitted for Executive Officer review prior to implementation. Once approved by the Executive Officer, the work plan must be implemented. Ranch-level groundwater discharge monitoring may be discontinued with the approval of the Executive Officer when the Discharger comes into compliance with the nitrogen discharge targets or limits, or the discharge has otherwise ceased.

Part 2, Section C.2. Third-Party Alternative Compliance Pathway for Groundwater Protection

1. Dischargers that are members in good standing in the third-party alternative compliance pathway program are subject to the provisions of this **Part 2, Section C.2**, unless otherwise stated. For purposes of this section, such Dischargers are referred to as "participating Dischargers."

   Participating dischargers:

   a. Are not subject to fertilizer nitrogen application limits in **Table C.1-2**, which are enforceable by the Central Coast Water Board.
   b. Are not subject to nitrogen discharge limits in **Table C.1-3**, which are enforceable by the Central Coast Water Board.
   c. Are subject to targets, which if exceeded result in consequences outlined in this **Part 2, Section C.2**.
   d. Are not subject to ranch-level groundwater discharge monitoring and reporting.
   e. Are generally provided more time to achieve fertilizer nitrogen application targets and nitrogen discharge targets, relative to non-participating dischargers.

2. Prior to the initiation of the work plan process outlined below and in the MRP for this third-party alternative compliance pathway program, entities wishing to implement the third-party alternative compliance pathway program described in this **Part 2, Section C.2** must submit a third-party alternative compliance pathway program proposal consistent with the third-party program requirements outlined in **Part 2, Section A** of this Order, as well as the request for proposal process and associated third-party program expectations document forthcoming after Order adoption. For purposes of this section, the entity approved to implement the third-party alternative compliance pathway is referred to as the approved third-party alternative compliance pathway program administrator.

3. Participating Dischargers must develop and implement an Irrigation and Nutrient Management Plan (INMP) that addresses groundwater. The INMP is a section of the Farm Plan and must be maintained in the Farm Plan and submitted to the Central Coast Water Board upon request. Summary information from the INMP must be submitted in the INMP Summary report. At a minimum, the elements of the INMP related to groundwater and surface water protection for participating Dischargers in a third-party program must include:

   a. Monitoring and recordkeeping necessary to submit complete and accurate reports, including the Annual Compliance form (ACF), Total Nitrogen Applied (TNA) report, and INMP Summary report.

b. Planning and management practice implementation and assessment that results in compliance with the fertilizer nitrogen application targets in **Table C.2-1,** the nitrogen discharge targets in **Table C.2-2**, and groundwater protection area targets to be determined and approved by the Executive Officer.
c. Descriptions of all irrigation, nutrient, and salinity management practices implemented and assessed on the ranch.

Quantifiable Milestones and Time Schedules

4. As shown in **Table C.2-1**, the fertilizer nitrogen application targets go into effect December 31, 2024 for participating Dischargers in the third-party alternative compliance pathway.

5. As shown in **Table C.2-2**, the nitrogen discharge targets go in to effect during the third year of this Order (December 31, 2024) for participating Dischargers in the third-party alternative compliance pathway.

Fertilizer Nitrogen Application Targets

6. Participating Dischargers must not apply fertilizer nitrogen ($\mathbf{A_{FER}}$) at rates greater than the **targets** in **Table C.2-1.** Compliance with fertilizer nitrogen application targets is assessed annually for each specific crop reported in the TNA report or INMP Summary report.

7. Participating Dischargers that apply fertilizer nitrogen ($\mathbf{A_{FER}}$) at rates greater than the **targets** in **Table C.2-1** one year after the compliance date are subject to follow-up by the approved third-party program administrator, which could include additional education and/or implementation of additional or improved management practices.

8. Participating Dischargers that apply fertilizer nitrogen ($\mathbf{A_{FER}}$) at rates greater than the **targets** in **Table C.2-1** for a two-year running average after the compliance date, are no longer eligible to participate in the third-party alternative compliance pathway program and must comply with the individual groundwater protection requirements in **Part 2, Section C.1**. Water Board staff will coordinate with participating Dischargers prior to the Executive Officer invoking this requirement to determine if non-compliance is the result of unforeseen or uncontrollable circumstances and to provide the Discharger with 90-day advanced notice of the forthcoming individual groundwater protection requirements.

Nitrogen Discharge Targets

9. Participating Dischargers must not discharge nitrogen at rates greater than the **targets** in **Table C.2-2**. Compliance with nitrogen discharge targets is assessed

annually for the entire ranch using INMP Summary report information. Participating Dischargers must comply with at least one of the nitrogen discharge compliance pathways described in **Part 2, Section C.1** by the compliance date.

10. The final year 2028 nitrogen discharge **targets**, as shown in **Table C.2-2** will be re-evaluated based on discharger reported nitrogen applied and removed data, new science, management practice effectiveness assessment and evaluation, and groundwater protection area collective numeric interim and final targets before becoming effective.

11. Participating Dischargers that discharge nitrogen in excess of the nitrogen discharge **targets** in **Table C.2-2** one year after the compliance date are subject to follow-up by the approved third-party alternative compliance pathway program administrator, which could include additional education and/or implementation of additional or improved management practices.

12. Participating Dischargers that discharge nitrogen in excess of the year 2024 or 2026 nitrogen discharge **targets** in **Table C.2-2** for a two-year running average, must obtain annual INMP certification by a qualified professional until nitrogen discharge targets are achieved for a two-year running average. The INMP certification must include the certification language outlined in **Part 2, Section C.1**.

13. Participating Dischargers that discharge nitrogen in excess of the final nitrogen discharge target in **Table C.2-2** for a three-year running average after the compliance date, are no longer eligible to participate in the third-party alternative compliance pathway program and must comply with individual groundwater protection requirements in **Part 2, Section C.1**. Water Board staff will coordinate with participating Dischargers prior to the Executive Officer invoking this requirement to determine if non-compliance is the result of unforeseen or uncontrollable circumstances and to provide the Discharger with 90-day advanced notice of the forthcoming individual groundwater protection requirements.

Groundwater Protection Areas, Formulas, Values, and Targets

14. The approved third-party alternative compliance pathway program administrator, on behalf of its participating Dischargers, must develop and submit incremental 35%, 70%, and 100% work plans for Executive Officer approval, as described in the MRP. The 35% and 70% work plans will be subject to Executive Officer approval following a 30-day written public period and a public meeting to receive public comments and board input.

15. The incremental draft and final work plans must include the following:

a. Clearly defined objectives and scientific justification for all proposed groundwater protection (GWP) areas, formulas, values, and collective numeric interim and final targets.

b. Scientific justification in support of the proposed GWP areas with respect to, but not limited to, geology, hydrogeology, groundwater basin and subbasin areas, recharge areas, land uses, cropping patterns, and potential membership coverage by acreage and number of members. The proposed GWP areas, formula, values, and collective interim and final targets must be tied together and scaled in a way that will allow for the effective evaluation of water quality and beneficial use protection and compliance with GWP interim and final targets on both a collective and individual basis.

c. A program to assess and evaluate the performance and effectiveness of the third-party alternative compliance pathway program's collective numeric interim and final targets in achieving tangible groundwater quality improvements over time at the individual GWP area scale. The assessment and evaluation program must be scaled – spatially and temporally – in coordination with the regional groundwater quality trend monitoring program described in **Part 2, Section C.1** of the third-party program over time.

d. Criteria and associated follow-up actions or consequences that the third-party alternative compliance pathway program administrator will implement if individual participating Dischargers do not meet collective numeric interim and final targets, and third-party program membership eligibility requirements including membership probation and revocation to address recalcitrant participating Dischargers.

16. The final work plans must be approved by the Executive Officer prior to implementation. Once approved by the Executive Officer, the work plans must be implemented.

17. Compliance with the collective numeric interim and final targets for a GWP area shall be determined by aggregating data from participating Dischargers within a GWP area to determine if the combined nitrogen discharge is achieving collective compliance with the GWP Area numeric interim and final targets.

18. Although compliance with GWP collective numeric interim and final targets is assessed using the combined nitrogen discharge of participating Dischargers in a GWP area, GWP collective numeric interim and final targets must be designed such that there is a clear and quantifiable means of assessing individual ranch level contribution to the success or failure of complying with the GWP area collective numeric interim and final targets.

19. Participating Dischargers in a GWP area that exceed the GWP collective numeric interim or final targets by 20% or more, as evaluated individually and on an annual basis, are subject to follow-up by the approved third-party alternative compliance pathway program administrator, which could include additional education or implementation of additional or improved management practices.

20. All participating Dischargers in a GWP area that exceeds the collective numeric interim and final GWP targets by 20% or more for a 3-year running average after the compliance date, are no longer eligible to participate in the third-party alternative compliance pathway program and must comply with the individual groundwater protection requirements in **Part 2, Section C.1**.

Monitoring and Reporting

21. Participating Dischargers must submit ACF, TNA, and INMP Summary information according to requirements outlined in **Part 2, Section C.1**, and as described in the MRP.

22. Participating Dischargers must submit ACF, TNA, and INMP Summary information accordingto the groundwater phase assigned to each ranch. Groundwater phases are outlined in **Part 2, Section C.1**.

23. Participating Dischargers must submit groundwater monitoring and reporting information according to requirements outlined in **Part 2, Section C.1** and as described in the MRP, either individually or as part of a third-party program.

Part 2, Section C.3. Surface Water Protection

Priority Areas (Individual)

1. Ranches are assigned the Surface Water Priority area of the HUC-8 watershed where the ranch is located based on the relative level of water quality, beneficial use impairment and risk to water quality. All ranches are assigned a Surface Water Priority of 1, 2, 3, or 4. Surface Water Priority Area 1 areas represent greater water quality impairment and higher risk to water quality relative to Surface Water Priority Areas 2, 3, and 4.

2. The follow-up surface receiving water implementation requirements for surface water protection are based on the surface water priority areas, listed in **Table C.3-1** and shown on the map in **Figure C.3-1**.

3. In the event that a ranch spans multiple Surface Water Priority areas, the ranch will either be assigned the earlier priority or will be assigned the priority of the watershed or drainage unit that the ranch drains or discharges to, if specific discharge information is provided to the Central Coast Water Board.

4. The Surface Water Priority assigned to each ranch will be displayed in the ranch eNOI in GeoTracker.

Priority Areas (Third-Party Program)

5. Ranches that are enrolled as part of an approved third-party follow-up surface receiving water implementation program are assigned the third-party program Surface Water Priority of high priority, medium priority, or low priority where the ranch is located, as shown in **Table C.3-1.3P** and the map shown in **Figure C-3.1. 3P**.

6. In the event that a ranch spans multiple third-party program Surface Water Priority areas, the ranch will either be assigned the earlier priority or will be assigned the priority of the watershed or drainage unit that the ranch drains or discharges to, if specific discharge information is provided to the Central Coast Water Board.

7. The third-party program Surface Water Priority assigned to each ranch will be displayed in the ranch eNOI in GeoTracker.

Irrigation and Nutrient Management

8. Dischargers must develop and implement an Irrigation and Nutrient Management Plan (INMP) that addresses both groundwater and surface water. This section applies to the surface water related INMP requirements and the groundwater related INMP requirements are contained within **Part 2, Section C.1** of this Order. The INMP is a section of the Farm Plan, must be maintained in the Farm Plan (see **Part 2, Section B** and Farm Plan paragraph 14 below), and submitted to the Central Coast Water Board upon request. Summary information from the INMP must be submitted in the ACF, as described in the MRP.

Pesticide Management

9. Dischargers must develop and implement a Pesticide Management Plan (PMP). The PMP is a section of the Farm Plan, must be maintained in the Farm Plan (see **Part 2, Section B** and Farm Plan paragraph 14 below), and submitted to the Central Coast Water Board upon request. Summary information from the PMP must be submitted in the ACF, as described in the MRP.

Sediment and Erosion Management

10. Dischargers must develop and implement a Sediment and Erosion Management Plan (SEMP). The SEMP is a section of the Farm Plan, must be maintained in the Farm Plan (see **Part 2, Section B** and Farm Plan paragraph 14 below), and submitted to the Central Coast Water Board upon request. Summary information from the SEMP must be submitted in the ACF, as described in the MRP.

Impermeable Surfaces

11. Ranches with either 50 to 100 percent of fields covered by impermeable surfaces (defined in Attachment C of this Order), or with greater than or equal to 22,500 square feet (0.5 acre) of impermeable surfaces must manage stormwater discharge duration, rate, and volume as described below.

    a. Stormwater discharge intensity from fields with impermeable surfaces must not exceed the stormwater discharge intensity from equivalent permeable field area for any storm event up to and including the 10-year storm event. The *Santa Barbara Urban Hydrograph Method* [5] and the *Rational Method* [6] are two methods for determining the stormwater discharge intensity match, however other similar methods to determine stormwater discharge intensity may be used.

    b. Stormwater discharge volume from fields with impermeable surfaces must not exceed the stormwater discharge volume from equivalent permeable field area for any storm event up to and including the 95th percentile, 24-hour storm event. The *Curve Number Method* [7] is a method for determining the stormwater discharge volume match, however other similar methods to determined stormwater discharge volume may be used.

    c. Description and time schedules of management practices, treatment, and/or control measures implemented to meet design storm requirements and mitigate for increased stormwater runoff from impermeable surfaces must be kept in the Farm Plan. Methods for assessing the effectiveness of each management practice, treatment, and/or control measure include calculation of peak and runoff volumes, visual inspection, photo documentation, and local precipitation event data, however other storm event measurement types and recordkeeping that determine the effectiveness of management practices may be used.

Farm Plan

12. At a minimum, the elements of the Farm Plan related to surface water protection must include:

    a. Monitoring and recordkeeping necessary to submit complete and accurate reports, including the ACF.

[5] The Santa Barbara Urban Hydrograph Method is based on the curve number approach and is useful for sheet flow over a plane surface, called overland flow.
[6] The Rational Method is used to determine peak discharge from runoff in a given area.
[7] The Curve Number Method was developed by the Soil Conservation Service to estimate runoff from rainfall on agricultural fields and provides runoff depth that can be used to calculate runoff volume.

b. Planning and management practice implementation and assessment that results in compliance with the surface water limits in **Table C.3-2** (TMDL areas) and **Table C.3-3** (non-TMDL areas) for nutrients, **Table C.3-4** (TMDL areas) and **Table C-3.5** (non-TMDL areas) for pesticides and toxicity, and **Table C.3-6** (TMDL areas) for sediment and **Table C.3-7** (non-TMDL areas) for turbidity that apply to a ranch based on the ranch location.

c. Descriptions of all management practices implemented on the ranch, as follows:

i. All irrigation, nutrient, and salinity management practices (i.e., INMP).
ii. All pesticide management practices (i.e., PMP), including pesticide application characteristics (e.g., timing, formulations, wind, and rainfall monitoring, etc.) and any integrated pest management (IPM) practices implemented (e.g., scouting, beneficial insects, etc.).
iii. All sediment, erosion, irrigation, stormwater, road, agricultural drainage pump, and impermeable surface management practices (i.e., SEMP).

Quantifiable Milestones and Time Schedules

13. Dischargers in an area **with an established TMDL** (**Figure C.3-2** for Nutrient TMDL areas, **Figure C.3-3** for Pesticide and Toxicity TMDL areas, and **Figure C.3-4** for Sediment TMDL areas) for a pollutant must not cause or contribute to an exceedance of the pollutant's surface receiving water limit in **Table C.3-2** for nutrients, **Table C.3-4** for pesticides and toxicity, and **Table C.3-6** for sediment in accordance with the compliance dates specified in the applicable table.

14. Dischargers in an area **without an established TMDL** for a pollutant must not cause or contribute to an exceedance of the pollutant's surface receiving water limit in **Table C.3-3** for nutrients, **Table C-3.5** for pesticides and toxicity, and **Table C.3-7** for turbidity in accordance with the compliance dates specified in the applicable table.

15. The surface receiving water limits in **Table C.3-3** for nutrients, **Table C-3.5** for pesticides and toxicity, and **Table C.3-7** for turbidity, apply to all Dischargers unless a specific surface receiving water limit based on a TMDL in **Table C.3-2** for nutrients, **Table C.3-4** for pesticides and toxicity, and **Table C.3-6** for sediment applies to a Discharger.

16. Dischargers in areas where the water quality for a pollutant is better (i.e., of higher quality) than the applicable limit in **Table C.3-2** (TMDL areas) and **Table C.3-3** (non-TMDL areas) for nutrients, **Table C.3-4** (TMDL areas) and **Table C-3.5** (non-TMDL areas) for pesticides and toxicity, and **Table C.3-6** (TMDL areas) for sediment and **Table C.3-7** (non-TMDL areas) for turbidity must

not cause or contribute to an increase of that pollutant in receiving waters, except as consistent with the antidegradation findings of this Order.

17. The discharge of pollutants from a ranch that cause or contribute to an exceedance of the applicable limits after the compliance date in **Table C.3-2** (TMDL areas) and **Table C.3-3** (non-TMDL areas) for nutrients, **Table C.3-4** (TMDL areas) and **Table C-3.5** (non-TMDL areas) for pesticides and toxicity, and **Table C.3-6** (TMDL areas) for sediment and **Table C.3-7** (non-TMDL areas) for turbidity may result in additional requirements, including obtaining additional education, implementing additional or improved management practices, follow-up monitoring and reporting, ranch-level surface discharge monitoring and reporting, and progressive enforcement actions.

Monitoring and Reporting

18. Dischargers must complete **surface receiving water monitoring and reporting** as described in the MRP, either individually or through a third-party monitoring program approved by the Executive Officer. Dischargers, either individually or through a third-party monitoring program, must submit a work plan, including a SAP and QAPP as described the MRP, for Executive Officer review prior to implementation. Once approved by the Executive Officer, the work plan must be implemented. The work plan must include applicable monitoring for the pollutants in **Table C.3-2** (TMDL areas) and **Table C.3-3** (non-TMDL areas) for nutrients, **Table C.3-4** (TMDL areas) and **Table C-3.5** (non-TMDL areas) for pesticides and toxicity, and **Table C.3-6** (TMDL areas) for sediment and **Table C.3-7** (non-TMDL areas) for turbidity and must describe the actions that will be taken to achieve the limits in the tables.

19. Dischargers must develop a **follow-up surface receiving water implementation work plan**, either individually or through a third-party program. The work plan due date is based on the Surface Water Priority of the ranch.

    a. Individual Dischargers that are not part of a third-party program approved to develop and implement follow-up surface receiving water implementation work plan(s) must submit an individual work plan by the dates specified below, based on the ranch's Surface Water Priority Area defined in **Table C.3-1** of the Order:
        i. March 1, 2023 for Surface Water Priority 1 areas
        ii. March 1, 2024 for Surface Water Priority 2 areas
        iii. March 1, 2025 for Surface Water Priority 3 areas
        iv. March 1, 2026 for Surface Water Priority 4 areas

    b. Third-party program(s) approved to develop and implement follow-up surface receiving water implementation work plan(s) on behalf of participating Dischargers must submit work plan(s) by the dates specified below, based

on the third-party program surface water priority area. Third-party program surface water priority areas are defined in **Table C.3-1.3P** of the Order:

i. March 1, 2024 for High Priority areas
ii. March 1, 2026 for Medium Priority areas
iii. March 1, 2028 for Low Priority and All Other areas

c. The work plan must include numeric interim quantifiable milestones and follow-up actions, such as outreach, education, and management practice implementation and assessment, and, where applicable for pollutant source identification and abatement, additional surface receiving water monitoring locations. Numeric quantifiable milestones include numeric interim quantifiable milestones for relevant constituents (e.g., pollutant load or concentration) and numeric interim quantifiable milestones for management practices implemented that confirm progress towards reducing the discharge of relevant constituents (e.g., volume of discharge water diverted to treatment systems, treatment system pollutant reduction, distance of riparian area improvements, acres no longer receiving conventional pesticide applications). The work plan must include a SAP and QAPP. The work plan must describe the implementation measures that will be taken to reduce the discharge of relevant pollutants and achieve the applicable surface water numeric limits by the compliance dates in **Table C.3-2** (TMDL areas) and **Table C.3-3** (non-TMDL areas) for nutrients, **Table C.3-4** (TMDL areas) and **Table C-3.5** (non-TMDL areas) for pesticides and toxicity, and **Table C.3-6** (TMDL areas) for sediment and **Table C.3-7** (non-TMDL areas) for turbidity. The work plan must be submitted for Executive Officer review prior to implementation. Once approved, the work plan must be implemented.

d. Prior to the applicable compliance dates in **Table C.3-2** (TMDL areas) and **Table C.3-3** (non-TMDL areas) for nutrients, **Table C.3-4** (TMDL areas) and **Table C-3.5** (non-TMDL areas) for pesticides and toxicity, and **Table C.3-6** (TMDL areas) for sediment and **Table C.3-7** (non-TMDL areas) for turbidity, Dischargers who elect to participate in a third-party program to develop and implement their work plan will not be subject to ranch-level surface discharge monitoring and reporting.

e. Work plans must take into consideration the level of water quality impairment identified through surface receiving water monitoring. Work plans for areas with persistent exceedances of the surface water limits in **Table C.3-2** (TMDL areas) and **Table C.3-3** (non-TMDL areas) for nutrients, **Table C.3-4** (TMDL areas) and **Table C-3.5** (non-TMDL areas) for pesticides and toxicity, and **Table C.3-6** (TMDL areas) for sediment and **Table C.3-7** (non-TMDL areas) for turbidity must identify follow-up actions to restore degraded areas and meet surface receiving water limits (e.g., numeric interim quantifiable milestones, outreach, education, management practice implementation and

assessment) and additional surface receiving water monitoring locations for pollutant source identification and abatement. Work plans for areas that are already achieving the surface water limits in **Table C.3-2** (TMDL areas) and **Table C.3-3** (non-TMDL areas) for nutrients, **Table C.3-4** (TMDL areas) and **Table C-3.5** (non-TMDL areas) for pesticides and toxicity, and **Table C.3-6** (TMDL areas) for sediment and **Table C.3-7** (non-TMDL areas) for turbidity must identify actions to be taken to protect the high-quality areas (e.g., numeric interim quantifiable milestones, outreach and education). Numeric quantifiable milestones include numeric interim quantifiable milestones for relevant constituents (e.g., pollutant load or concentration) and numeric interim quantifiable milestones for management practices implemented that confirm progress towards reducing the discharge of relevant constituents (e.g., volume of discharge water diverted to treatment systems, treatment system pollutant reduction, distance of riparian area improvements, acres no longer receiving conventional pesticide applications).

f. Dischargers who elect to develop their work plan individually and whose ranches are located in areas where surface receiving water monitoring shows an exceedance of an applicable surface water limit in **Table C.3-2** (TMDL areas) and **Table C.3-3** (non-TMDL areas) for nutrients, **Table C.3-4** (TMDL areas) and **Table C-3.5** (non-TMDL areas) for pesticides and toxicity, and **Table C.3-6** (TMDL areas) for sediment and **Table C.3-7** (non-TMDL areas) for turbidity after the applicable compliance deadline may be subject to ranch-level surface discharge monitoring and reporting.

20. When required by the Executive Officer, based on surface receiving water quality data or significant and repeated exceedance of the surface water quality limits in **Table C.3-2** (TMDL areas) and **Table C.3-3** (non-TMDL areas) for nutrients, **Table C.3-4** (TMDL areas) and **Table C-3.5** (non-TMDL areas) for pesticides and toxicity, and **Table C.3-6** (TMDL areas) for sediment and **Table C.3-7** (non-TMDL areas) for turbidity, Dischargers must complete **ranch-level surface discharge monitoring and reporting** as described in the MRP. Dischargers can complete this requirement either individually or as part of a third-party program effort. Water Board staff will coordinate with Dischargers prior to the Executive Officer invoking this requirement to determine if non-compliance is the result of unforeseen or uncontrollable circumstances and to provide the Discharger with 90-day advanced notice of the forthcoming requirement. When ranch-level surface discharge monitoring and reporting is required, a work plan, including a SAP and QAPP, must be submitted for Executive Officer review prior to implementation. Once approved by the Executive Officer, the work plan must be implemented. Ranch-level surface discharge monitoring may be discontinued with the approval of the Executive Officer when the Discharger comes into compliance with the surface receiving water limits, or the discharge has otherwise ceased.

21. Dischargers must report on nutrient, pesticide, and sediment and erosion control management practice implementation and assessment electronically in the ACF, as described in the MRP.

22. Dischargers whose ranches have impermeable surfaces must report on stormwater management practice implementation and assessment electronically in the ACF, as described in the MRP.

23. Dischargers with waterbodies within or bordering their ranch must measure and report the current riparian area (average width and length, in feet) in the ACF, as described in the MRP.

Part 2, Section D. Additional Requirements and Prohibitions

Waste Discharge Control and Prohibitions

1. Except in compliance with this Order, Dischargers must not cause or contribute to exceedances of applicable water quality objectives, as defined in Attachment A, must protect all beneficial uses for inland surface waters, enclosed bays, and estuaries, and for groundwater, as outlined in sections 3.3.2 and 3.3.4 of the Basin Plan, and must prevent nuisance as defined in Water Code section 13050.

2. Dischargers must achieve applicable Total Maximum Daily Load (TMDL) Load Allocations (LAs) by achieving the surface water receiving limits established in this Order. Dischargers must incorporate planning elements from applicable TMDLs into the appropriate section of their Farm Plan and, as appropriate, into their follow-up surface receiving water implementation work plan(s).

3. Dischargers that anticipate exceeding a limit or condition of the Order after the final compliance date has passed may request a time schedule order pursuant to Water Code section 13300 for the Central Coast Water Board's consideration. A time schedule order must be requested 18 months in advance of a Discharger or a group of Dischargers anticipating that they will not be able to achieve the receiving water limit by the compliance date. At a minimum, the request for a time schedule order must include information outlined in Attachment A (Additional Findings). Dischargers may either individually request a time schedule order or may jointly request a time schedule order with other Dischargers subject to the same groundwater or surface receiving water limit.

4. The discharge of rubbish, refuse, trash, irrigation tubing or tape, or other solid wastes into surface waters is prohibited. The placement of such materials where they discharge or have the potential to discharge to surface waters is prohibited.

5. The discharge of chemicals such as fertilizers, fumigants, pesticides, herbicides, or rodenticides down a groundwater well casing is prohibited.

6. The discharge of chemicals, including those used to control wildlife (such as bait traps or poison), directly into surface waters or groundwater is prohibited. The placement of chemicals in a location where they may be discharged to surface waters or groundwater is prohibited.

7. Dischargers who apply fertilizers, fumigants, pesticides, herbicides, rodenticides, or other chemicals through an irrigation system must have functional and properly maintained backflow prevention devices installed at the well or pump to prevent pollution of groundwater and surface water that comply with any applicable DPR requirements or local ordinances. Backflow prevention devices used to protect water quality must be those approved by the United States Environmental Protection Agency (USEPA), DPR, State Water Board Division of Drinking Water, or the local public health or water agency.

8. Dischargers must properly destroy all abandoned groundwater wells, exploration holes or test holes, as defined by Department of Water Resources (DWR) Bulletin 74-81 and revised in 1988, in such a manner that they will not produce water or act as a conduit for mixing or otherwise transfer groundwater or waste pollutants between permeable zones or aquifers. Well destruction must be performed in compliance with any applicable DWR requirements or local ordinances (including local well destruction permitting requirements).

9. This Order does not authorize the discharge of pollutants from point sources to waters of the United States, including wetlands. Where required, Dischargers must obtain authorization for such discharges by obtaining a Clean Water Act (CWA) section 402 National Pollutant Discharge Elimination System (NPDES) permit or a CWA section 404 dredge and fill permit.

10. Dischargers who utilize containment structures (such as retention ponds or reservoirs) to achieve treatment or control of the discharge of waste must manage, construct, and maintain such containment structures to avoid discharges of waste to groundwater and surface water that cause or contribute to exceedances of water quality objectives or impairment of beneficial uses. Dischargers may choose the method of compliance appropriate for the individual ranch, which may include, but is not limited to:

    a. Implementing chemical treatment (such as enzymes);
    b. Implementing biological treatment (such as wood chips);
    c. Recycling or reusing contained water to minimize infiltration or discharge of waste;
    d. Minimizing the volume of water in the containment structure to minimize percolation of waste; and/or
    e. Minimizing percolation of waste via a synthetic, concrete, clay, or low permeability soil liner.

11. Dischargers must implement proper handling, storage, disposal, and management of fertilizers, fumigants, pesticides, herbicides, rodenticides, and other chemicals to prevent or control the discharge of waste to waters of the state that causes or contributes to exceedances of water quality standards. All chemical storage areas must have appropriate secondary containment structures to protect water quality and prevent discharge through spillage, mixing, or seepage.

12. Dischargers must implement water quality protective management practices (such as source control or treatment) to prevent erosion, reduce stormwater runoff quantity and velocity, and hold fine particles in place.

13. Dischargers must minimize the presence of bare soil vulnerable to erosion and soil runoff to surface waters and implement erosion control, sediment, and stormwater management practices in non-cropped areas, such as unpaved roads and other heavy use areas.

14. Dischargers who utilize agricultural drainage pumps must implement management practices to dissipate flow and prevent channel and/or streambank erosion resulting in increased sediment transport and turbidity within surface water.

15. Dischargers must comply with any applicable stormwater permits.

16. Dischargers must implement best practicable treatment or control (BPTC) measures for the construction and maintenance of farm roads to minimize erosion and sediment discharges that contribute to nonpoint source pollution.

17. Dischargers must ensure that all farm roads are, to the extent possible, hydrologically disconnected from waters of the state by installing disconnecting drainage features, increasing the frequency of (inside) ditch drain relief as needed, constructing out-sloped roads, constructing energy dissipating structures, avoiding concentrating flows in unstable areas, and performing inspection and maintenance as needed to optimize access road performance.

18. Dischargers must ensure that farm road surfacing, especially within a segment leading to waters of the state, minimizes sediment delivery to waters of the state and maximizes road integrity.

19. Dischargers must ensure that farm roads are out-sloped whenever possible to promote even drainage of the farm road surface, prevent the concentration of stormwater flow within an inboard or inside ditch, and to prevent disruption of the natural sheet flow pattern off a hill slope to waters of the state.

20. Farm road stormwater drainage structures must not discharge onto unstable slopes, earthen fills, or directly into waters of the state. Drainage structures must discharge onto stable areas with straw bales, slash, vegetation, and/or rock riprap.

21. If used, chemical toilets or holding tanks must be maintained in a manner appropriate for the frequency and conditions of usage, sited in stable locations, and located outside of areas bordering surface waterbodies.

22. Dischargers who produce and apply compost in-house must comply with the following requirements:

    a. Materials and activities on-site must not cause, threaten to cause, or contribute to conditions of pollution, contamination, or nuisance;
    b. Activities must be set back at least 100 feet from the nearest surface waterbody and/or the nearest water supply well;
    c. Dischargers must implement practices to minimize or eliminate the discharge of waste that may adversely impact the quality or beneficial uses of waters of the state;
    d. Dischargers must manage the application of water to compost (including from precipitation events) to reduce the generation of wastewater;
    e. Working surfaces must be designed to prevent, to the greatest extent possible, ponding, infiltration, inundation, and erosion, notwithstanding precipitation events, equipment movement, and other aspects of the facility operations;
    f. Dischargers must maintain the following records in the Farm Plan. These records must be submitted to the Central Coast Water Board upon request.
        i. Total operational footprint of compost activities (in acres), including ancillary activities;
        ii. Compost operation records to provide background information on the composting operation history and a description of methods and operation used, including the following: feedstock types, volumes, sources, and suppliers. Description of the method of composting (e.g., windrow, static, forced air, mechanical). Description of how residuals are removed from the feedstocks and managed and/or disposed of.
        iii. Description of water supply.
        iv. Map detailing the location and size (in acres) of the working surface used for the storage of incoming feedstocks, additives, and amendments (receiving area); active and curing composting; final product; drainage patterns; location of any groundwater monitoring wells and water supply wells within and/or near the property boundary; location and distance (in feet) to nearby water supply wells (e.g., municipal supply, domestic supply, agricultural wells) from the nearest property boundary of the operation; identification of all surface waterbodies, including streams, ditches, canals, and other drainage

courses; and distances from the nearest property boundary of the operation to these surface waterbody areas.

v. Records of appropriate monitoring (dependent on method of composting) for composting to develop final product (temperature, turning, air flow, etc.).

vi. Records of final product use, including locations and volumes.

23. Disturbance (e.g., removal, degradation, or destruction) of existing, naturally occurring, and established native riparian vegetative cover (e.g., trees, shrubs, and grasses), unless authorized or exempted (e.g., Clean Water Act [CWA] section 404 permit and CWA section 401 certification, WDRs, waivers of WDRs, a California Department of Fish and Wildlife [CDFW] Lake and Streambed Alteration Agreement, or municipal ordinance), is prohibited. Dischargers must avoid disturbance in riparian areas to minimize waste discharges and protect water quality and beneficial uses.

24. In the case where disturbance of riparian areas is authorized, Dischargers must implement appropriate and practicable measures to avoid, minimize, and mitigate erosion and discharges of waste.

Additional Requirements

25. Upon the Central Coast Water Board's request, Dischargers must submit information regarding compliance with any DPR adopted or approved surface water or groundwater protection requirements to the Central Coast Water Board.

26. Upon the Central Coast Water Board's request, Dischargers must submit proof of an approved Lake and Streambed Alteration Agreement or other authorization or release from the CDFW to the Central Coast Water Board for any work conducted within the bed, bank, and channel, including riparian areas, of parcels enrolled in this order, that has the potential to result in erosion and discharges of waste to waters of the State.

27. Upon the Central Coast Water Board's request, Dischargers must submit proof of a Clean Water Act section 404 dredge and fill permit from the United States Army Corps of Engineers (USACE) for any work that has the potential to discharge wastes considered "fill" material, such as sediment, to waters of the United States to the Central Coast Water Board.

28. Dischargers must comply with DWR Bulletin 74-81 and supplement 74-90, Water Code sections 13700 through 13755, and any local permitting requirements associated with installation of new wells.

29. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in

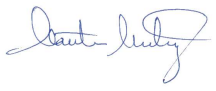
the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C. sections 1531 to 1544). If a "take" will result from any act authorized under this Order, the Dischargers must obtain authorization for an incidental take prior to taking action. Dischargers are responsible for meeting all applicable requirements of the California and federal Endangered Species Acts for the discharge authorized by this Order.

30. Dischargers or a representative authorized by the Discharger must sign technical reports submitted to the Central Coast Water Board to comply with this Order. Any person signing or submitting a document must provide the following certification, whether written or implied:

    "In compliance with Water Code section 13267, I certify under penalty of perjury that this document and all attachments were prepared by me, or under my direction or supervision, following a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. To the best of my knowledge and belief, this document and all attachments are true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

CERTIFICATION

I, Matthew T. Keeling, Executive Officer, do hereby certify that this General Order with all its attachments is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Central Coast Region on April 15, 2021.



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Matthew T. Keeling, Executive Officer

Tables and Figures

Tables and Figures related to Part 2, Section C.1. Groundwater Protection

Table C.1-1. Groundwater Phase Areas

Groundwater Basin[1]	Groundwater Phase
Gilroy-Hollister Valley - Llagas Area	Phase 1, Phase 2
Salinas Valley - Forebay Aquifer	Phase 1, Phase 2
Salinas Valley - Upper Valley Aquifer	Phase 1, Phase 2
Santa Maria River Valley - Santa Maria	Phase 1, Phase 2
Santa Ynez River Valley	Phase 1, Phase 3
Corralitos - Pajaro Valley	Phase 2
Gilroy Hollister Valley - North San Benito	Phase 2
Salinas Valley - 180/400 Foot Aquifer	Phase 2
Salinas Valley - East Side Aquifer	Phase 2
San Luis Obispo Valley	Phase 2
All Other Basins and Areas Outside of Basins	Phase 3

[1]As defined in the 2019 California Department of Water Resources Bulletin 118.

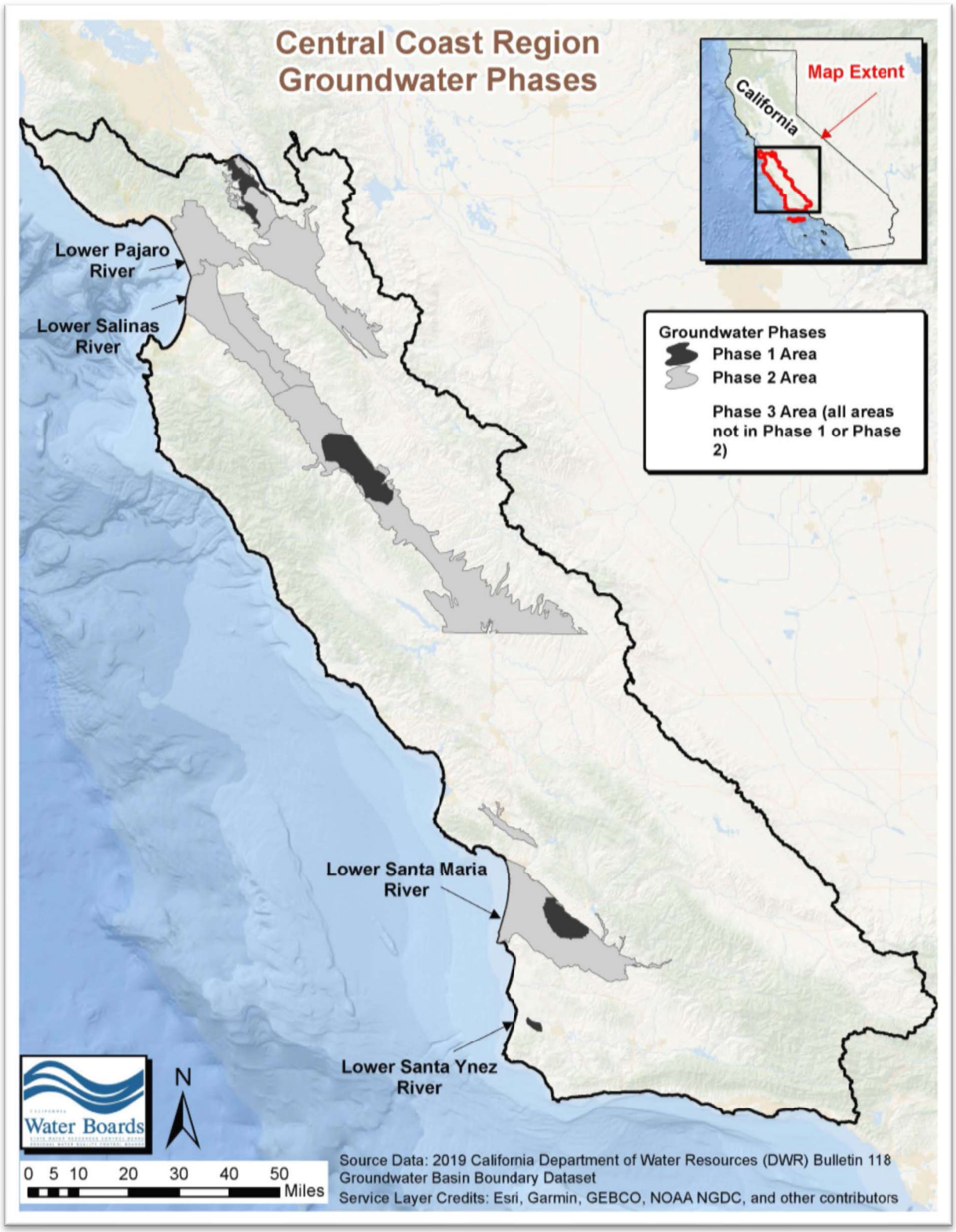

Figure C.1-1: Groundwater Phase Areas

Table C.1-2. Compliance Dates for Fertilizer Nitrogen Application Limits

Crop	90th Percentile A_{FER} =	Compliance Date	85th Percentile A_{FER} =	Compliance Date
Broccoli	295	12/31/2023	280	12/31/2025
Cauliflower	310		285	
Celery	360		330	
Lettuce	275		255	
Spinach	245		230	
Strawberry	320		295	
All Other Crops	500		480	

Note: For crops grown for less than one year (e.g., broccoli, lettuce, etc.), units are in pounds of nitrogen per acre per crop. In the situation where a Discharger grows a crop more than once during the year, e.g. grows a spring lettuce and a fall lettuce, the application limit applies to each of the crops separately: no more than 275 pounds of nitrogen per acre can be applied to the spring lettuce crop and no more than 275 pounds of nitrogen per acre can be applied to the fall lettuce crop. The two lettuce crops can be reported on separately or can be averaged together. For crops grown for more than one year (e.g., grapes, trees, etc.), units are in pounds of nitrogen per acre per year. The 90th and 85th percentile fertilizer nitrogen application limits were determined by using year 2014 to 2019 total nitrogen applied (TNA) reporting information.

Table C.1-3. Compliance Dates for Nitrogen Discharge Targets and Limits

Compliance Pathway 1 $A_{FER} + (C \times A_{COMP}) + (O \times A_{ORG}) + A_{IRR} - R =$	**Compliance Date**		
	Target	500	12/31/2023
	Target	400	12/31/2025
	Limit	300	12/31/2027
	Limit	200	12/31/2031
	Limit	150	12/31/2036
	Limit	100	12/31/2041
	Limit	50	12/31/2051
OR			
Compliance Pathway 2 $A_{FER} + (C \times A_{COMP}) + (O \times A_{ORG}) = R$	**Compliance Date**		
	Target	A = R	12/31/2023
	Target	A = R	12/31/2025
	Limit	A = R	12/31/2027
	Limit	A = R	12/31/2031
	Limit	A = R	12/31/2036
	Limit	A = R	12/31/2041
	Limit	A = R	12/31/2051
OR			
Compliance Pathway 3 $A_{FER} + (C \times A_{COMP}) + (O \times A_{ORG}) - R =$	**Compliance Date**		
	Target	300	12/31/2023
	Target	200	12/31/2025
	Limit	100	12/31/2027
	Limit	0	12/31/2031
	Limit	-50	12/31/2036
	Limit	-100	12/31/2041
	Limit	-150	12/31/2051

Note: All units are in pounds of nitrogen per acre per year and represent all crops grown and harvested on the entire ranch. The initial 2027 nitrogen discharge limits will be re-evaluated based on discharger reported nitrogen applied and removed data, new science, and management practice implementation and assessment before becoming effective.

A_{FER} is the amount of fertilizer nitrogen applied in pounds per acre.
C is the compost discount factor used to represent the amount of compost nitrogen mineralized during the year that the compost was applied.
A_{COMP} is the total amount of compost nitrogen applied in pounds per acre.
A_{IRR} is the amount of nitrogen in pounds per acre applied in the irrigation water estimated from the volume required for crop evapotranspiration (ET) or volume of water applied.
O is the organic fertilizer discount factor used to represent the amount of nitrogen mineralized during the first 12 weeks in the year it was applied.
A_{ORG} is the total amount of organic fertilizer or amendment nitrogen applied in pounds per acre.
R is the amount of nitrogen removed from the field through harvest, sequestration, or other removal methods, in pounds per acre.

Note: Report due dates to confirm compliance with the fertilizer application limits and nitrogen discharge targets and limits are included in the MRP.

Tables and Figures related to Part 2, Section C.2. Third-Party Alternative Compliance Pathway for Groundwater Protection

Table C.2-1. Compliance Dates for Fertilizer Nitrogen Application Targets (Alternative Compliance Pathway)

Crop	90th Percentile A_{FER} =	Compliance Date	85th Percentile A_{FER} =	Compliance Date
Broccoli	295	12/31/2024	280	12/31/2026
Cauliflower	310		285	
Celery	360		330	
Lettuce	275		255	
Spinach	245		230	
Strawberry	320		295	
All Other Crops	500		480	

Note: For crops grown for less than one year (e.g., broccoli, lettuce, etc.), units are in pounds of nitrogen per acre per crop. In the situation where a Discharger grows a crop more than once during the year, e.g. grows a spring lettuce and a fall lettuce, the application limit applies to each of the crops separately: no more than 275 pounds of nitrogen per acre can be applied to the spring lettuce crop and no more than 275 pounds of nitrogen per acre can be applied to the fall lettuce crop. The two lettuce crops can be reported on separately or can be averaged together. For crops grown for more than one year (e.g., grapes, trees, etc.), units are in pounds of nitrogen per acre per year. The 90th and 85th percentile fertilizer nitrogen application targets were determined by using year 2014 to 2019 total nitrogen applied (TNA) reporting information.

Table C.2-2. Compliance Dates for Nitrogen Discharge Targets (Alternative Compliance Pathway)

	Target	Compliance Date
Compliance Pathway 1 $A_{FER} + (C \times A_{COMP}) + (O \times A_{ORG}) + A_{IRR} - R =$	500	12/31/2024
	400	12/31/2026
	300	12/31/2028
OR		
	Target	**Compliance Date**
Compliance Pathway 2 $A_{FER} + (C \times A_{COMP}) + (O \times A_{ORG}) = R$	A = R	12/31/2024
	A = R	12/31/2026
	A = R	12/31/2028
OR		
	Target	**Compliance Date**
Compliance Pathway 3 $A_{FER} + (C \times A_{COMP}) + (O \times A_{ORG}) - R =$	300	12/31/2024
	200	12/31/2026
	100	12/31/2028

Notes: All units are in pounds of nitrogen per acre per year and represent all crops grown and harvested on the entire ranch. All compliance pathway variables are defined above under **Table C.1-3**. The final 2028 nitrogen discharge targets will be re-evaluated based on discharger reported nitrogen applied and removed data, new science, management practice implementation and assessment, and third-party GWP collective numeric interim and final targets before becoming effective.

Tables and Figures related to Part 2, Section C.3. Surface Water Protection

Table C.3-1. Surface Water Priority Areas

HUC-8 Number[1]	HUC-8 Name	Surface Water Priority
18060008	Santa Maria	Priority 1
18060005	Salinas	Priority 2
18060002	Pajaro	Priority 3
18060015	Monterey Bay	Priority 3
18060010	Santa Ynez	Priority 3
18050003	Coyote	Priority 4
18050006	San Francisco Coastal South	Priority 4
18060004	Estrella	Priority 4
18060006	Central Coastal	Priority 4
18060003	Carrizo Plain	Priority 4
18060007	Cuyama	Priority 4
18060009	San Antonio	Priority 4
18060013	Santa Barbara Coastal	Priority 4
18060014	Santa Barbara Channel Islands	Priority 4
18070101	Ventura	Priority 4

[1]As defined by the National Hydrography Dataset Plus Watershed Boundary Dataset

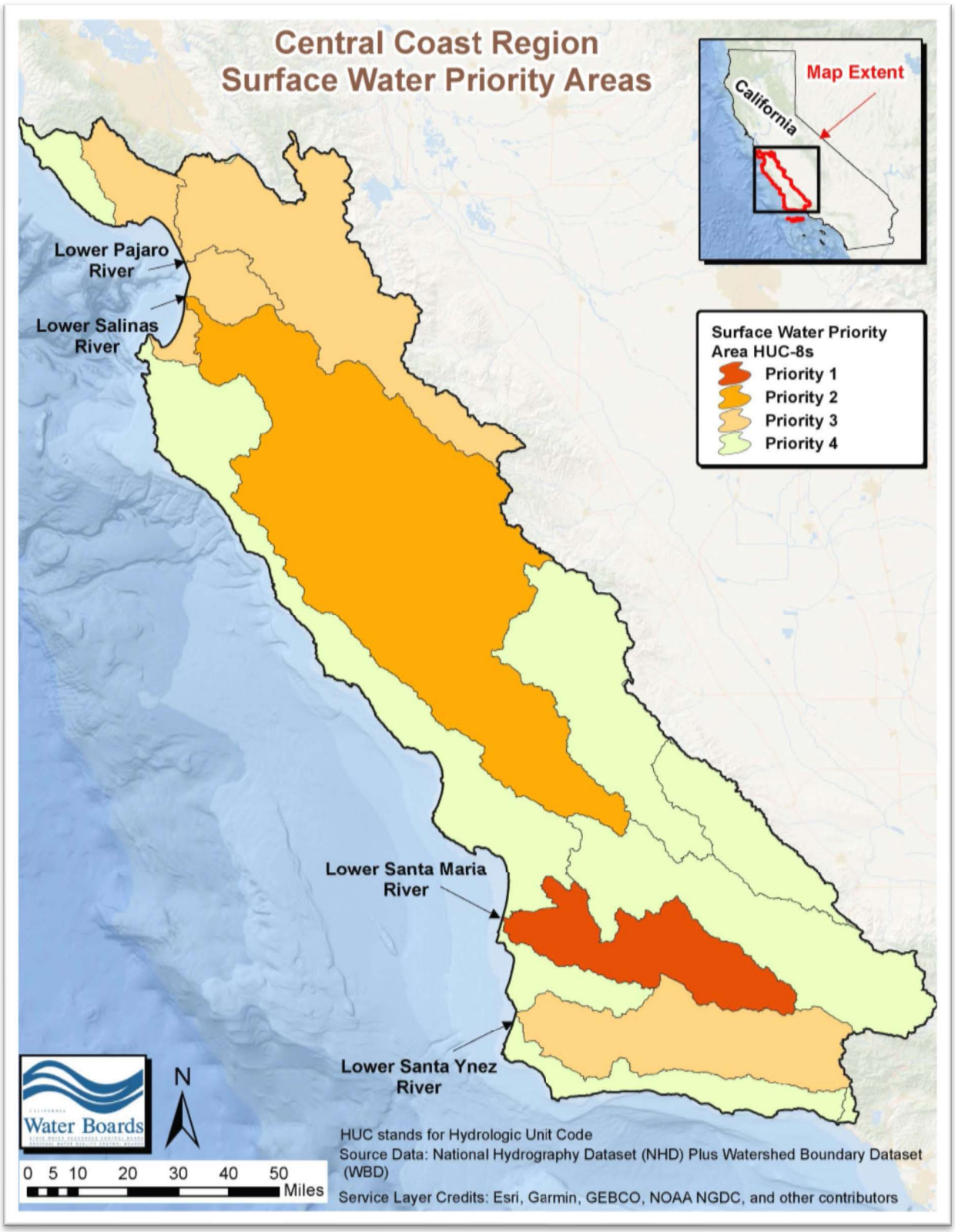

Figure C-3.1: Surface Water Priority Areas

Table C.3-1.3P. Surface Water Priority Areas (Third-Party Program)

High Priority	
305FUF	Furlong Creek at Frazier Lake Road
309ALG	Salinas Reclamation Canal at La Guardia
309CCD	Chualar Creek west of Highway 101
309CRR	Chualar Creek North Branch east of Highway 101
309ESP	Espinosa Slough upstream from Alisal Slough
309JON	Salinas Reclamation Canal at San Jon Road
309MER	Merrit Ditch upstream of Highway 183
309NAD	Natividad Creek upstream of Salinas Reclamation Canal
309OLD	Old Salinas River at Monterey Dunes Way
309QUI	Quail Creek at culvert on east side of Highway 101
309TEH	Tembladero Slough at Haro Street
312BCC	Bradley Canyon Creek at Culvert
312BCJ	Bradley Channel at Jones Street
312GVS	Green Valley at Simas
312MSD	Main Street Canal upstream of Ray Road at Highway 166
312OFC	Oso Flaco Creek at Oso Flaco Lake Road
312ORC	Orcutt Solomon Creek upstream of Santa Maria River
312ORI	Orcutt Solomon Creek at Highway 1
312SMA	Santa Maria River at Estuary
Medium Priority	
305BRS	Beach Road Ditch at Shell Road
305CAN	Carnadero Creek upstream of Pajaro River
305CHI	Pajaro River at Chittenden Gap
305FRA	Pajaro River Millers Canal at Frazier Lake Road
305LCS	Llagas Creek at Southside Avenue
305PJP	Pajaro River at Main Street
305SJA	San Juan Creek at Anzar Road
305TSR	Tequisquita Slough upstream of Pajaro River at Shore Road
305WCS	Watsonville Creek at Elkhorn Road / Hudson Landing
309ASB	Alisal Slough at White Barn
309BLA	Blanco Drain below Pump
309GAB	Gabilan Creek at Boronda Road
309MOR	Moro Cojo Slough at Highway 1
309RTA	Santa Rita Creek at Santa Rita Creek Park
310LBC	Los Berros Creek at Century Road
310PRE	Prefumo Creek at Calle Joaquin
310USG	Arroyo Grande Creek at old USGS Gauge
310WRP	Warden Creek at Wetlands Restoration Preserve
312OFN	Little Oso Flaco Creek
312SMI	Santa Maria at Highway 1
313SAE	San Antonio Creek at San Antonio Road east
314SYN	Santa Ynez River at 13th
315BEF	Bell Creek at Winchester Canyon Park
315FMV	Franklin Creek at Mountain View Lane
315GAN	Glenn Annie Creek
315LCC	Los Carneros Creek at Calle Real

Low Priority	
305COR	Salsipuedes Creek downstream of Corralitos Creek upstream of HWY 129
305WSA	Watsonville Slough at San Andreas Road
309GRN	Salinas River (Mid) at Elm Road in Greenfield
309SAC	Salinas River at Chualar
309SAG	Salinas River at Gonzales River Road Bridge
309SSP	Salinas River (Lower) at Spreckles Gauge
310CCC	Chorro Creek upstream of Chorro Flats
314SYF	Santa Ynez River at Flordale
314SYL	Santa Ynez River at River Park
315APF	Arroyo Paredon Creek at Foothill Bridge
All Other Areas	Low priority also includes all other areas not in high or medium priority areas

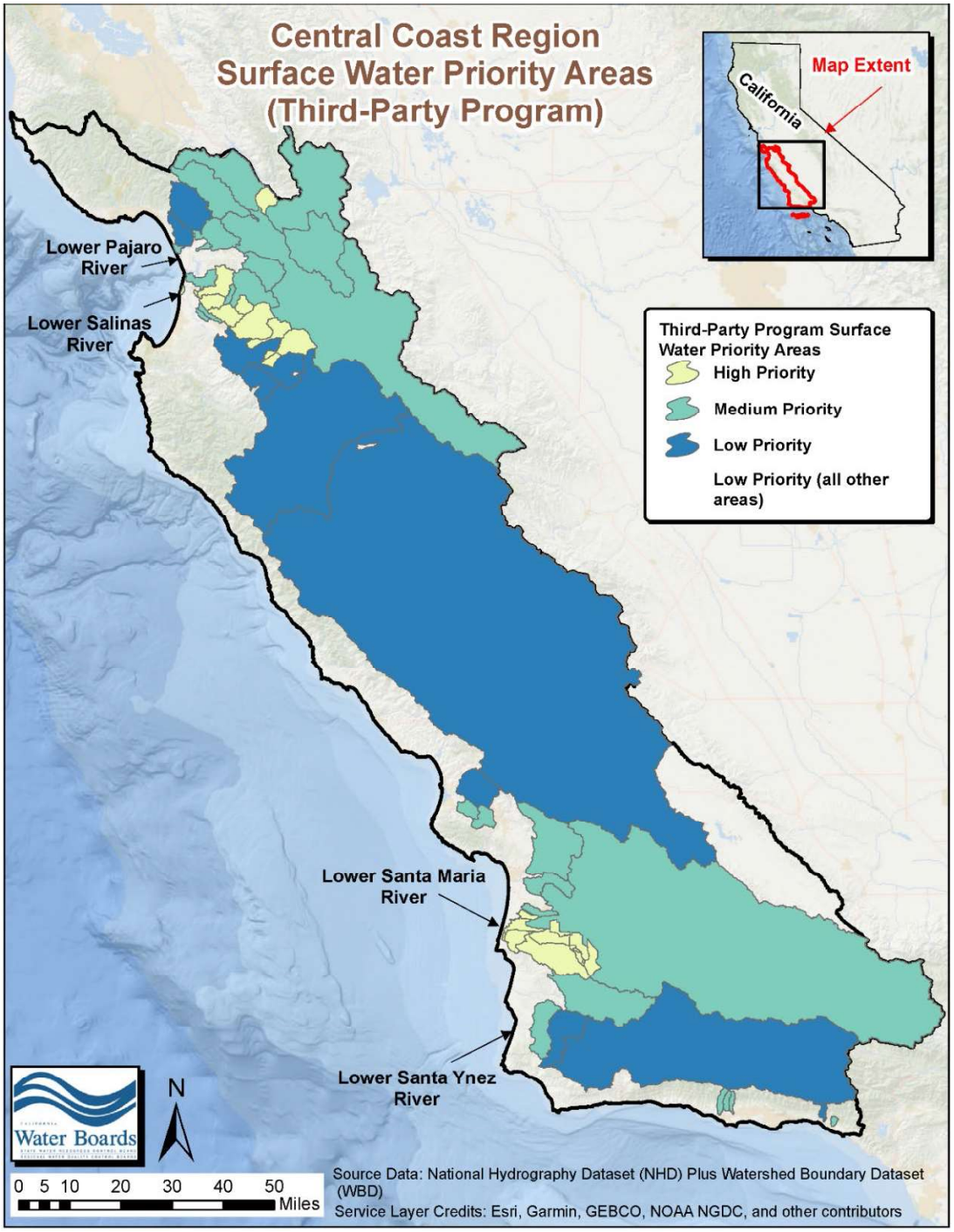

Figure C-3.1.3P: Surface Water Priority Areas (Third-Party Program)

Table C.3-2. Compliance Dates for Nutrient Limits (TMDL areas)

TMDL Project Name	Constituent	Matrix	Limit[1]	Units[2]	Compliance Date
Arroyo Paredon Nitrate TMDL	Nitrate, as N	Water Column	10.0	mg/L	12/31/2032
Bell Creek Nitrate TMDL	Nitrate, as N	Water Column	10.0	mg/L	12/31/2032
Franklin Creek Nutrients TMDL	Nitrate, as N	Water Column	10.0	mg/L	12/31/2032
Franklin Creek Nutrients TMDL	Total Nitrogen, as N	Water Column	Wet Season: 8.0	mg/L	3/4/2034
Franklin Creek Nutrients TMDL	Total Phosphorous	Water Column	Wet Season: 0.3	mg/L	3/4/2034
Franklin Creek Nutrients TMDL	Total Nitrogen, as N	Water Column	Dry Season: 1.1	mg/L	3/4/2044
Franklin Creek Nutrients TMDL	Total Phosphorous	Water Column	Dry Season: 0.075	mg/L	3/4/2044
Glen Annie Canyon, Tecolotito Creek, & Carneros Creek Nitrate TMDL	Nitrate, as N	Water Column	10.0	mg/L	12/31/2032
Los Berros Creek Nitrate TMDL	Nitrate, as N	Water Column	10.0	mg/L	12/31/2032
Los Osos Creek, Warden Creek, and Warden Lake Wetland Nutrient TMDL	Nitrate, as N	Water Column	10.0	mg/L	12/31/2032

TMDL Project Name	Constituent	Matrix	Limit[1]	Units[2]	Compliance Date
Lower Salinas River Watershed Nutrient TMDL	Ammonia (Un-Ionized), as N3	Water Column	0.025	mg/L	12/31/2032
Lower Salinas River Watershed Nutrient TMDL	Nitrate, as N	Water Column	10.0	mg/L	12/31/2032
Lower Salinas River Watershed Nutrient TMDL	Total Nitrogen, as N4	Water Column	Wet Season: 8.0	mg/L	5/7/2034
Lower Salinas River Watershed Nutrient TMDL	Nitrate, as N	Water Column	Wet Season: 8.0	mg/L	5/7/2034
Lower Salinas River Watershed Nutrient TMDL	Orthophosphate, as P	Water Column	Wet Season: 0.3	mg/L	5/7/2034
Lower Salinas River Watershed Nutrient TMDL	Total Nitrogen, as N4	Water Column	Dry Season: 1.7	mg/L	5/7/2044
Lower Salinas River Watershed Nutrient TMDL	Nitrate, as N	Water Column	Dry Season: 1.4 – 6.41	mg/L	5/7/2044
Lower Salinas River Watershed Nutrient TMDL	Orthophosphate, as P	Water Column	Dry Season: 0.07 – 0.131	mg/L	5/7/2044
Pajaro River Watershed Nutrient TMDL	Ammonia (Un-ionized), as N3	Water Column	0.025	mg/L	12/31/2032
Pajaro River Watershed Nutrient TMDL	Nitrate, as N	Water Column	10.0	mg/L	12/31/2032

TMDL Project Name	Constituent	Matrix	Limit[1]	Units[2]	Compliance Date
Pajaro River Watershed Nutrient TMDL	Total Nitrogen, as N	Water Column	Wet Season: 8.0	mg/L	12/31/2032
Pajaro River Watershed Nutrient TMDL	Nitrate, as N	Water Column	Wet Season: 8.0	mg/L	12/31/2032
Pajaro River Watershed Nutrient TMDL	Orthophosphate, as P	Water Column	Wet Season: 0.3	mg/L	12/31/2032
Pajaro River Watershed Nutrient TMDL	Total Nitrogen, as N5	Water Column	Dry Season: 1.1 – 2.11	mg/L	7/12/2041
Pajaro River Watershed Nutrient TMDL	Nitrate, as N	Water Column	Dry Season: 1.8 – 3.91	mg/L	7/12/2041
Pajaro River Watershed Nutrient TMDL	Orthophosphate, as P	Water Column	Dry Season: 0.04 – 0.141	mg/L	7/12/2041
San Luis Obispo Creek Nitrate TMDL	Nitrate, as N	Water Column	10.0	mg/L	12/31/2032
Santa Maria River Watershed Nutrients TMDL	Ammonia (Un-Ionized), as N3	Water Column	0.025	mg/L	12/31/2032
Santa Maria River Watershed Nutrients TMDL	Nitrate, as N	Water Column	10.0	mg/L	12/31/2032

TMDL Project Name	Constituent	Matrix	Limit[1]	Units[2]	Compliance Date
Santa Maria River Watershed Nutrients TMDL	Nitrate, as N	Water Column	Wet Season or Year-Round: 5.7 – 8.01	mg/L	5/22/2034
Santa Maria River Watershed Nutrients TMDL	Orthophosphate, as P	Water Column	Wet Season or Year-Round: 0.08 – 0.31	mg/L	5/22/2034
Santa Maria River Watershed Nutrients TMDL	Nitrate, as N	Water Column	Dry Season: 4.3	mg/L	5/22/2044
Santa Maria River Watershed Nutrients TMDL	Orthophosphate, as P	Water Column	Dry Season: 0.19	mg/L	5/22/2044

[1]The Lower Salinas River Watershed Nutrient TMDL, Pajaro River Watershed Nutrient TMDL, and Santa Maria River Watershed Nutrient TMDL include load allocations for specific waterbody reaches within the TMDL project area. The limits for those TMDLs are summarized in this table as ranges; however, the exact load allocation values for each reach apply as described in the TMDL and Basin Plan and will be assessed as numeric limits for the purposes of this Order.
[2]mg/L is milligrams per liter.
[3]Calculated using total ammonia and onsite instream measurements (field measurements) of pH and water temperature.
[4]Total nitrogen TMDL load allocation applies to Moro Cojo Slough only.
[5]Total nitrogen TMDL load allocation applies to the following sloughs: Watsonville, Harkins, Gallighan, and Struve.

Table C.3-3. Compliance Dates for Nutrient Limits (Non-TMDL areas)

Constituent Group	Constituent	Matrix	Limit	Units[1]	Compliance Date
Nutrients	Nitrate, as Nitrogen	Water Column	10.0	mg/L	12/31/2032
Nutrients	Ammonia (un-ionized), as Nitrogen[2]	Water Column	0.025	mg/L	12/31/2032

[1]mg/L is milligrams per liter.
[2]Calculated using total ammonia and onsite instream measurements (field measurements) of pH and water temperature.

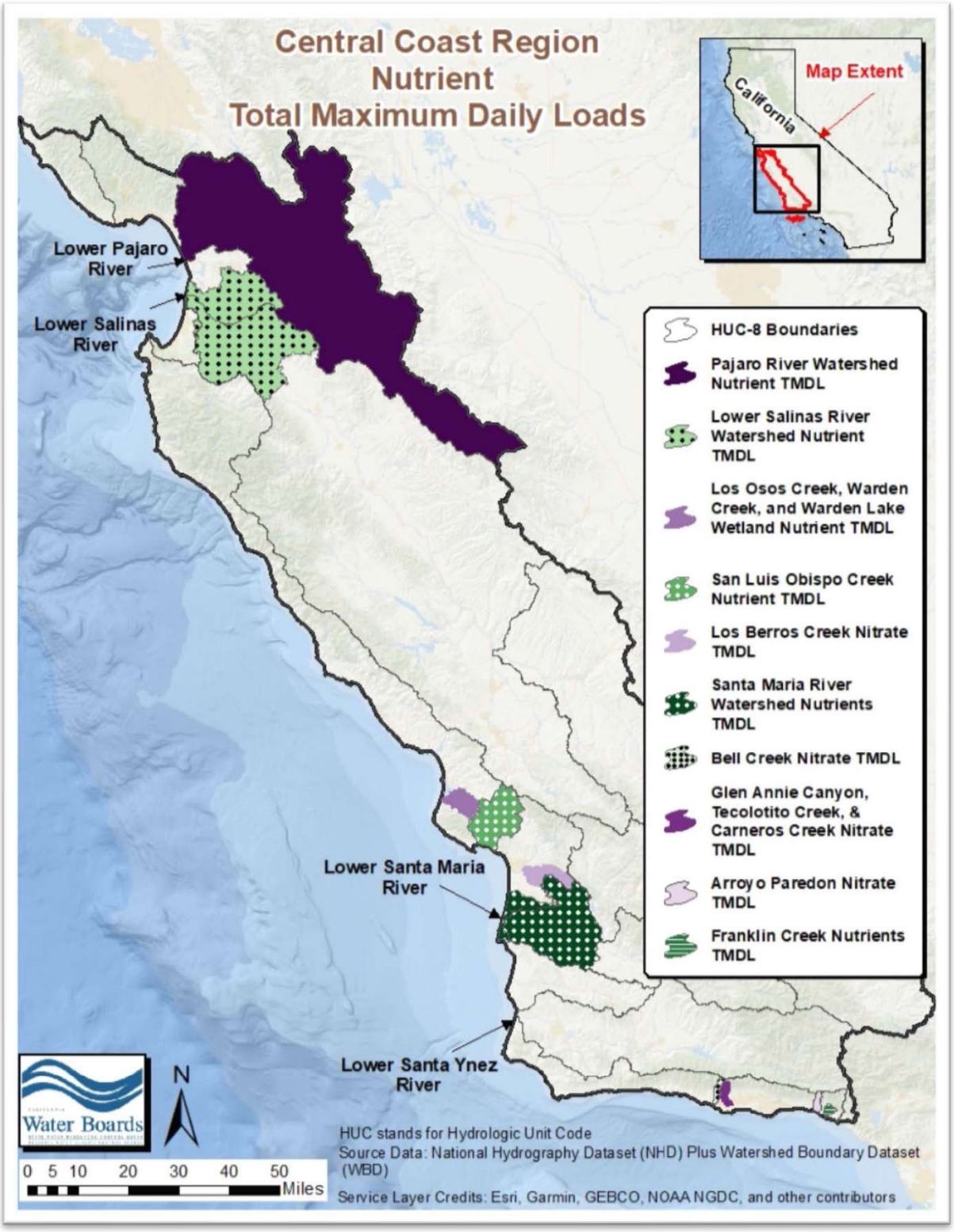

Figure C.3-2: Nutrient TMDL Areas

Table C.3-4. Compliance Dates for Pesticide and Toxicity Limits (TMDL areas)

TMDL Project Name	Constituent[1]	Matrix	Limit[2]	Units[3]	Compliance Date
Arroyo Paredon Diazinon TMDL	Additive Toxicity (Chlorpyrifos and Diazinon)	Water Column	Sum of Additive Toxicity, TU ≤ 1.0	TU	12/31/2032
Arroyo Paredon Diazinon TMDL	Diazinon	Water Column	CCC: 0.10 CMC: 0.16	µg/L	12/31/2032
Lower Salinas River Watershed Chlorpyrifos and Diazinon TMDL	Chlorpyrifos[4]	Water Column	CCC: 0.015 CMC: 0.025	µg/L	12/31/2032
Lower Salinas River Watershed Chlorpyrifos and Diazinon TMDL	Diazinon[4]	Water Column	CCC: 0.10 CMC: 0.16	µg/L	12/31/2032
Lower Salinas River Watershed Chlorpyrifos and Diazinon TMDL	Additive Toxicity (Chlorpyrifos and Diazinon)	Water Column	Sum of Additive Toxicity, TU ≤ 1.0	TU	12/31/2032

TMDL Project Name	Constituent[1]	Matrix	Limit[2]	Units[3]	Compliance Date
Lower Salinas River Watershed Sediment Toxicity and Pyrethroids in Sediment TMDL	Additive Toxicity (Pyrethroids)	Sediment	Sum of Pyrethroid TU < 1.0	TU	12/31/2032
Lower Salinas River Watershed Sediment Toxicity and Pyrethroids in Sediment TMDL	Aquatic Toxicity	Sediment	No significant toxic effect, 10-day, chronic exposure with *Hyalella azteca*	Survival endpoint	12/31/2032
Pajaro River Watershed Chlorpyrifos and Diazinon TMDL	Additive Toxicity (Chlorpyrifos and Diazinon)	Water Column	Sum of Additive Toxicity, TU ≤ 1.0	TU	12/31/2032
Pajaro River Watershed Chlorpyrifos and Diazinon TMDL	Chlorpyrifos	Water Column	CCC: 0.015 CMC: 0.025	µg/L	12/31/2032
Pajaro River Watershed Chlorpyrifos and Diazinon TMDL	Diazinon	Water Column	CCC: 0.10 CMC: 0.16	µg/L	12/31/2032

TMDL Project Name	Constituent[1]	Matrix	Limit[2]	Units[3]	Compliance Date
Pajaro River Watershed Chlorpyrifos and Diazinon TMDL	Aquatic Toxicity	Sediment	No significant toxic effect, 10-day, chronic exposure with *Hyalella azteca*	Survival and reproduction endpoints	12/31/2032
Pajaro River Watershed Chlorpyrifos and Diazinon TMDL	Aquatic Toxicity	Water Column	No significant toxic effect, 7-day, chronic exposure with *Ceriodaphnia dubia*	Survival and reproduction endpoints	12/31/2032
Santa Maria River Watershed Toxicity and Pesticide TMDL	Additive Toxicity (Chlorpyrifos and Diazinon)	Water Column	Sum of Additive Toxicity, TU ≤ 1.0	TU	12/31/2032
Santa Maria River Watershed Toxicity and Pesticide TMDL	Chlorpyrifos	Water Column	CCC: 0.015 CMC: 0.025	µg/L	12/31/2032
Santa Maria River Watershed Toxicity and Pesticide TMDL	Diazinon	Water Column	CCC: 0.10 CMC: 0.16	µg/L	12/31/2032

TMDL Project Name	Constituent[1]	Matrix	Limit[2]	Units[3]	Compliance Date
Santa Maria River Watershed Toxicity and Pesticide TMDL	Malathion	Water Column	CCC: 0.028 CMC: 0.17	µg/L	12/31/2032
Santa Maria River Watershed Toxicity and Pesticide TMDL	Additive Toxicity (Pyrethroids)	Sediment	Sum of Pyrethroid TU $\leq$ 1.0	TU	12/31/2032
Santa Maria River Watershed Toxicity and Pesticide TMDL	Aquatic Toxicity	Sediment	No significant toxic effect, 10-day, chronic exposure with *Hyalella azteca*	Survival endpoint	Not Defined[5]
Santa Maria River Watershed Toxicity and Pesticide TMDL	Aquatic Toxicity	Water Column	No significant toxic effect, 6-8 day, chronic exposure with *Ceriodaphnia dubia*	Survival and reproduction endpoints	Not Defined[5]
Santa Maria River Watershed Toxicity and Pesticide TMDL	4,4'-DDT (p,p-DDT)	Sediment	6.5	µg/kg o.c.	10/29/2044

TMDL Project Name	Constituent[1]	Matrix	Limit[2]	Units[3]	Compliance Date
Santa Maria River Watershed Toxicity and Pesticide TMDL	4,4'-DDE (p,p-DDE)	Sediment	5.5	µg/kg o.c.	10/29/2044
Santa Maria River Watershed Toxicity and Pesticide TMDL	4,4'-DDD (p,p-DDD)	Sediment	9.1	µg/kg o.c.	10/29/2044
Santa Maria River Watershed Toxicity and Pesticide TMDL	Total DDT (Sediment)	Sediment	10.0	µg/kg o.c.	10/29/2044
Santa Maria River Watershed Toxicity and Pesticide TMDL	Chlordane	Sediment	1.7	µg/kg o.c.	10/29/2044
Santa Maria River Watershed Toxicity and Pesticide TMDL	Dieldrin	Sediment	0.14	µg/kg o.c.	10/29/2044
Santa Maria River Watershed Toxicity and Pesticide TMDL	Endrin	Sediment	550.0	µg/kg o.c.	10/29/2044

TMDL Project Name	Constituent[1]	Matrix	Limit[2]	Units[3]	Compliance Date
Santa Maria River Watershed Toxicity and Pesticide TMDL	Toxaphene	Sediment	20.0	µg/kg o.c.	10/29/2044

[1]Toxic units and/or additive toxicity units are calculated using the relevant biological indicators, as described in the applicable TMDL, e.g. LC50, CCC, or CMC.
[2]CCC is Criterion Continuous Concentration or chronic (4-day (96-hour) average), not to be exceeded more than once in a three year period; CMC is Criterion Maximum Concentration or acute (1- hour average) not to be exceeded more than once in a three year period; the sum of additive toxicity is calculated by dividing each measured chemical concentration by that chemical's criterion (CCC or CMC) and summing those values as defined in the staff report for the respective TMDL project.
[3]µg/L is micrograms per liter; µg/kg is micrograms per kilogram; ng/g is nanograms per gram; o.c. means normalized for sediment organic carbon content; ppb is parts per million.
[4]Apply only when one of the two compounds (chlorpyrifos or diazinon) is present.
[5]A time schedule for aquatic toxicity was not identified in the Santa Maria River Watershed Toxicity and Pesticide TMDL; therefore, Dischargers in this area must comply with the aquatic toxicity compliance date defined in Table C.3-2.

Table C-3.5. Compliance Dates for Pesticide and Toxicity Limits (Non-TMDL areas)

Constituent Group	Constituent	Matrix	Limit[1]	Units[2]	Compliance Date
Pesticides	Acetamiprid	Water Column	2.10	µg/L	12/31/2032
Pesticides	Atrazine	Water Column	60.0	µg/L	12/31/2032
Pesticides	Bifenthrin	Sediment	0.52	µg/g o.c.	12/31/2032
Pesticides	Chlorpyrifos	Water Column	0.023	µg/L	12/31/2032
Pesticides	Chlorpyrifos	Sediment	1.77	µg/g o.c.	12/31/2032
Pesticides	Clothianidin	Water Column	0.05	µg/L	12/31/2032
Pesticides	Cyanazine	Water Column	27.0	µg/L	12/31/2032
Pesticides	Cyfluthrin	Sediment	1.08	µg/g o.c.	12/31/2032
Pesticides	Cypermethrin	Sediment	0.38	µg/g o.c.	12/31/2032
Pesticides	Danitol (fenpropathrin)	Sediment	1.10	µg/g o.c.	12/31/2032
Pesticides	Demeton-s-methyl sulfoxide (oxydemeton-methyl)	Water Column	46	µg/L	12/31/2032
Pesticides	Diazinon	Water Column	0.105	µg/L	12/31/2032
Pesticides	Dichlorvos	Water Column	0.0058	µg/L	12/31/2032
Pesticides	Dimethoate	Water Column	0.50	µg/L	12/31/2032
Pesticides	Dinotefuran	Water Column	23.5	µg/L	12/31/2032
Pesticides	Disulfoton (Disyton)	Water Column	0.01	µg/L	12/31/2032
Pesticides	Diuron	Water Column	80.0	µg/L	12/31/2032
Pesticides	Esfenvalerate	Sediment	1.54	µg/g o.c.	12/31/2032
Pesticides	Fenvalerate	Sediment	1.54	µg/g o.c.	12/31/2032
Pesticides	Glyphosate	Water Column	26,600	µg/L	12/31/2032
Pesticides	Imidacloprid	Water Column	0.01	µg/L	12/31/2032
Pesticides	Cyhalothrin, lambda	Sediment	0.45	µg/g o.c.	12/31/2032
Pesticides	Linuron	Water Column	0.09	µg/L	12/31/2032
Pesticides	Malathion	Water Column	0.049	µg/L	12/31/2032
Pesticides	Methamidophos	Water Column	4.50	µg/L	12/31/2032
Pesticides	Methidathion	Water Column	0.66	µg/L	12/31/2032
Pesticides	Paraquat	Water Column	< 36.9	µg/L	12/31/2032
Pesticides	Parathion-methyl	Water Column	0.25	µg/L	12/31/2032
Pesticides	Permethrin	Sediment	10.83	µg/g o.c.	12/31/2032

Constituent Group	Constituent	Matrix	Limit[1]	Units[2]	Compliance Date
Pesticides	Phorate	Water Column	0.21	µg/L	12/31/2032
Pesticides	Phosmet	Water Column	0.80	µg/L	12/31/2032
Pesticides	Simazine	Water Column	40.0	µg/L	12/31/2032
Pesticides	Thiacloprid	Water Column	0.97	µg/L	12/31/2032
Pesticides	Thiamethoxam	Water Column	0.74	µg/L	12/31/2032
Pesticides	Trifluralin	Water Column	2.40	µg/L	12/31/2032
Toxicity	Sediment Toxicity	Sediment	No significant effect based on chronic or acute toxicity to applicable test organism	Survival, growth, and reproduction endpoints[3]	12/31/2032
Toxicity	Water Column Toxicity	Water Column	No significant effect based on chronic or acute toxicity to applicable test organism	Survival, growth, and reproduction endpoints[3]	12/31/2032
Toxicity	Toxic Units	Sediment	Sum of additive toxicity ≤ 1	Toxic Unit (TU)[4]	12/31/2032
Toxicity	Toxic Units	Water Column	Sum of additive toxicity ≤ 1	Toxic Unit (TU)[4]	12/31/2032

[1]Attachment A to this Order describes the sources of the limits established in this table.

[2]µg/L is micrograms per liter; µg/kg is micrograms per kilogram; ng/g is nanograms per gram; o.c. means normalized for sediment organic carbon content; ppb is parts per million.

[3]Toxicity determinations will be pass/fail based on a comparison of the test organism's response (survival, growth, and reproduction) to the water sample compared to the control using the Test of Significant Toxicity (TST statistical approach), or a statistical t-test, based on the toxicity provisions in the State Water Board *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries in California* (in draft). If a sample is declared "fail" (i.e., toxic) for any endpoint, then the limit is not met. The most sensitive test species for each constituent must be used when evaluating toxicity.

[4]Toxic units (TU) and/or additive toxicity units are calculated using the relevant biological indicators, e.g. LC50, CCC, or CMC as follows: Calculate additive toxicity for organophosphate pesticides in non-TMDL watersheds as defined in the TMDL for Chlorpyrifos and Diazinon in the Lower Salinas River Watershed; and calculate TUs for pyrethroid pesticides in non-TMDL watersheds as defined in the TMDL for Sediment Toxicity and Pyrethroids in the Lower Salinas River Watershed.

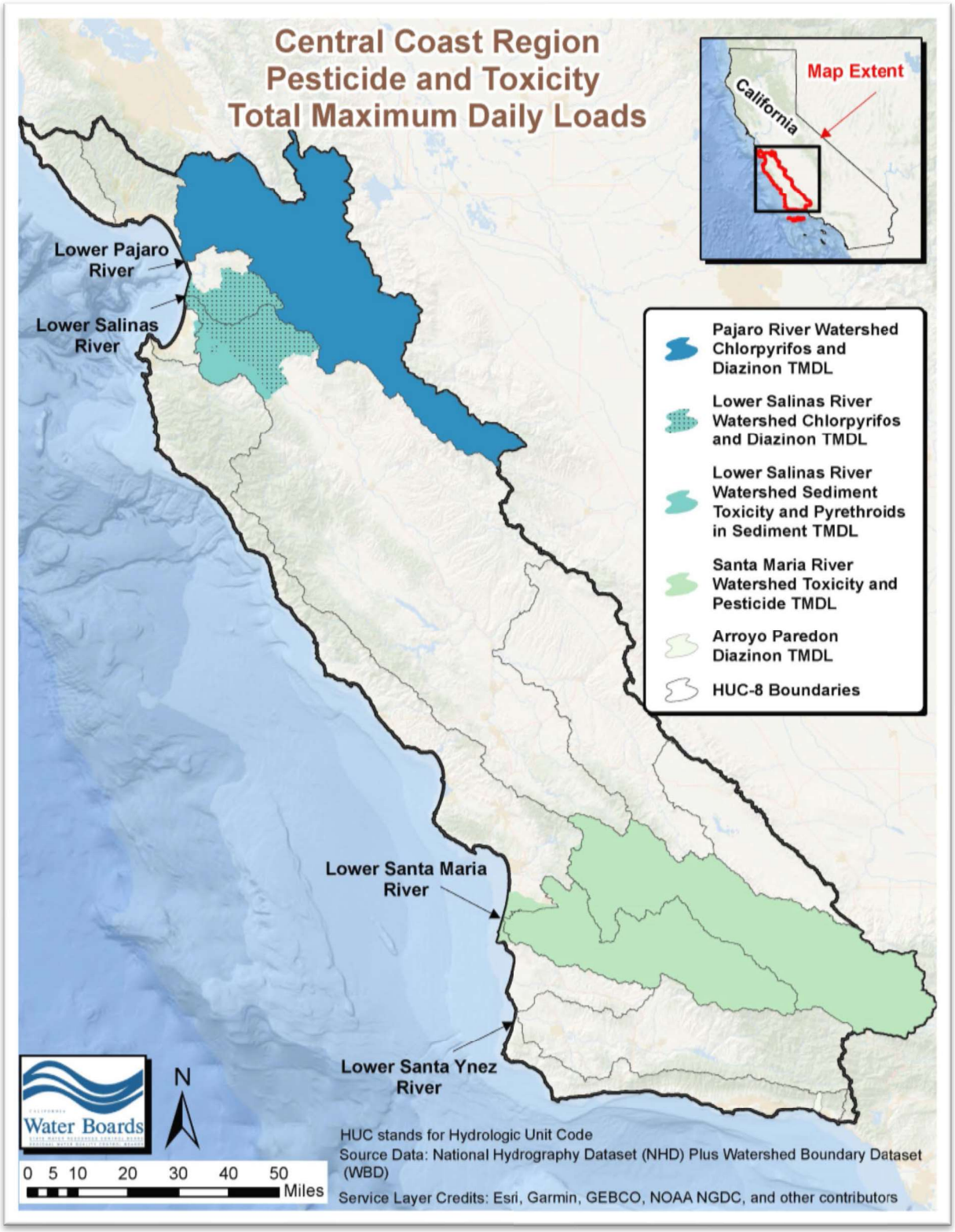

Figure C.3-3: Pesticide and Toxicity TMDL Areas

Table C.3-6. Compliance Dates for Sediment Limits (TMDL areas)

TMDL Project Name	Constituent	Limit[1]	Units	Compliance Date
Morro Bay Sediment TMDL	Sediment	285 – 6,662	Tons of sediment per year	12/3/2053
Pajaro River Watershed Sediment TMDL	Sediment	447 – 4,114	Tons of sediment per year	11/27/2051

[1]The Morro Bay Sediment TMDL and Pajaro River Watershed Sediment TMDL include load allocations for specific waterbody reaches within the TMDL project area. The limits for those TMDLs are summarized in this table as ranges; however, the exact load allocation values for each reach apply as described in the TMDL and Basin Plan and will be assessed as numeric limits for the purposes of this Order.

Table C.3-7. Compliance Dates for Turbidity Limits (Non-TMDL areas)

Constituent Group	Constituent	Beneficial Use	Limit	Units[1]	Compliance Date
Physical Parameters and General Chemistry	Turbidity	WARM	40.0	NTU	12/31/2032
Physical Parameters and General Chemistry	Turbidity	COLD	25.0	NTU	12/31/2032

[1]NTU is nephelometric turbidity units

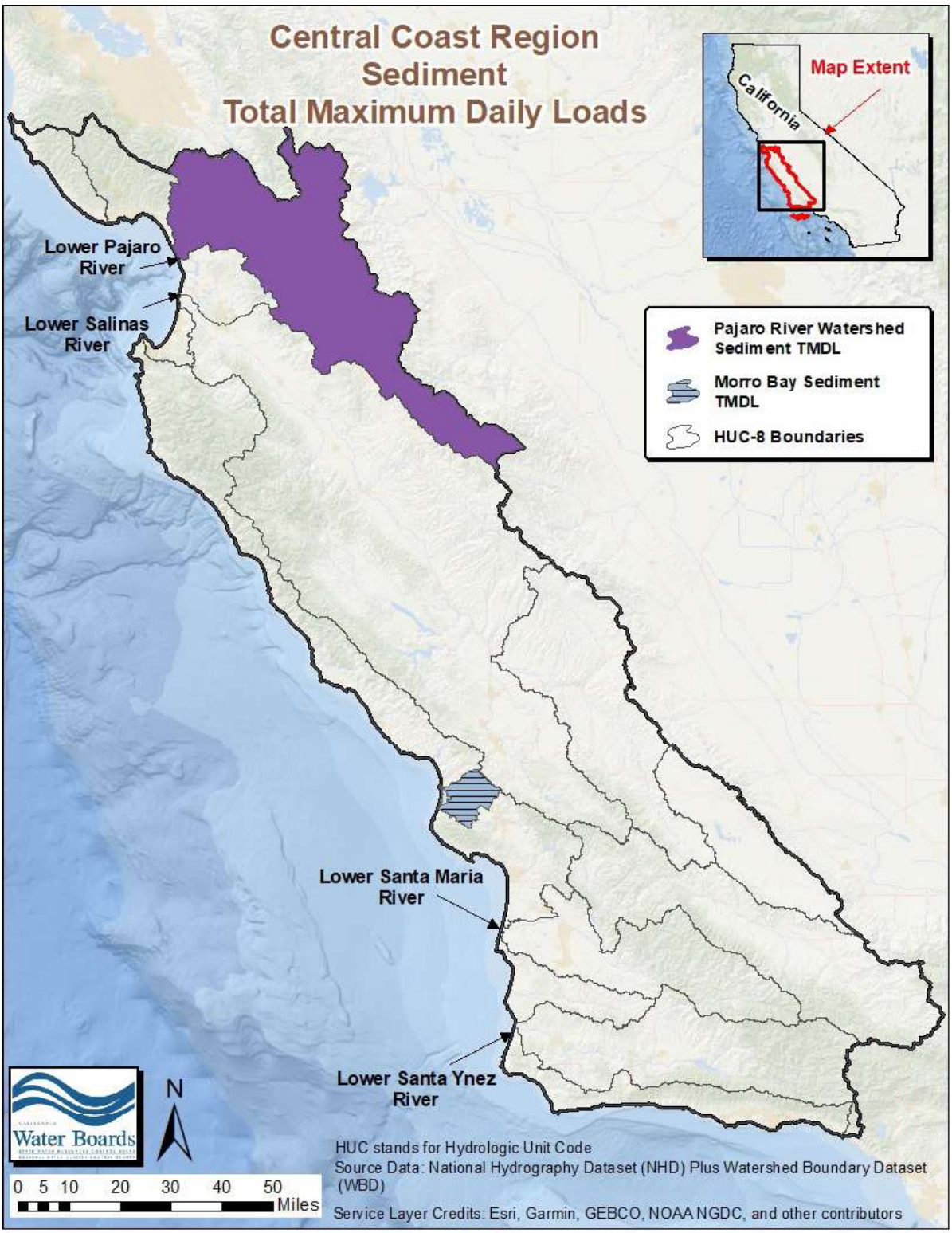

Figure C.3-4: Sediment TMDL Areas

EXHIBIT B

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

ORDER WQ 2023-0081

In the Matter of Review of

General Waste Discharge Requirements for Discharges from Irrigated Lands
Order No. R3-2021-0040

Issued by the
California Regional Water Quality Control Board,
Central Coast Region

SWRCB/OCC FILES A-2751(a)-(b)

BY THE BOARD:

In this order, the State Water Resources Control Board (State Water Board) reviews on its own motion General Waste Discharge Requirements for Discharges from Irrigated Lands Order No. R3-2021-0040 (General WDRs) issued by the Central Coast Regional Water Quality Control Board (Central Coast Water Board). The General WDRs authorize discharges from irrigated lands operations to waters of the state within the Central Coast region. For the reasons discussed herein, we uphold several of the requirements of the General WDRs but remand the General WDRs to the Central Coast Water Board to make revisions consistent with certain precedential elements of State Water Board Order WQ 2018-0002 (*Eastern San Joaquin River Watershed*). We also direct the Central Coast Water Board to make revisions regarding composting requirements and extensions of total maximum daily load deadlines, and to develop an alternative water supply program.

I. BACKGROUND

California's agricultural industry produces more than 400 commodities at over 75,000 farms and ranches and is a significant part of the state's economy, providing a large percentage of fruits and vegetables for the nation. Agriculture is especially significant within the Central Coast region, where approximately 3,000 agricultural operations utilize approximately 540,000 acres of irrigated lands.[1] Both growers and residents in the Central Coast region rely primarily on groundwater, which supplies approximately 90 percent of the drinking water in the region through more than

[1] General WDRs, p. 1.

700 municipal public supply wells and more than 40,000 permitted private supply wells.[2] In the three primary agricultural basins in the Central Coast region (the Salinas, Santa Maria, and Pajaro groundwater basins), agriculture accounts for approximately 80 to 90 percent of groundwater pumping.[3]

One of the most challenging responsibilities for the State Water Board and the regional water quality control boards (regional water boards) is developing and implementing a long-term sustainable irrigated lands regulatory program that protects the quality of waters of the state. Collectively, with the help of our partners, we have made substantial progress in defining a science-based, data-driven approach that we believe provides a solid foundation for our next steps. But we still have much to do. As we stated in Order WQ 2018-0002,

> Water quality impacts associated with agriculture are complex and addressing them requires pooling and focusing the knowledge, expertise, and resources of all concerned parties, including growers and their representatives, the regulatory agencies, and the environmental and environmental justice communities. The issues are especially complicated because the same activities that are essential to producing a crucial, reliable food supply – e.g., pesticide use to control pests, nitrogen to fertilize crops, irrigation to water crops – also underlie many of the critical impacts. Pesticide toxicity in surface water threatens the viability of the water bodies to support aquatic and other species. High levels of nitrates found in drinking water supply wells impact public health. Concentrated levels of salt resulting from long-term irrigation adversely affect the quality of groundwater for irrigation, municipal, and other uses. Collectively, we have a responsibility to acknowledge these impacts and address them, but in a manner that preserves the economic viability of agriculture. In some cases, historic agricultural practices have resulted in the impacts we see today. Current practices are also, in some cases, causing impacts and although agricultural practices have generally improved over time, we have an obligation to continue to develop appropriate solutions. This is an ongoing process that requires a thorough understanding of the complex relationship between agricultural practices and water quality impacts gained through collecting and analyzing real-world data and responding to that data with innovations in practices. This data-driven analysis of the issues forms the foundation for fair, even-handed, and reasonable regulation of irrigated lands.[4]

The Central Coast Water Board adopted the first iteration of its modern irrigated lands regulatory program in 2004 with Order R3-2004-0117, Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands. The

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[2] General WDRs, Attachment A, Findings, p. 2.
[3] *Id*. at p. 3.
[4] State Water Board Order WQ 2018-0002, pp. 2-3.

Central Coast Water Board adopted updates to its irrigated lands regulatory program in 2012 (Order R3-2012-0011) and 2017 (Order R3-2017-0002). The Central Coast Water Board commenced the process for updating Order R3-2017-0002 later in 2017.[5] After almost four years of extensive public participation,[6] on April 15, 2021, the Central Coast Water Board certified an Environmental Impact Report[7] and adopted the General WDRs, the fourth iteration of its irrigated lands regulatory program.

In response to the Central Coast Water Board's adoption of the General WDRs, we received two timely petitions for review filed by Grower-Shipper Association of Central California, et al. (GSA Petitioners)[8] and by the California Coastkeeper Alliance, et al. (CCKA Petitioners)[9] (collectively Petitioners). After determining that the petitions were complete, consolidating the petitions for review, receiving a response to the petitions and the administrative record from the Central Coast Water Board, and receiving responses to the petitions from interested persons, we took up the matter on our own motion by adopting Order WQ 2022-0020 on April 19, 2022. We took up the matter on our own motion to give ourselves sufficient time to consider the issues raised in the petitions and other issues associated with the General WDRs.[10]

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[5] General WDRs, finding 17, p. 4.

[6] *See* General WDRs, pp. 4-6.

[7] Central Coast Water Board Resolution No. R3-2021-0039.

[8] SWRCB/OCC File A-2751(a) Petition of Grower-Shipper Association of Central California, Grower-Shipper Association of Santa Barbara and San Luis Obispo Counties, Western Growers Association, Western Plant Health Association, California Farm Bureau Federation, Monterey County Farm Bureau and California Strawberry Commission.

[9] SWRCB/OCC File A-2751(b) Petition of California Coastkeeper Alliance, Santa Barbara Channelkeeper, Monterey Coastkeeper, San Jerardo Cooperative, California Sportfishing Protection Alliance, Pacific Coast Federation of Fishermen's Associations, and Institute for Fisheries Resources.

[10] On August 11, 2023, we received a request from the CCKA Petitioners to consider supplemental evidence. The evidence is voluminous. Most of it was referenced in CCKA's August 11, 2023 letter commenting on an early draft of this Order; the rest of it was contained in an appendix with fourteen scientific studies. CCKA Petitioners only briefly summarize the nature of the evidence, largely fail to detail the facts to be proved by the evidence, and fail to adequately explain why the vast majority of the evidence could not have been submitted to the Central Coast Water Board, all in contravention of California Code of Regulations, title 23, section 2050.6, subdivision (a)(2). We therefore decline to accept the supplemental evidence referenced in CCKA's comment letter or appendix. It is also important to note that this proceeding is not an opportunity to re-litigate the issues that we resolved in State Water Board Order WQ 2018-0002. To the extent that the evidence proffered by CCKA Petitioners would be appropriate for review by an expert panel as described below, CCKA Petitioners will have the opportunity to submit it at that time.

II. ISSUES AND FINDINGS

The two petitions raise several issues concerning the General WDRs. To the extent petitioners or other commenters raised issues that are not discussed in this order, either in whole or in part, such issues are dismissed as not raising substantial issues appropriate for review in this order.[11] We issue this Order to restate and reinforce some of the most important precedential requirements of Order WQ 2018-0002, to announce our intention to further develop the Irrigated Lands Regulatory Program (ILRP) by convening a second expert panel, to direct the Central Coast Water Board to develop an alternative water supply program to assist residents who rely on nitrate-contaminated groundwater, to direct the Central Coast Water Board to require that large on-farm composting operations obtain coverage under the composting general waste discharge requirements we issued in 2020, and to address certain issues raised in the petitions.[12] As such, the only portions of this Order that are precedential in nature are the generally applicable statements regarding quantifiable milestones and final time schedules in Section II.C, the derivation of numeric limitations based on narrative water quality objectives in Section II.E, the lack of a legal obligation to conduct a broad economic study in Section II.G, the limitations on revising final compliance dates that were adopted as basin plan amendments in Section II.H, the public trust doctrine in Section II.I, and the lack of a precedential designation for our general orders in footnote 90.

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[11] Cal. Code Regs., tit. 23, § 2052, subd. (a)(1); *People ex rel. Cal. Regional Water Quality Control Bd. v. Barry* (1987) 194 Cal.App.3d 158, 175-177; *Johnson v. State Water Resources Control Bd.* (2004) 123 Cal.App.4th 1107, 1114.

[12] CCKA Petitioners assert that we failed to comply with Water Code sections 189.7 and 13149.2 in adopting this Order. Those sections were enacted by Assembly Bill 2108 (Assem. Bill No. 2108, (2021-2022 Reg. Sess.) §§ 2-3) and took effect on January 1, 2023. Section 189.7, subdivision (a)(1), requires the State Water Board and the regional water boards to “[e]ngage in equitable, culturally relevant community outreach to promote meaningful civil engagement from potentially impacted communities of proposed discharges of waste that may have disproportionate impacts on water quality in disadvantaged communities or tribal communities and ensure that outreach and engagement shall continue throughout the waste discharge planning, policy, and permitting processes.” Section 13149, subdivision (c), requires the State Water Board and the regional water boards to “make a concise, programmatic finding on potential environmental justice, tribal impact, and racial equity considerations” when issuing or reissuing regional waste discharge requirements, and specifies that for reissuances, "the finding may be limited to considerations related to any changes to the requirements of the prior waste discharge requirements.” This Order is much more modest than Order WQ 2018-0002, in which we announced several new precedential requirements for all irrigated lands regulatory programs administered by the regional water boards and took the additional step of amending the underlying general waste discharge requirements

The Central Coast Water Board issued the General WDRs under the authority of the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), specifically Water Code sections 13263 and 13267. Among other mandates, section 13263 requires the Central Coast Water Board to adopt waste discharge requirements that implement relevant water quality control plans.[13] The General WDRs primarily implement the Water Quality Control Plan for the Central Coastal Basin (Basin Plan)[14] which establishes the beneficial uses of the surface water bodies and groundwater in the region and water quality objectives to be achieved in those waters. The General WDRs must also comply with state policies for water quality control.[15] The most relevant state policy for water quality control to our irrigated lands regulatory programs is the Policy for the Implementation and Enforcement of the Nonpoint Source Pollution Control

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issued by the Central Valley Regional Water Quality Control Board (Central Valley Water Board). Had Assembly Bill 2108 been in effect in 2018, it certainly would have applied to our adoption of Order WQ 2018-0002. In this Order, however, we are solely remanding the General WDRs to be consistent with orders we adopted prior to the effective date of Assembly Bill 2108 and reviewing (and largely upholding) portions of the General WDRs that were adopted by the Central Coast Water Board prior to the effective date of Assembly Bill 2108. Our water quality petition authority is contained in Water Code section 13320 and does not involve our authority to adopt state policy for water quality control (Water Code section 13140 et seq.) or our authority to adopt water quality control plans (Water Code section 13170). Because we are exercising our Water Code section 13320 discretion to not revisit our prior precedential direction or amend the General WDRs, we are not engaging in the permitting process or issuing or reissuing waste discharge requirements. Therefore, the adoption of this Order is not subject to the requirements of Assembly Bill 2108. On remand, however, the Central Coast Water Board will comply with Assembly Bill 2108 to the extent that its reissuance of the General WDRs includes changes to the requirements in the existing General WDRs that go beyond what is needed to comply with Order WQ 2018-0002. Nonetheless, we feel it is important to note that we fully support the goals of Assembly Bill 2108, which are consistent with our own values as expressed in our Racial Equity Action Plan and our Human Right to Water Resolution No. 2016-0010. In particular, our direction to the Central Coast Water Board in Section C of this Order to involve representatives of impacted communities and environmental justice organizations in developing an alternative water supply program to assist residents who rely on nitrate-contaminated groundwater exemplifies our commitment to these values.

[13] Wat. Code, §13263, subd. (a).

[14] Water Quality Control Plan for the Central Coastal Basin at <https://www.waterboards.ca.gov/centralcoast/publications_forms/publications/basin_plan/> [as of September 7, 2023]. In addition, the General WDRs must implement applicable statewide water quality control plans.

[15] Wat. Code, § 13146.

Program (Nonpoint Source Policy).[16] In addition, the General WDRs must also conform to our precedential water quality orders.[17] Of particular relevance here is our Order WQ 2018-0002.

A. Consistency with Order WQ 2018-0002's Precedential Nitrogen Reporting Requirements

Government Code section 11425.60, subdivision (b), authorizes agencies to designate a decision, or part of a decision, that contains a significant legal or policy determination of general application that is likely to recur as a precedential decision. Shortly after the enactment of section 11425.60, subdivision (b), we expressly designated all State Water Board decisions and orders adopted after a public meeting as precedential decisions, except to the extent that a decision or order indicates otherwise, or is superseded by later enacted statutes, judicial opinions, or actions of the State Water Board. We explained that a prior decision or order may be distinguished or overturned by a later decision or order, but that the treatment of our decisions and orders as precedent helps provide greater consistency and predictability.[18]

The field of water quality regulation is constantly evolving, and we firmly believe that our less mature regulatory programs, including the irrigated lands regulatory program, benefit greatly from varying experimentation by the different regional water boards. However, once we determine that such experimentation has run its course and we resolve a technical, policy, or legal issue by issuing a precedential water quality order, we fully expect that the regional water boards will carefully follow our direction. As public bodies, we have an obligation to provide consistency and predictability for our stakeholders where we can, so that they may plan their affairs accordingly. Such consistency and predictability, where appropriate, contribute to both the actual and perceived integrity of the Water Boards' regulatory programs.

The State Water Board has been actively engaged in further developing and refining the Water Boards' irrigated lands regulatory programs in recent years. In 2013, we adopted Order WQ 2013-0101, reviewing the Central Coast Water Board's Order No. R3-2012-0011. In Order WQ 2013-0101, we revised several provisions of

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[16] State Water Board Policy for the Implementation and Enforcement of the Nonpoint Source Pollution Control Program (2004) at <https://www.waterboards.ca.gov/water_issues/programs/nps/docs/plans_policies/nps_iepolicy.pdf> [as of September 7, 2023].

[17] *See* State Water Board Order WR 96-1 (*Lagunitas Creek*), fn. 11 (designating as precedential those decisions and orders adopted by the State Water Board at a public meeting, unless expressed otherwise in the decision or order); *Malaga County Water District v. State Water Resources Control Bd.* (2020) 58 Cal.App.5th 447, 475; *see also* Wat. Code, § 13320, subd. (c) (providing State Water Board review authority over most regional water board adjudicative decisions to determine whether the action was appropriate and proper).

[18] State Water Board Order WR 96-1 (*Lagunitas Creek*), fn. 11.

Order No. R3-2012-0011 related to nitrogen balance. We explained that we had significant concerns with the precision, reliability, and usefulness of the data that would have been required to be reported under Order No. R3-2012-0011.[19] Rather than giving precedential direction to the regional water boards on these issues, we stated that we would be referring these and other issues to an expert panel for a more thorough analysis and long-term statewide recommendations and that we would provide additional direction as appropriate based on the expert panel's findings.[20] We subsequently convened the expert panel, known as the Agricultural Expert Panel.[21]

In 2018, we adopted Order WQ 2018-0002. Order WQ 2018-0002 was the result of several years of extensive stakeholder input, including from the Agricultural Expert Panel, the Nitrogen Tracking Task Force convened by the California Department of Food and Agriculture (CDFA), the broader scientific community, grower organizations and individual growers, environmental and environmental justice organizations, CDFA, regional water boards including the Central Coast Water Board, other public agencies, and agricultural consultants. The specific actions, events, and considerations that led us to adopt Order WQ 2018-0002 are recounted in detail throughout Order WQ 2018-0002 itself and will only be summarized here to the extent relevant.

It is worth noting that the Agricultural Expert Panel reviewed both the Central Coast Water Board's nitrogen balance reporting approach and a different nitrogen reporting approach used by the Central Valley Water Board in its Order R5-2013-0120 for the Tulare Lake Basin, and rejected both in favor of a new approach.[22] In Order WQ 2018-0002, we accepted the Agricultural Expert Panel's recommended new approach. In so doing, we expressly established new precedential statewide irrigated lands regulatory program requirements for reporting specific data related to growers' nitrogen usage and other items.[23]

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[19] Order WQ 2013-0101, pp. 49-51.

[20] *Id*. at pp. 4-5.

[21] State Water Board Order WQ 2018-0002, pp. 7-8. The Agricultural Expert Panel consisted of eight members with various areas of specialization including: an irrigation specialist/agricultural engineer, a soil scientist, a hydrogeologist, an agronomist, a certified crop advisor, a University of California Cooperative Extension farm advisor, a Central Coast grower, and a Central Valley grower. The Agricultural Expert Panel released a draft report in July 2014 considering and answering the questions posed, took written public comment on the draft report, and issued the Agricultural Expert Panel Report on September 9, 2014. (*See* Conclusions of the Agricultural Expert Panel (2014) at <https://www.waterboards.ca.gov/water_issues/programs/agriculture/docs/ILRP_expert_panel_final_report.pdf> [as of September 7, 2023].)

[22] Conclusions of the Agricultural Expert Panel, pp. 21-22, 26; State Water Board Order WQ 2018-0002, p. 37.

[23] *See*, e.g., State Water Board Order WQ 2018-0002, pp. 47-51.

Order WQ 2018-0002 represented a significant step forward in our evolving understanding of how best to collect usable data that will ultimately enable the Water Boards to address the challenges associated with nitrate pollution from agricultural operations. As directed in Order WQ 2018-0002, growers must report the pounds of nitrogen applied (referred to as "A") and the pounds of nitrogen removed (referred to as "R") for each field annually on a per acre basis to the regional water board.

> The nitrogen applied includes all nitrogen proactively added to a field from any source [(]such as organic amendments, synthetic fertilizers, manure, and irrigation water). The nitrogen removed includes the nitrogen present in all harvested materials removed from the field (including any prunings, removed vegetation, etc.) plus, in the case of perennial crops, the nitrogen sequestered in the permanent wood. Nitrogen removed is based on a measurable value of yield. Crop yield is multiplied by a coefficient determined via direct testing of the harvested materials. The nitrogen removed coefficient expresses the amount of nitrogen removed from the field for a given crop per unit of crop yield.[24]

Using the nitrogen applied and nitrogen removed data reported by the grower, the next step is to calculate the annual and multi-year (or multi-cropping cycle) ratios of nitrogen applied to nitrogen removed for each field on a per acre basis. This metric is known as the "A/R ratio."[25]

The Agricultural Expert Panel proposed a multi-year A/R calculation "as the simplest metric of good management"[26] relying on "quantitative measurements that can be performed simply and repeatedly with relative accuracy and that it is easy to understand."[27]

> When evaluated over multiple years, the A/R ratio provides a reliable measurement of the nitrogen left in the field. In each consecutive year, the nitrogen left in the field from the prior year, as approximated by the A/R ratio, will either be utilized by the next crop or move further down in the soil column with potential to be leached to groundwater. If, over several years, the ratio of nitrogen applied and nitrogen removed from the field remains high, a significant portion of the nitrogen applied to the field is remaining in the field and potentially reaching groundwater over time through percolation. A high multi-year A/R ratio thus alerts the [grower], the third-party group, and the regional water board to the need to address over-application at the field level. As recommended by the Agricultural Expert Panel, a multi-year A/R ratio may also provide the basis for acceptable multi-year A/R ratio target values, with reduction in the multi-year A/R ratio toward the target ratio for an area over time acting as a proxy for reduction in nitrate discharge to

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[24] *Id.* at p. 38 (internal citation omitted).
[25] *Id.* at pp. 38-40, fn. 108.
[26] *Id*. at p. 37.
[27] *Id*. at p. 38.

> groundwater. The Agricultural Expert Panel Report identified a shift to using the A/R ratio in nitrogen management as critical in reducing nitrogen leaching to groundwater because the multiyear A/R ratio will provide a fairly accurate picture of the efficiency of the nitrogen application on the field and the potential over-application of nitrogen over several years. Similarly, the trend in the multi-year A/R ratio over time will inform whether practices are working to reduce the amount of nitrogen being left on the field and the corresponding potential for discharge to groundwater.[28]

We concluded in Order WQ 2018-0002 that the A/R ratio will be more informative if paired with an additional calculation of the pounds of nitrogen applied minus the pounds of nitrogen removed for each field on a per acre basis. This metric is known as the "A-R difference."[29] The A-R difference, which uses the same A and R data that is used to calculate the A/R ratio,

> further tease[s] out the magnitude of any potential nitrogen over-application, especially in cases where use of only the multi-year A/R ratio may mask significant quantities of nitrogen left in the field. Further, the A-R difference, whether considered at the scale of a field, a township, or an alternative geographic unit, provides useful information on the magnitude of the amount of nitrogen left in the soil with potential to reach groundwater. This data in turn allow the Third Party and regional water board to better focus follow-up and management practice implementation as well as research and modeling on groundwater loading.[30]

We made it clear in Order 2018-0002 that the requirements for growers to report their A and R data, and for the grower, the third party[31] or the regional water board to calculate each grower's annual and multi-year A/R ratios and annual and multi-year A-R difference values was precedential statewide for all irrigated lands regulatory programs,[32] with specified exceptions.[33] We also made it clear that, regardless of which of

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[28] *Id*. at p. 39 (internal citations omitted).
[29] *Ibid*.
[30] *Ibid*.
[31] A third party, typically a coalition of growers, is a separate entity that is authorized by a regional water board to assist its member growers and to accept responsibility for compliance with certain aspects of the regional water board's ILRP. *See generally*, Nonpoint Source Policy, p. 8; State Water Board Order WQ 2018-0002, pp. 19-21.
[32] State Water Board Order WQ 2018-0002, p. 40.
[33] *See id*. at fn. 92, pp. 34, 40-41. The irrigation and nitrogen management requirements in State Water Board Order WQ 2018-0002 are not precedential for rice growers in the Central Valley region, growers who never apply nitrogen to their fields, and growers who demonstrate that the nitrogen applied to their fields does not percolate below the root zone in an amount that could impact groundwater and does not migrate to surface water

the three entities calculated the A/R ratio and A-R difference values, it was a precedential statewide requirement that the A/R ratio and A-R difference values were to be shared with the grower, the third party, and the regional water board so that the values could be used for the purposes identified above.[34]

We also endorsed the Agricultural Expert Panel's recommendation to use the growers' A and R data to develop acceptable multi-year A/R ratio target values, stating that they are "the most reliable measure of the potential for nitrogen to reach groundwater that is currently available to us," and that they "are expected to provide a valuable tool in irrigated lands regulatory programs for fair and even-handed consideration of nitrogen application practices."[35] We therefore directed the Central Valley Water Board "to develop, in coordination with the State Water Board, other regional water boards, and CDFA, target values for each crop within three years of the availability of the nitrogen removed coefficient for that crop."[36] We acknowledged, however, that

> It is premature at this point to project the manner in which the multi-year A/R ratio target values might serve as regulatory tools. That determination will be informed by the data collected and the research conducted in the next several years. If we move forward with a new regulatory approach in the future, we expect to do so only after convening an expert panel that can help evaluate and consider the appropriate use of the acceptable ranges for multi-year A/R ratio target values in irrigated lands regulatory programs statewide.[37]

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through discharges, including drainage, runoff, or sediment erosion. In addition, the regional water boards were given the discretion to apply alternative requirements to some or all growers in the following categories: (1) growers who operate in areas with limited nitrogen impacts, have minimal nitrogen inputs, and have difficulty measuring crop yield (e.g., some growers who operate irrigated pastures), (2) diversified socially disadvantaged growers who do not operate more than 45 acres, have annual sales less than $350,000, and grow no fewer than an average of two different crops per acre, and (3) other growers who do not operate more than 20 acres and grow no fewer than an average of two different crops per acre. The final three categories of growers are required to report their A values, but the regional water boards were given the discretion to determine when or how these growers will report their R values. We take this opportunity to reiterate to the regional water boards that these are currently the only authorized exceptions to our precedential direction in Order WQ 2018-0002. Based on comments we received from the third party, we expect that the Central Coast Water Board will, on remand, consider using this discretion as appropriate. We also encourage the Central Coast Water Board to work closely with the third party to develop targeted education in appropriate languages for reporting A prior to revising the General WDRs on remand.

[34] *Id*. at pp. 39-40.
[35] *Id.* at p. 44.
[36] *Id*. at p. 74.
[37] *Ibid.*

We directed the regional water boards to revise their existing irrigated lands regulatory programs within five years to be consistent with the precedential direction that we detailed in Order WQ 2018-0002.[38] Throughout its consideration and adoption of the General WDRs, the Central Coast Water Board was well aware of the precedential nature of Order WQ 2018-0002 and that many of the provisions of the General WDRs were implicated by our precedential direction.[39] The Central Coast Water Board attempted to recast our precedential direction as merely setting a floor for regional board irrigated lands regulatory programs[40] and to distinguish the circumstances in its region as justifying deviations from our requirements.[41] As we will discuss below, the Central Coast Water Boards' efforts to justify its departures from our precedential direction are unavailing.

In recognition of the fact that it will take many years for the data collection and analysis required by Order WQ 2018-0002 to bear fruit, we stated that we will be directing the regional water boards to provide updates on their irrigated lands regulatory program on a triennial basis,[42] and that we will consider establishing a neutral panel to evaluate the programs after the second triennial update.[43] We have now arrived at the five year anniversary of our adoption of Order WQ 2018-0002. The scientific work to develop and further refine nitrogen removal coefficients is well underway, with a requirement in Order WQ 2018-0002 that coefficients for crops that cover 99 percent of the acreage within the Eastern San Joaquin Coalition's boundaries due to be published in 2023.[44] And at the same time, the Third District Court of Appeal recently affirmed the judgment of the Superior Court denying three petitions for writs of mandate challenging

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[38] *Id*. at p. 9.
[39] *See* General WDRs, Attachment A, Findings, pp. 77-89.
[40] *Id*. at p. 78 ("This Order uses the flexibility afforded to the regional boards through the ESJ Order but does not include requirements that are inconsistent with the minimum precedential requirements established through the ESJ Order (i.e., this order uses ESJ as the regulatory minimum, or floor, as the basis for its requirements).")
[41] *Ibid*. ("This Order incorporates the precedential portions of the ESJ Order, as described below. In some instances, this Order differs from the precedential requirements to some extent based on differences between the facts before the Central Coast Water Board and the facts that were the basis for the State Water Board precedent, for example by building requirements that incentivize the use of compost and by establishing nitrogen discharge limits to protect water quality and beneficial uses. The requirements of this Order that deviate from precedential requirements of the ESJ Order are based on extensive nitrogen application and groundwater monitoring data the Central Coast Water Board has collected relative to the Central Valley Water Board, as well as recognition of the differences between the groundwater quality and reliance on groundwater in the central coast region relative to the central valley region.")
[42] State Water Board Order WQ 2018-0002, p. 51.
[43] *Id*. at p. 52.
[44] *Id.* at p. 42.

several aspects of Order WQ 2018-0002.[45] Therefore, in Section II.A.6, we give direction to our staff to review the data that have been collected and the progress that has been made related to the regional water boards' irrigated lands regulatory program.

1. Modifications to Nitrogen Applied (A) and Nitrogen Removed (R)

In the General WDRs, the Central Coast Water Board made modifications to the calculations of nitrogen applied (A) and nitrogen removed (R) that are inconsistent with Order WQ 2018-0002. As stated above, Order WQ 2018-0002 defines nitrogen applied as including "all nitrogen proactively added to a field from any source such as organic amendments, synthetic fertilizers, manure, and irrigation water."[46] Order WQ 2018-0002 defines nitrogen removed as "the nitrogen present in all harvested materials removed from the field (including any prunings, removed vegetation, etc.) plus, in the case of perennial crops, the nitrogen sequestered in the permanent wood."[47]

In order to encourage the use of compost and organic fertilizers, the General WDRs allow the use of discount factors for calculating nitrogen applied in the form of compost (A_{COMP}) and organic fertilizers (A_{ORG}). A discount factor (C) as low as 0.05 can be used in calculating nitrogen in composted materials, depending on the ratio of carbon to nitrogen in the compost product, such that 100 pounds of nitrogen applied to a field via finished compost would result in counting only five pounds of nitrogen in the calculation of nitrogen applied (A).[48] Similarly, a discount factor (O) as low as 0.03 can be used in calculating nitrogen in organic fertilizer, depending on the ratio of carbon to nitrogen in the organic fertilizer, such that 100 pounds of nitrogen applied to a field via organic fertilizer would result in counting only three pounds of nitrogen in the calculation of nitrogen applied (A).[49] In order to encourage the use of management practices that remove nitrogen, the General WDRs also provide opportunities for growers to increase the calculation of nitrogen removed (R) by creating three new categories of nitrogen removed that are not contemplated in Order WQ 2018-0002: nitrogen scavenging ($R_{SCAVENGE}$),[50] nitrogen treatment (R_{TREAT})[51] and any other method

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[45] *Environmental Law Foundation v. State Water Resources Control Bd.* (2023) 89 Cal.App.5th 451, as modified (Apr. 13, 2023), review denied (June 14, 2023).
[46] State Water Board Order WQ 2018-0002, p. 38.
[47] *Ibid*.
[48] General WDRs, pp. 24-25; General WDRs, Attachment B, Monitoring and Reporting Program, p. 4.
[49] General WDRs, pp. 24-25; General WDRs, Attachment B, Monitoring and Reporting Program, pp. 5, 35.
[50] "[T]he amount of nitrogen credited as removed from the field through nitrogen scavenging cover crops utilized during the wet/rainy season, nitrogen scavenging high carbon amendments during the wet/rainy season, or high carbon woody materials applied as mulch to the crop ground surface." General WDRs, p. 24.
[51] "[T]he amount of nitrogen removed from the ranch through a quantifiable treatment method (e.g., bioreactor)." (*Ibid*.)

of removing nitrogen (R_{OTHER}).[52]

To the extent growers utilize the Central Coast Water Board's discount factors for nitrogen applied, they will be using artificially reduced A values, resulting in lower A/R ratio values and A-R difference values than are required to be calculated under Order WQ 2018-0002. And while we support the use of management practices to remove additional nitrogen and expect that growers using those management practices will continue to report their use to the Central Coast Water Board, we are concerned with the lack of uniformity and reliability in determining the amount of nitrogen actually removed with those management practices.[53] As we noted in discussing the A/R ratio, "[t]he basis of any good performance metric is that it relies on quantitative measurements that can be performed simply and repeatedly with relative accuracy and that it is easy to understand."[54] In Order WQ 2018-0002, we designated the method of determining A and R, and of calculating the A/R ratio values and the A-R difference values as precedential elements that apply to regional water board irrigated lands regulatory programs statewide.[55] These elements were adopted, based on the recommendations of the Agricultural Expert Panel, not only to provide "a cost-effective and reliable methodology for tracking the amount of nitrogen left in the soil over a period of time, and that may enter the groundwater from the soil,"[56] but also to develop a set of consistently derived data across regions to inform scientific analyses and other developments in the regulation of discharges from irrigated lands.[57]

Accordingly, we remand the General WDRs to the Central Coast Water Board with the instruction to revise the use of nitrogen applied and nitrogen removed data for the purposes of calculating the A/R ratio and A-R difference values to be consistent with Order WQ 2018-0002.

2. Modifications to Nitrogen Applied Minus Nitrogen Removed Difference Value

Order WQ 2018-0002 designated the calculation of the A-R difference value as a precedential element because it provides information on the magnitude of the amount of nitrogen left in the soil.[58] The A-R difference value that we identified in Order WQ 2018-0002 is simply the nitrogen applied (A) minus the nitrogen removed (R). In the General WDRs, however, the Central Coast Water Board established three compliance pathways,[59] each with a distinct method of calculating the A-R difference:

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[52] "[T]he amount of nitrogen removed from the ranch through other methods not previously quantified." (*Id*. at p. 25.)
[53] *See, e.g.*, General WDRs, Attachment A, Findings, pp. 153-154.
[54] State Water Board Order WQ 2018-0002, p. 38.
[55] State Water Board Order WQ 2018-0002, pp. 40, 51.
[56] *Id*. at p. 65.
[57] *Id*. at p. 73.
[58] *Id*. at p. 39.
[59] General WDRs, p. 24.

- Compliance Pathway 1:
  A_{FER}[60] + (C x A_{COMP}) + (O x A_{ORG}) + A_{IRR}[61] – R = Nitrogen Discharge

- Compliance Pathway 2:
  A_{FER} + (C x A_{COMP}) + (O x A_{ORG}) = R

- Compliance Pathway 3:
  A_{FER} + (C x A_{COMP}) + (O x A_{ORG}) – R = Nitrogen Discharge

As described above, the application of discount factors in calculating the nitrogen applied in compost and organic fertilizers in all three compliance pathways is inconsistent with the precedential direction of Order WQ 2018-0002. The exclusion of nitrogen applied in irrigation water from the calculation of total nitrogen applied in Compliance Pathways 2 and 3 is also inconsistent with Order WQ 2018-0002. The use of the discount factors and the exclusion of nitrogen applied in irrigation water in calculating the A-R difference can result in substantially understated amounts of nitrogen left in the soil with potential to reach groundwater. Additionally, the three compliance pathways will result in inconsistently derived data, not just across regions, but within the Central Coast region itself. Accordingly, we remand the General WDRs to the Central Coast Water Board with the instruction to modify the calculation of A-R consistent with Order WQ 2018-0002.

We understand that the Central Coast Water Board modified A, R, and A-R in an effort to incentivize management practices that are intended to reduce nitrogen loading from ongoing agricultural operations. While we agree that properly designed incentives to reduce growers' nitrogen impacts are highly desirable, ultimately, those incentives should not come at the cost of accuracy in determining the true impacts of the growers' nitrogen practices on water quality. We also note widespread support in comments to the State Water Board for the continued use of discount factors for calculating nitrogen applied, the new categories of nitrogen removed, and the use of the three compliance pathways. As such, the Central Coast Water Board may continue to collect the data and use the compliance pathway formulas for limited purposes, as described in Section II.A.5 below, during the interim period between the adoption of this Order and when the State Water Board acts on the expert panel's findings (see below).

3. Lack of Use of A/R Ratio Values

As explained in Section II.A, above, in Order WQ 2018-0002 we directed that the use of both the A/R ratio values and the A-R difference values would be required for all irrigated lands regulatory programs. The Central Coast Water Board

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[60] "A_{FER} is the amount of fertilizer nitrogen applied in pounds per acre." *Id*. at p. 52.
[61] "A_{IRR} is the amount of nitrogen in pounds per acre applied in the irrigation water estimated from the volume required for crop evapotranspiration (ET) or volume of water applied." *Ibid*.

chose to rely on its version of the A-R difference values, explaining that it believed that the A-R difference value by itself "is a reasonable proxy for the amount of nitrogen discharge from a ranch, which can be correlated to potential discharges of nitrogen and impacts to water quality."[62] The Central Coast Water Board stated that it would calculate the A/R ratio values,[63] but there is no indication in the record that the Central Coast Water Board intends to share the calculated A/R ratio values with the growers and any applicable third party, as required by Order WQ 2018-0002. On remand, the Central Coast Water Board shall revise the General WDRs to be consistent with this aspect of Order WQ 2018-0002.

4. Enforceable Limits on Nitrogen Applied

The General WDRs impose enforceable limits on fertilizer nitrogen application (A_{FER}) for individual dischargers that are not participating in the third-party option, known as "non-participating dischargers." Beginning on December 31, 2023, on a crop-by-crop basis, these dischargers must limit their application of fertilizer nitrogen to no greater than the 90th percentile of total nitrogen applied as reported to the Central Coast Water Board from 2014 through 2019, as specified in Table C.1-2.[64] After two years, those limits are further reduced to the 85th percentile, also as specified in Table C.1-2.[65] It appears that any exceedance of these nitrogen application limits would be a violation of the General WDRs and therefore subject to enforcement.

For dischargers participating in the third-party alternative compliance pathway program, the General WDRs contain fertilizer nitrogen application targets, rather than enforceable limits, that go into effect on December 31, 2024.[66] Like the limits described above, after two years, these targets are reduced from the 90th to the 85th percentile.[67] While exceedances of targets are not subject to the same enforcement as exceedances of limits, participating dischargers that apply fertilizer nitrogen at rates "greater than the targets in Table C.2-1 for a two-year running average after the compliance date, are no longer eligible to participate in the third-party alternative compliance pathway program and must comply with the individual groundwater protection requirements."[68] As a result, participating dischargers may ultimately be subject to the same enforcement for violations of the General WDRs as non-participating dischargers.

Focusing on fertilizer nitrogen application alone, without reference to other sources of nitrogen added to a field or nitrogen removed from the field, does not provide meaningful insight into the amount of nitrogen left in the soil with potential to reach

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[62] General WDRs, Attachment A, Findings, p. 81.
[63] *Ibid*.
[64] *Id*. at pp. 23, 51.
[65] *Id*. at p. 51.
[66] *Id*. at pp. 32, 54.
[67] *Id*. at p. 54.
[68] *Id*. at p. 32.

groundwater. As such, there is not a clear connection between the amount of fertilizer nitrogen applied and impacts on water quality. Enforceable limitations on fertilizer nitrogen application were not contemplated by Order WQ 2018-0002. The Central Coast Water Board acknowledged this, but apparently concluded that Order WQ 2018-0002 therefore did not preclude enforceable limitations on fertilizer application.[69] However, as explained above, we explicitly stated that "[i]f we move forward with a new regulatory approach in the future, we expect to do so only after convening an expert panel."[70] While it is true that we were discussing this in the specific context of the A/R ratio target values, our cautionary statement applies equally to any other new regulatory approach focused on nitrogen impacts to water quality.

Accordingly, we remand this portion of the General WDRs to the Central Coast Water Board with the instruction to eliminate the use of enforceable limits based solely on fertilizer nitrogen application rates. We are cognizant, however, of the need to maintain some continuity and momentum toward reducing fertilizer nitrogen application rates in the short term for the growers that are currently required to collect only nitrogen application data. Therefore, the Central Coast Water Board may continue to use the existing fertilizer nitrogen application limits and targets for growers who are not yet reporting nitrogen removed for the limited purpose of requiring additional education for those growers who exceed the targets. This use of fertilizer nitrogen application rates will be short-lived, because the Central Coast Water Board will need to accelerate the timing for collecting R data from all growers on remand, consistent with Order WQ 2018-0002. The fertilizer nitrogen application targets may not be used for any other purpose, including removal from the third-party alternative compliance pathway program, progressive enforcement actions, or additional requirements, such as implementing additional or improved management practices, or increased monitoring or reporting.[71]

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[69] *See* General WDRs, Attachment A, Findings, pp. 88-89. In essence, the Central Coast Water Board justified its departure from the precedential direction in Order WQ 2018-0002 because it had developed information showing that high nitrogen application rates have contributed to nitrate contamination in groundwater. This situation, of which the State Water Board was well aware when we adopted Order WQ 2018-0002, also exists in the central valley region and numerous other irrigated lands areas throughout California. The Central Coast Water Board also noted that it would reevaluate its regulatory approach if "an expert panel finds that another regulatory method would be more protective of water quality, or if the more protective regulatory methods are identified through other sources." The Central Coast Water Board's attempt to eschew the precedential direction in Order WQ 2018-0002 by distinguishing its region and opening the door to revisiting the regulatory approach of the General WDRs is simply not appropriate.

[70] State Water Board Order WQ 2018-0002, p. 74.

[71] In its August 11, 2023 comment letter, GSA Petitioners asked us to issue a stay of the nitrogen application and discharge targets and limits on our own motion. Because we are providing specific direction to the Central Coast Water Board regarding its use of the targets and limits in this Order, a stay is not necessary.

In revising this portion of the General WDRs, the Central Coast Water Board shall add an "outlier" approach similar to that described in Section II.A.5.f of Order WQ 2018-0002.[72] The Central Coast Water Board shall also develop a process to include properly calculated interim milestones based on A/R ratio and A-R difference targets. These targets could also be used to inform follow-up by the Central Coast Water Board or third-party program administrator, such as requiring additional education, Irrigation and Nutrient Management Plan certification by a qualified professional, implementing additional or improved management practices, and increased monitoring or reporting, or both monitoring and reporting consistent with Order WQ 2018-0002.

While the use of directly enforceable limits on fertilizer nitrogen application is currently impermissible for the reasons stated above, the Central Coast Water Board and the other regional water boards are not precluded from using a grower's repeated clearly excessive A/R ratio or A-R difference data, in conjunction with other evidence, to demonstrate noncompliance with other enforceable provisions of their waste discharge requirements, including, for example, requirements to implement the management practices contained in the grower's Irrigation and Nutrient Management Plan. In addition, when faced with exceedingly high nitrogen application data and the absence of any R data, the Central Coast Water Board could, for example, issue a Water Code section 13267 Order to the grower requiring the collection and submission of R data and development of a certified Irrigation and Nutrient Management Plan sooner than would otherwise be required, or any other relevant information.

5. Enforceable Limits on A-R Difference

The General WDRs also impose what it refers to as "nitrogen discharge targets and limits" based on the calculation of nitrogen applied minus nitrogen removed (A-R).[73] Non-participating dischargers will ultimately be subject to enforceable limits, as measured using one of the three compliance pathway calculations noted above. Beginning on December 31, 2023, and continuing for four years, non-participating dischargers will be subject to non-enforceable nitrogen discharge targets.[74] On December 31, 2027, these growers will become subject to enforceable nitrogen discharge limits, which will be progressively reduced over the course of the next 24 years.[75]

The consequences for discharges of nitrogen in excess of the nitrogen discharge targets include "obtaining additional education, [Irrigation and Nutrient Management Plan] certification by a qualified professional, implementing additional or

[72] *See id*. at pp. 52-53.
[73] General WDRs, pp. 23-24.
[74] *See id.,* Table C.1-3, Compliance Dates for Nitrogen Discharge Targets and Limits, p. 52.
[75] *Ibid.*

improved management practices, and increased monitoring and/or reporting."[76] When the nitrogen discharge limits go into effect, dischargers who exceed the limits may also be subject to enforcement actions.[77]

Dischargers participating in the third-party alternative compliance pathway program are subject only to nitrogen discharge targets, not limits.[78] These targets take effect on December 31, 2024, and are progressively reduced over the course of four years.[79] Consequences for participating dischargers that report A and R values in excess of the applicable compliance pathway for the nitrogen discharge targets depends on how long the exceedances continue. After one year of exceedances, participating dischargers "are subject to follow-up by the approved third-party alternative compliance pathway program administrator, which could include additional education and/or implementation of additional or improved management practices."[80] If a participating discharger exceeds the target for a two-year running average, that discharger "must obtain annual [Irrigation and Nutrient Management Plan] certification by a qualified professional until nitrogen discharge targets are achieved for a two-year running average."[81] If a participating discharger exceeds the final nitrogen discharge target that takes effect on December 31, 2028, for a three-year running average, the discharger is "no longer eligible to participate in the third-party alternative compliance pathway program and must comply with individual groundwater protection requirements," (i.e., the nitrogen discharge limits).[82]

The Central Coast Water Board's use of its A-R difference compliance pathways as enforceable nitrogen discharge limits is also a new regulatory approach. Accordingly, as with the fertilizer nitrogen application limits discussed above, we remand this portion of the General WDRs to the Central Coast Water Board with the instruction to eliminate the use of enforceable limits for the A-R difference. The Central Coast Water Board shall add interim targets that are consistent with Order WQ 2018-0002 for purposes other than direct enforcement, as discussed in the preceding section.

As noted above in Section II.A.2, the State Water Board acknowledges support for the modifications to the calculation of nitrogen applied and nitrogen removed, the compliance pathways calculations, and the use of discharge targets in triggering certain follow-up actions by growers. As such, during the interim period between the adoption of this Order and when the State Water Board acts on the expert panel's findings (see below), the Central Coast Water Board may use the nitrogen

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[76] *Id*. at p. 27.
[77] *Ibid.*
[78] *Id*. at pp. 32-33.
[79] *See id.,* Table C.2-2, Compliance Dates for Nitrogen Discharge Targets (Alternative Compliance Pathway), p. 54.
[80] *Id*. at p. 33.
[81] *Ibid.*
[82] *Ibid.*

discharge limits and targets for the limited purposes of requiring additional education and Irrigation and Nutrient Management Plan certification by a qualified professional. Nitrogen discharge limits and targets may not be used for any other purpose, including removal from the third-party alternative compliance pathway program, progressive enforcement actions, or additional requirements, such as implementing additional or improved management practices, or increased monitoring or reporting.

6. Convening an Expert Panel

In Order WQ 2018-0002, we indicated that, after a number of years, it may be appropriate to convene another expert panel to review the data generated by our irrigated lands regulatory programs that use the approach to gathering nitrogen applied (A) and nitrogen removed (R) data that we specified in Order WQ-2018-0002. This assessment could inform "the appropriate use of the acceptable ranges for multi-year A/R ratio target values in irrigated lands regulatory programs statewide."[83] An expert panel could also evaluate other potential modifications to our irrigated lands regulatory programs, including the collection and analysis of A and R data.

Since we adopted Order WQ 2018-0002, the Central Valley Water Board has amassed almost four years of data on A, R, A/R, and A-R from the Eastern San Joaquin coalition's area and from other coalition areas throughout the Central Valley region. The Central Coast Water Board has been collecting total nitrogen applied information for eight years across the entire Central Coast region, and will receive its first year's R data from growers in its Groundwater Phase 1 area in March 2024. Given the amount of data generated and other progress made in implementing Order WQ 2018-0002, such as developing nitrogen removal coefficients for numerous crops, we hereby direct our staff to work with the regional water boards to conduct a review of the data that have been collected by the regional water boards and the other progress that has been made by CDFA, third parties, academics, and others in furtherance of regional water boards' irrigated lands regulatory programs. The review shall be presented at a State Water Board meeting as soon as reasonable, but at least within the next twelve months. As part of that review, we direct staff to make recommendations regarding any changes to the data that are being collected and the sufficiency of the data for an expert panel's evaluation.

As soon as we determine that sufficient data has been collected for review by an expert panel, we will direct staff to initiate an expert panel process to advise us on the next steps for our irrigated lands regulatory programs. That process will include opportunities for the public to provide their input on the data to be reviewed by the panel, the questions to be posed to the panel, and the areas of expertise for the panelists. The expert panel will be comprised of scientific experts drawn from entities such as academic institutions, scientific and policy institutes, and government agencies. The work of the expert panel will include opportunities for public participation and will be reviewed by the State Water Board with the expectation that its recommendations will

[83] *Ibid*.

be used to provide additional precedential guidance to the regional water boards' irrigated lands regulatory programs. We are committed to acting promptly to initiate a new public process to give further precedential direction if the expert panel recommends any significant revisions to our irrigated lands regulatory program.

It is premature to determine the full charge of that expert panel now, but we foresee that we will task the expert panel to review the nitrogen applied and nitrogen removed data and evaluate the suitability of expanding the use of the multi-year A/R ratio target values and A-R difference values in our irrigated lands regulatory programs.[84] In addition, we expect to task the expert panel to review the modifications to measuring A and R advanced by the Central Coast Water Board in the General WDRs, including discount factors applied to nitrogen in compost and organic fertilizer and the creation of new categories of nitrogen removed ($R_{SCAVENGE}$, R_{TREAT}, and R_{OTHER}). The review of these new categories of A and R will involve evaluating the scientific bases for their measurements and expected efficacy in reducing overall nitrogen loading. And we also expect that we will task the expert panel with assessing whether incentivizing the use of nitrogen in irrigation water by excluding it from the calculation of total nitrogen applied is the most appropriate approach for evaluating and controlling potential discharges to groundwater and reducing overall concentrations of nitrates in groundwater.

B. Consistency with State Water Board's Composting General Order

In the course of our review of the General WDRs, we identified a potential water quality concern regarding large on-farm composting operations that was not raised by any of the petitioners. On April 7, 2020, we adopted General Waste Discharge Requirements for Commercial Composting Operations, Order WQ 2020-0012-DWQ (Composting General Order). We adopted the Composting General Order to streamline the permitting of composting operations and protect water quality from discharges from composting activities.[85] In the Composting General Order, we found that on-farm composting operations that receive, process, or store less than 25,000 cubic yards of certain types of feedstocks at any given time and implement limited management practices are unlikely to degrade water quality, and therefore qualify for a conditional exemption from the Composting General Order.[86] By contrast, we imposed prescriptive design, construction and operation requirements for larger composting operations.[87]

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[84] We also intend to consider granting a request submitted by several environmental justice organizations to have the Groundwater Protection Targets described in Order WQ 2018-0002 and recently conditionally approved by the Central Valley Water Board reviewed, either by the expert panel or through a separate independent review process.

[85] State Water Board Order WQ 2020-0012-DWQ, finding 12, p. 7.

[86] *Id*., finding 30, p. 13.

[87] *Id*. at pp. 32-33.

The General WDRs authorize on-farm composting operations and impose minimal management practices for those operations.[88] Unlike the Composting General Order, the General WDRs do not include any volumetric limitations on the size of the on-farm composting operations. We are concerned about the potential for groundwater or surface water quality impacts from large on-farm composting operations authorized under the General WDRs. Accordingly, we remand this portion of the General WDRs to the Central Coast Water Board with directions to revise the General WDRs to be consistent with the qualifications for the on-farm composting conditional exemption from the Composting General Order, including the 25,000 cubic yard limitation.[89] The General WDRs shall also require that any on-farm composting operations that do not qualify for the conditional exemption obtain coverage under the Composting General Order.

C. Nonpoint Source Policy

For different reasons, both the GSA and CCKA Petitioners ask us to set aside or revise the General WDRs as inconsistent with the quantifiable milestones requirements of our Nonpoint Source Policy. As detailed below, we conclude that the Central Coast Water Board incorporated into the General WDRs milestones that are appropriately quantifiable, but that further consideration of timelines is necessary.

As we discussed at length in Order WQ 2018-0002, the Nonpoint Source Policy guides the interpretation and implementation of Water Code requirements, including Water Code sections 13263, in the context of regulating nonpoint source discharges, including discharges from irrigated lands.[90] The Nonpoint Source Policy

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[88] General WDRs, Part 2, Section D, Paragraph 22, pp. 45-46.

[89] Note that this direction is based on the same water quality concerns that led us to impose volumetric limitations on on-farm composting in our Composting General Order, not on any failure by the Central Coast Water Board to follow our precedential direction. We have not designated our general waste discharge requirements, including the Composing General Order, as precedential orders in accordance with Government Code section 11425.60. To the extent there is any ambiguity about our decision in *Lagunitas Creek* to designate our orders adopted at public meetings as precedential, we hereby clarify that the precedential designation does not apply to general orders, including general waste discharge requirements. General orders do not name the specific persons regulated by the order and generally provide a mechanism for persons to seek coverage or enrollment under the general order following adoption. General orders have attributes of both quasi-legislative and quasi-judicial administrative action and are ill-suited to precedential status under the adjudicative proceeding provisions of the Administrative Procedure Act. In the relatively rare circumstance where we issue a water quality order that also includes specific amendments to a general order issued by a regional water board (as we did in Order WQ 2018-0002), only the water quality order is precedential, unless specifically designated otherwise.

[90] State Water Board Order WQ 2018-0002, p. 14.

requires that any nonpoint source pollution control implementation program, including one administered by a third-party group, incorporate five "key elements."[91]

Key Element 3 provides that, "Where a RWQCB determines it is necessary to allow time to achieve water quality requirements, the NPS control implementation program shall include a specific time schedule, and corresponding quantifiable milestones designed to measure progress toward reaching the specified requirements."[92] The Central Coast Water Board incorporated numeric quantifiable milestones in several areas in the General WDRs. For example, as described in Sections II.A.4 and II.A.5 above, the General WDRs include numeric targets and limits for fertilizer nitrogen application and nitrogen discharge. These targets and limits are progressively reduced over time. (We are, of course, directing the Central Coast Water Board to revise those targets and limits and develop interim milestones consistent with Order WQ 2018-0002 in Section II.A.3, above.) The General WDRs also require that dischargers develop a surface receiving water implementation work plan that includes numeric quantifiable milestones for relevant constituents (e.g., pollutant load or concentration) and for management practices that show progress towards reducing the discharge of relevant constituents.[93]

GSA Petitioners complain that the quantifiable milestones required by Key Element 3 need not be "numeric in nature, or tied directly to concentrations or loads of pollutants." Rather, GSA Petitioners assert, the quantifiable milestones required by Key Element 3 are "intended to be flexible and encompass a wide variety of performance goals and measures. By limiting quantifiable milestones to something numeric and directly tied to concentrations or loads of pollutants, [the General WDRs are] inconsistent with the Nonpoint Source Policy."[94]

The regional water boards have discretion to determine the most appropriate quantifiable milestones for the situation.[95] Water quality objectives and total maximum daily loads are typically expressed as concentrations or loads, so pollutant concentrations and loads are particularly well suited for measuring progress toward reaching these water quality requirements. Key Element 3 requires that the milestones be "quantifiable," which generally means that the milestones must be capable of being expressed as an amount, quantity, or numerical value.[96] Thus, the Central Coast Water Board's inclusion of pollutant concentrations and loads as numeric quantifiable

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[91] Nonpoint Source Policy, p. 11.
[92] *Id*. at p. 13. The Nonpoint Source Policy identifies Water Code sections 13242, subdivision (b), and 13263, subdivision (c), as the statutory support for Key Element 3.
[93] General WDRs, p. 40.
[94] A-2751(a) Petition, pp. 42-43.
[95] *See Monterey Coastkeeper v. State Water Resources Control Bd*. (2018) 28 Cal.App.5th 342, 369 (State Water Board has discretion to determine appropriate milestones).
[96] Merriam-Webster.com Dict. at <https://www.merriam-webster.com/dictionary/quantifiable> [as of September 7, 2023].

milestones is consistent with the Nonpoint Source Policy. In upholding the Central Coast Water Board's determination here, though, we do not preclude the appropriateness of a regional water board determining, with adequate justification, in another proceeding that a particular milestone should be expressed qualitatively so long as Key Element 3 is satisfied by the inclusion of a sufficient number of other milestones that are quantifiable.

CCKA Petitioners assert that Key Element 3 is not satisfied because the General WDRs do not include timelines for achieving nitrate water quality objectives in groundwater.[97] It is important to understand that nonpoint source control implementation programs developed pursuant to the Nonpoint Source Policy are designed to meet water quality requirements that are focused primarily on controlling current and proposed nonpoint source discharges of waste so that they do not cause or contribute to exceedances of water quality objectives in receiving waters, not on remediating existing pollution caused by historic discharges.[98] However, Key Element 3 does require that the nonpoint source control implementation programs include time schedules for achieving those water quality requirements. The commentary following Key Element 3 explains that:

> The time schedule may not be longer than that which is reasonably necessary to achieve an NPS implementation program's water quality objectives …. If the [regional water board] later determines that additional time is necessary to complete the program, it may make further amendments to the time schedule or issue an enforcement order that contains a compliance schedule.[99]

For individual dischargers, the General WDRs establish final time schedules for the three nitrogen discharge compliance pathways discussed in Section II.A.2, above.[100] For participating dischargers, the General WDRs establish 2028 deadlines for the nitrogen discharge compliance pathways, but it does not appear that these dates are intended to be the final time schedules.[101] As discussed in

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[97] A-2751(b) Petition, p. 14.

[98] *See*, e.g., State Water Board Order WQ 2018-0002, p. 16; *Environmental Law Foundation v. State Water Resources Control Bd., supra,* 89 Cal.App.5th at p. 465 (the ultimate purpose of the waste discharge requirements is that "[w]astes discharged from Member operations shall not cause or contribute to an exceedance of applicable water quality objectives in surface water [or underlying groundwater], unreasonably affect applicable beneficial uses, or cause or contribute to a condition of pollution or nuisance").

[99] Nonpoint Source Policy, p. 13.

[100] General WDRs, Table C.1-3, p. 52.

[101] *Id*., Table C.2-2, p. 54. The Central Coast Water Board indicates that the final time schedule for participating dischargers will be included in the third party's Groundwater Protection Area workplan described on page 34 of the General WDRs. (Central Coast

Section II.A, we are concerned that the General WDRs' inconsistencies with the precedential A/R and A-R direction in Order WQ 2018-0002 will understate (or overstate, in the case of fertilizer nitrogen application) the potential for nitrogen to reach groundwater. Because we are remanding the General WDRs to address those inconsistencies, we necessarily must also remand the time schedules based on those inconsistencies.[102]

Final time schedules for ongoing discharges to cease causing or contributing to exceedances of nitrate water quality objectives in groundwater consistent with the precedential A/R and A-R direction in Order WQ 2018-0002 must be incorporated in either the revisions to the General WDRs or in third party proposals subject to public comment and approval by the Central Coast Water Board.[103] We are fully aware of the apparent tension between requiring the establishment of final compliance dates for achieving nitrate water quality objectives and rejecting the General WDRs' use of enforceable limits on nitrogen application and A-R difference. This is a function of the fact that the science supporting our irrigated lands regulatory program is, as thoroughly explained in Order WQ 2018-0002, still evolving and we have not yet identified a metric that directly correlates to ongoing practices ceasing to cause or contribute to exceedances of nitrate water quality objective in groundwater that can be used as a regulatory tool. This is why Order WQ 2018-0002 called for convening another expert panel to evaluate data related to nitrogen application and removal and to propose modifications to our regulatory approach. Accordingly, we are aware that all of the regional water boards may have to amend their final compliance schedules in the future as our irrigated lands regulatory programs develop, as expressly contemplated by the Nonpoint Source Policy.[104]

As a related matter, because of the critical drinking water impacts associated with groundwater nitrate contamination, we hereby direct the Central Coast

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Water Board Response to Petitions, p. 66.) While the workplan is required to include final targets, it is not clear that it is also required to include final time schedules. On remand, the Central Coast Water Board should clearly indicate either the final time schedules or the process for approving final time schedules.

[102] As we discuss below, the Central Coast Water Board should note that we authorized a framework that allowed a maximum final time schedule of 35 years for dischargers to cease causing or contributing to exceedances of water quality objectives in the receiving water, but only for dischargers that are participating in a program that provides short-term and long-term drinking water supplies to affected residents, when we approved the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS). (State Water Board Resolution No. 2019-0057.)

[103] *Environmental Law Foundation v. State Water Resources Control Bd., supra,* 89 Cal.App.5th at p. 486.

[104] Nonpoint Source Policy, p. 13 ("If the [regional water board] later determines that additional time is necessary to complete the program, it may make further amendments to the time schedule or issue an enforcement order that contains a compliance schedule").

Water Board to incorporate a requirement or reach an agreement in which dischargers or their third-party representatives provide short-term and long-term alternative water supplies for residents relying on groundwater in areas where the maximum contaminant level (MCL) for nitrate is exceeded as a result of agricultural operations. The Central Coast Water Board shall take into account the experience gained through the Central Valley Water Board's CV-SALTS program and the Central Coast Water Board's own Salinas Basin Agricultural Stewardship Group interim replacement water settlement agreement, but shall also consider mechanisms that would include funding by dischargers with program management by an independent organization that focuses on providing alternative water supplies. The Central Coast Water Board could incorporate such a requirement in its water quality control plan or in cleanup and abatement orders, or reach an agreement with the dischargers that is incorporated into the General WDRs, in order to justify a longer final time schedule for ceasing to cause or contribute to nitrate water quality objectives exceedances in groundwater, similar to the maximum 35-year time schedule authorized under CV-SALTS. The Central Coast Water Board shall invite representatives of impacted communities, environmental justice organizations and other stakeholders, as well as State Water Board staff with experience in alternative water supplies, to participate in the development of such a requirement or agreement and shall report its progress to the State Water Board semi-annually.

D. Monitoring for 1,2,3-TCP

The GSA Petitioners challenge the General WDRs' requirement to monitor 1,2,3-trichloropropane (1,2,3-TCP) in on-farm domestic wells. In essence, GSA Petitioners contend that the monitoring requirements are not adequately justified and should not be included in the General WDRs for all enrollees. As set forth below, we conclude the Central Coast Water Board appropriately applied the Porter-Cologne Act's definition of discharge and thereby appropriately justified the 1,2,3-TCP monitoring requirement.

The General WDRs require that dischargers monitor on-farm domestic supply wells for 1,2,3-TCP, which is classified as a carcinogen.[105] According to the Central Coast Water Board's findings, 1,2,3-TCP

> [W]as commonly used [as a soil fumigant] in agricultural activities from the 1950s until the 1990s [and] has been detected throughout California, including within the central coast region in some public water systems and monitoring wells, as well as in some private domestic wells.[106]

[105] *See* 1,2,3-trichloropropane, Proposition 65 List, Safe Drinking Water and Toxic Enforcement Act at <https://oehha.ca.gov/proposition-65/chemicals/123-trichloropropane> [as of September 7, 2023].
[106] General WDRs, Attachment A, Findings, p. 167.

The General WDRs required annual monitoring beginning in 2022. If two consecutive samples result in non-detects, the discharger may suspend sampling for 1,2,3-TCP for a period of three years. If the sample in this follow-up test also results in a non-detect, no further monitoring is required of the discharger. However, if 1,2,3-TCP is detected in this sample, the discharger must resume annual monitoring.[107]

GSA Petitioners argue that dischargers who did not actually apply 1,2,3-TCP to their fields should not be required to monitor for its presence in on-farm domestic supply wells:

> [T]he Central Coast Water Board makes no demonstration that those subject to [the General WDRs] applied the soil fumigant in question and there is no evidence that readily traces 1,2,3-TCP in on-site domestic wells to the discharge or disposal of 1,2,3-TCP from specific properties that are subject to [the General WDRs]. Accordingly, growers and landowners subject to [the General WDRs] are not dischargers of 1,2,3-TCP and thus the monitoring and reporting requirements as imposed in [the General WDRs] are improper and must be removed.[108]

While 1,2,3-TCP is not currently being used as a soil fumigant, it nonetheless continues to be discharged to groundwater in the Central Coast region. "The Central Coast Water Board acknowledged that products containing 1,2,3-TCP are likely no longer in use by the agricultural community."[109] However, we have long construed the term "discharge" in Water Code section 13304 to refer not just to the initial discharge or release, but also to include the "entire time during which the discharged waste remains in the soil or groundwater and continues to impact or threaten the groundwater."[110] This interpretation has been upheld by the Court of Appeal.[111] We agree that dischargers regulated under the General WDRs may be considered dischargers of 1,2,3-TCP, despite not having applied it to their fields, due to ongoing migration of 1,2,3-TCP through soil and groundwater throughout the region.

We have previously held that waste discharge requirements issued under Water Code section 13263 serve a different function than cleanup and abatement orders issued under Water Code section 13304, and the two functions should not be conflated.[112] But monitoring requirements associated with both waste discharge requirements and cleanup and abatement orders are authorized by the same Water Code section. Section 13267 broadly authorizes the regional water boards to require

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[107] General WDRs, Attachment B, Monitoring and Reporting Program, pp. 13, 37-38.
[108] A-2751(a) Petition, pp. 33-34.
[109] Central Coast Water Board Response to Petitions, p. 21.
[110] *Tesoro Refining & Marketing Co. LLC v. Los Angeles Regional Water Quality Control Bd.* (2019) 42 Cal.App.5th 453, 472 (citing State Water Board Order No. WQ 86-2 (*Zoecon*) and State Water Board Order No. 74-13 (*Atchison, Topeka and Santa Fe Railway Co.*)).
[111] *Ibid*.
[112] *See*, e.g., State Water Board Order WQ 96-2 (*County of San Diego*).

any person to furnish monitoring reports if that person has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste.

In its findings, the Central Coast Water Board determined that,

> Current landowners are dischargers when wastes continue to be discharged into waters of the state. Given the potential health risk to users who drink 1,2,3-TCP contaminated groundwater, the [Central Coast Water] Board also finds that the burden of adding sampling and analysis for 1,2,3-TCP to existing sampling of on-farm domestic wells is reasonably related to the need for the sampling and reporting and the benefits to be obtained.[113]

Given the pervasive nature of 1,2,3-TCP, its health risk, and the fact that the dischargers are already required to sample their on-farm drinking water wells for nitrate, we agree that the requirement to monitor for 1,2,3-TCP is appropriate.

E. Pesticide Surface Water Receiving Water Limits

GSA Petitioners argue that it was improper for the Central Coast Water Board to impose numeric surface water receiving water limits for specific pesticides where the underlying water quality objectives are framed as narrative objectives in the Basin Plan. We conclude, consistent with our prior decisions, that the Central Coast Water Board appropriately included numeric requirements to implement the narrative water quality objective in the Basin Plan.

The General WDRs establish numeric surface receiving water limits for a number of pesticides in areas not otherwise subject to TMDLs and require that dischargers in areas where the water quality for the identified pesticides is better than the applicable limit must not cause or contribute to an increase of that pesticide in receiving waters.[114] The discharge of pesticides that cause or contribute to an exceedance of the applicable limits on or after December 31, 2032 "may result in additional requirements, including obtaining additional education, implementing additional or improved management practices, follow-up monitoring and reporting, ranch-level surface discharge monitoring and reporting, and progressive enforcement actions."[115]

GSA Petitioners fault the Central Coast Water Board for specifying numeric limits for pesticides in the General WDRs to implement the Basin Plan's narrative water quality objectives. In their words, "before being used as a numeric limit,

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[113] General WDRs, Attachment A, Findings, p. 168.
[114] General WDRs, pp. 38-39, Table C.3-5, Compliance Dates for Pesticide and Toxicity Limits (Non-TMDL areas).
[115] *Id*. at p. 39, Table C.3-5.

a pesticide [water quality objective] must be adopted properly, pursuant to Water Code sections 13240 et seq., and must be based on proper evidence."[116]

The receiving water limits for the pesticides at issue are derived from the narrative toxicity and pesticides water quality objectives in the Basin Plan.[117] When water quality objectives are established in a basin plan in narrative form, it is appropriate for a regional water board to exercise its professional judgment, relying on scientific studies, to establish numeric limits. This is a fundamental regulatory practice of the regional water boards in implementing basin plans and exercising their regulatory authority under the Water Code.[118]

In interpreting the narrative limits in the Basin Plan, the Central Coast Water Board properly relied on U.S. EPA aquatic life benchmarks and other scientific literature.[119] We find that the Central Coast Water Board appropriately established numeric receiving water limits for the pesticides at issue by interpreting narrative toxicity and pesticides water quality objectives contained in the Basin Plan.

F. Impermeable Surfaces

GSA Petitioners also challenge requirements established in the General WDRs for the first time to address impermeable surfaces. In the GSA Petitioners' view, these requirements create added expense and technical challenges without providing water quality benefits in most cases. After considering the record and arguments, we conclude the impermeable surface requirements are a lawful and measured response to ameliorate the effects of increased stormwater runoff.

The General WDRs require that any ranch with either 50 percent or more of its fields covered by impermeable surfaces, or with greater than or equal to 22,500 square feet (0.5 acre) of impermeable surfaces, must comply with requirements to address the associated impacts from increased stormwater runoff.[120] Impermeable surfaces are defined as, "Plastic-covered surfaces that do not allow fluid to pass through, including polyethylene mulch and hoop houses. For the purposes of this Order, impermeable surface does not refer to relatively impermeable soils."[121] If a ranch

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[116] A-2751(a) Petition, p. 40.
[117] Central Coast Water Board Response to Petitions, pp. 40-41.
[118] *See* Wat. Code, § 13263, subd. (a); *see also* Order WQ 99-09 (*Communities for a Better Environment*); State Water Board Policy for Water Quality Control: Toxicity Provisions (2021), p. 4 ("The Permitting Authority may apply narrative toxicity water quality objective(s) to derive … chemical-specific effluent limitations…. .") at <https://www.waterboards.ca.gov/water_issues/programs/state_implementation_policy/docs/2021/2021-state-policy-toxicity-provisions.pdf> [as of September 7, 2023].
[119] General WDRs, Attachment A, Findings, Table A.C.3-2, Source of Numeric Limits for Pesticides, Toxicity, and Toxic Units, pp. 190-93.
[120] General WDRs, p.37.
[121] General WDRs, Attachment C, Acronyms, Abbreviations, and Definitions, p. 14.

exceeds the threshold for impermeable surfaces, the following requirements must be satisfied:

- Stormwater discharge intensity from fields with impermeable surfaces must not exceed the stormwater discharge intensity from equivalent permeable field area for any storm event up to and including the 10-year storm event.

- Stormwater discharge volume from fields with impermeable surfaces must not exceed the stormwater discharge volume from equivalent permeable field area for any storm event up to and including the 95th percentile, 24-hour storm event.

- Description and time schedules of management practices, treatment, and/or control measures implemented to meet design storm requirements and mitigate for increased stormwater runoff from impermeable surfaces must be kept in the Farm Plan. Methods for assessing the effectiveness of each management practice, treatment, and/or control measure include calculation of peak and runoff volumes, visual inspection, photo documentation, and local precipitation event data, however other storm event measurement types and recordkeeping that determine the effectiveness of management practices may be used.[122]

GSA Petitioners argue that these new requirements for impermeable surfaces "add further layers of expense and complication for all berry farmers, regardless of size, with no direct connection to a threat to water quality in most cases."[123] The GSA Petitioners are also concerned that the "average small berry farmer is not able to compute stormwater duration, rate and volume using urban stormwater management formulas or methods as part of their Farm Plan without expensive professional assistance."[124]

We are supportive of the General WDRs' requirements for impermeable surfaces. Experience has taught that increased stormwater runoff from large areas with impermeable surfaces, either individually or cumulatively, can cause significant water quality problems if not managed properly. We have included similar types of requirements for development projects that create or replace as little as 5,000 square feet or more of impervious surface in our Phase II Municipal Storm Sewer System Permit.[125] As climate change is likely to cause precipitation in California to become

[122] General WDRs, p. 37.
[123] A-2751(a) Petition, p. 39.
[124] *Ibid*.
[125] Order No. 2013-0001-DWQ, § E.12, pp. 48-57.

more intense and extreme,[126] lessening runoff through requirements like those developed by the Central Coast Water Board will become even more important. We are sympathetic to the concerns expressed about the need for professional assistance, however, so we expect that the Central Coast Water Board will work with the third party to assist small berry farmers with understanding how to comply with these requirements.

G. Economic Considerations

GSA Petitioners contend that the Central Coast Water Board did not adequately consider the economics associated with the long-term impact of the General WDRs on agricultural production. A careful review of the record shows extensive consideration of a variety of economic considerations. While we acknowledge growers will bear costs and there will be economic impacts to irrigated agriculture from implementation of the General WDRs, the Central Coast Water Board thoughtfully considered those issues and satisfied its legal obligations under the Porter-Cologne Act.

GSA Petitioners assert that the "long-term cumulative impact of [the General WDRs] on Central Coast Agriculture will make agricultural production infeasible."[127] The crux of their argument is that the Central Coast Water Board failed to evaluate "economic considerations" as required under Water Code section 13241. GSA Petitioners allege that the Central Coast Water Board violated Water Code section 13263 because

> [The General WDRs] essentially ignores the economic impacts of [the General WDRs] and instead substitutes economic considerations and analysis with cost considerations … Economic considerations and cost considerations are not one and the same. Economics is the study of how individuals and businesses make decisions about allocation of resources in response to changing conditions. Thus, economic considerations would be looking at how agriculture will make decisions in response to requirements in [the General WDRs]. The fundamental question that the Central Coast Water Board needed to ask was "[w]hat happens to agriculture and the communities in the Central Coast under [the General WDRs]?"[128]

Water Code section 13263 requires that a regional board consider, among other things, the "provisions of Section 13241" when issuing waste discharge requirements.[129] Water Code section 13241 establishes "[f]actors to be considered by a

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[126] *See, e.g., Projected Changes in California's Precipitation Intensity-Duration-Frequency Curves, A Report for California's Fourth Climate Change Assessment* (August 2018) at <https://www.energy.ca.gov/sites/default/files/2019-11/CCCA4-CEC-2018-005_ADA.pdf> [as of September 7, 2023].
[127] A-2751(a) Petition, p. 43.
[128] *Id*. at pp. 44-45.
[129] Wat. Code, § 13263, subd. (a).

regional board in establishing water quality objectives," which includes economic considerations.[130] "Section 13241 does not specify how a water board must go about considering the specified factors. Nor does it require that board to make specific findings on the factors."[131] GSA Petitioners cite no authority to support their claim that Water Code section 13241 requires an analysis of "how individuals and businesses make decisions about allocation of resources in response to changing conditions" and "what happens to agriculture and the communities" as a result of the adoption of the General WDRs.

Attachment A to the General WDRs includes an extensive review of cost considerations. Spanning 27 pages, the Central Coast Water Board addresses costs to dischargers resulting from the requirements of the General WDRs and costs to the public and the environment resulting from water quality impacts from irrigated lands, including public health costs and alternative water supply costs associated with widespread nitrate contamination of drinking water in many areas of the Central Coast region.[132] The bulk of the cost assessment relates to costs to dischargers and covers issues such as costs of compliance, permit fees, costs of monitoring and reporting, and total costs to dischargers.

The discussion of cost of compliance is detailed, including identifying several agricultural management practices developed by the Natural Resources Conservation Service to address irrigation and nutrient management and a range of associated costs.[133] The Central Coast Water Board also considered potential costs associated with groundwater quality trend monitoring and reporting, monitoring of on-farm domestic wells and irrigation wells, ranch-level groundwater discharge monitoring, surface receiving water quality trend monitoring and reporting, surface receiving water follow-up monitoring and reporting, and ranch-level surface discharge monitoring and reporting.[134] The discussion on the costs of reporting goes into detail on the estimated time and costs dischargers may expect to expend in completing the Annual Compliance Form, Total Nitrogen Applied Report, and Irrigation and Nutrient Management Plan Summary Report.[135] A summary of costs to dischargers is provided in Table A.B-18.[136] We conclude that the Central Coast Water Board complied with its obligations regarding economic considerations in accordance with Water Code section 13241.

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[130] Wat. Code, § 13241.
[131] *City of Arcadia v. State Water Resources Control Bd.* (2010) 191 Cal.App.4th 156, 177.
[132] General WDRs, Attachment A, Findings, pp. 7-33.
[133] General WDRs, Attachment A, Findings, pp. 13-16.
[134] *Id*. at pp. 16-22.
[135] *Id*. at pp. 22-27.
[136] *Id*. at pp. 131-33.

H. Extensions of TMDL Compliance Dates

CCKA Petitioners claim that the revision of total maximum daily loads ("TMDLs") compliance dates in the General WDRs violates State Water Board policy and does not comply with notice requirements for modifying TMDLs.[137] CCKA Petitioners also assert that the TMDL compliance date modifications cannot be completed through this permitting action because to do so will violate basic principles of administrative procedure that require fair notice to all TMDL stakeholders."[138] As set forth below, we conclude the Central Coast Water Board acted appropriately for one subset of TMDLs derived from single-permitting actions, but require the Central Coast Water Board to take further actions to codify any extensions for final compliance schedules that are specified in the basin plan.[139]

The General WDRs extended the final compliance dates for two groups of TMDLs: TMDLs that were adopted exclusively as "single permitting actions"[140] as part of an earlier Central Coast irrigated lands order, and TMDLs that were adopted as basin plan amendments.[141] We are not concerned about the process that the Central Coast Water Board used to extend the TMDL final compliance dates for the subset of TMDLs that were adopted exclusively as "single regulatory actions," because there was no quasi-legislative action taken by the Central Coast Water Board for these TMDLs; the General WDRs themselves serve to implement the TMDLs.

The Central Coast Water Board acted improperly, however, in using the General WDRs to extend final compliance dates for TMDLs that were adopted as basin plan amendments. As a quasi-legislative enactment, the basin plan is superior to the waste discharge requirements and other quasi-adjudicative orders that implement the basin plan. Water Code section 13263 requires that regional board waste discharge requirements "implement any relevant water quality control plans that have been adopted."[142] This requires that waste discharge requirements be consistent with applicable basin plans, not the other way around. Therefore, final compliance dates for

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[137] A-2751(b) Petition, p. 25.
[138] *Id*. at p. 26.
[139] GSA Petitioners correctly note that some of the Central Coast Water Board's basin plan TMDLs have estimated target dates, rather than final compliance schedules with final compliance dates. Our concern, and the rationale that we express herein, applies only to the basin plan TMDLs that have final compliance dates. In all other cases, the Central Coast Water Board may use the authority granted by Water Code section 13263, subdivision (c), to include, or revise, time schedules in its General WDRs.
[140] *See* State Water Board Water Quality Control Policy for Addressing Impaired Waters: Regulatory Structure and Options (June 16, 2005), p. 5, at <https://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/iw_policy.pdf> [as of September 7, 2023].
[141] General WDRs, Attachment A, pp. 33-39.
[142] Wat. Code, § 13263(a).

existing TMDLs adopted in basin plans may not be extended through the issuance of waste discharge requirements.[143]

In our order reviewing the Los Angeles Regional Water Quality Control Board's waste discharge requirements for municipal separate storm sewer systems,[144] we indicated that time schedule orders are appropriate "where a final compliance deadline for a state-adopted TMDL has passed and the Permittee believes that additional time to comply with the requirement is necessary."[145] In explaining why it revised the final compliance deadlines for some of its TMDLs adopted as basin plan amendments, the Central Coast Water Board noted that,

> [I]f the [Central Coast Water Board] strictly followed the implementation schedule in the Basin Plan, hundreds of dischargers would be out of compliance with the Order provisions immediately or within the early stages of the implementation of the permit. The [Central Coast Water Board] considered the option of issuing time schedule orders to such dischargers under Water Code section 13300 in lieu of extending the compliance schedules within the permit under Water Code section 13263, subdivision (c), but concluded that time schedule orders would require an extensive investment of board resources with questionable water quality results. Applying a less-than-strict interpretation of target dates to achieve TMDL load allocations when establishing the surface receiving water limits in this Order is both a legally permissible and practical alternative to the exercise of issuing multiple time schedule orders.[146]

We certainly understand the practical difficulties associated with adopting hundreds of individual time schedule orders. In this case, however, all of the growers within each of the affected TMDL watersheds are similarly situated for these purposes, in that the Central Coast Water Board need not take into account their individual circumstances. Accordingly, the Central Coast Water Board should consider adopting a series of watershed-wide time schedule orders that apply to all dischargers within each watershed that has a TMDL with a final compliance date established in its Basin Plan. In

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[143] *See Monterey Coastkeeper v. State Water Res. Control Bd.*, 28 Cal. App. 5th 342, 370, 239 Cal. Rptr. 3d 140, 161 (2018) ("In *State Water Resources Control Bd. Cases* (2006) 136 Cal.App.4th 674, 39 Cal.Rptr.3d 189, this court found the State Board failed to implement certain salinity objectives of the 1995 Bay-Delta Plan at three locations. The State Board delayed implementation at these three locations by several years. We found this delay was not an adequate implementation because nothing in the 1995 Bay-Delta Plan allowed for such delay. *The State Board was in effect amending the 1995 Bay-Delta Plan without complying with the procedural requirements for an amendment*. (*Id*. at p. 735, 39 Cal.Rptr.3d 189.)" [Emphasis added.])

[144] *See* State Water Board Order WQ 2015-0075 (*Los Angeles MS4*).

[145] *Id*. at p. 32.

[146] *Id*. at pp. 91-92 (citing Responses to Comments, Revised Draft Agricultural Order, p. 47 (Master Response 5.6).

addition, however, the Central Coast Water Board must initiate the process to amend its Basin Plan to reflect the changes in final compliance dates for those TMDLs.[147]

I. Public Trust

CCKA Petitioners assert that the Central Coast Water Board, in adopting the General WDRs, failed to adequately analyze the impact of agricultural discharges on public trust resources and violated its trustee duties.[148] As discussed in more detail below, the relevant public trust resources are considered and the requirements to protect those resources where feasible are already addressed through the Central Coast Water Board's Porter-Cologne Act responsibilities to reasonably protect beneficial uses, including fisheries. We find that the Central Coast Water Board did not violate any obligations it may have under the public trust doctrine.

In the view of the CCKA Petitioners,

> Neither the Order, the Findings, or the environmental impact report so much as mention the public trust, despite acknowledging that several types of agricultural discharges it proposes to authorize are likely to impact surface waters and have the potential to adversely impact fish and wildlife. The discharges likely to impact waterbodies include discharges of nutrients, pesticides, sediments and erosion carried by agricultural runoff and drains into surface waters. Yet the 2021 Order fails to do any analysis of the impacts to public trust resources.[149]

The Central Coast Water Board aptly responded to the CCKA Petitioners' assertion:

> The Porter-Cologne Act is, in effect, a codification of the Water Boards' public trust duty vis-?-vis water quality because it requires the Water Boards to adopt water quality control plans establishing water quality objectives necessary to protect beneficial uses and further requires that waste discharge requirements issued by the Water Boards implement those water quality control plans, and

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[147] *See California Assn. of Sanitation Agencies v. State Water Res. Control Bd.* (2012) 208 Cal. App. 4th 1438, 1461, ("[T]he Basin Plan also charged the Regional Board with the responsibility, on a 'case-by-case basis' to correct an erroneous designation when circumstances require it, for example, when the board is issuing a permit prescribing discharges into those tributaries. As articulated by the State Board in its order, '[a]t a minimum, where a Regional Board has evidence that a use neither exists nor likely can be feasibly attained, the Regional Board must expeditiously initiate appropriate basin plan amendments to consider dedesignating the use.'[20] If the Regional Board unreasonably fails or refuses to do so, mandamus will lie.")

[148] A-2751(a) Petition, p. 25.

[149] *Id*. at p. 24.

take into consideration the beneficial uses to be protected and the water quality objectives reasonably required for that purpose.[150]

We agree with the Central Coast Water Board that the Porter-Cologne Act is a codification of the Water Boards' public trust duty regarding water quality, that the Central Coast Water Board met its public trust duty in adopting the General WDRs, and that a specific finding on the public trust is not required.[151]

Pursuant to *National Audubon Society v. Superior Court*, the State Water Board "has an affirmative duty to take the public trust into account in the planning and allocation of water resources, and to protect public trust uses whenever feasible."[152] "[T]he state must bear in mind its duty as trustee to consider the effect of the taking on the public trust [citation], and to preserve, so far as consistent with the public interest, the uses protected by the trust."[153] In *National Audubon Society*, the California Supreme Court considered the State Water Board's duty associated with the planning and allocation of water resources, not as part of the Board's consideration or issuance of a water quality decision that at its core is about protecting and balancing among all beneficial uses, including fisheries.[154] In dicta in a case involving the State Water Board's implementation of a water quality control plan through a water rights proceeding, the Court in *State Water Resources Control Board Cases* noted that in creating a water quality control plan, the Board had a duty to adopt objectives to protect fish and wildlife uses, and in doing so consider and protect all of the other beneficial uses to be made of water in the Bay-Delta, including municipal, industrial and agricultural uses.[155] Essentially, the Court recognized that the water quality control plan reflected the State Water Board's determination of what was in the public interest consistent with the duties under *National Audubon Society*. Because the public trust petitioners in the *State Water Resources Control Board Cases* did not show that adoption of the plan was inconsistent with its duty to protect public trust values "so far as consistent with the public interest," the State Water Board's adoption of a water quality control plan would fulfill its duties under the public trust.[156]

Uses protected by the public trust have traditionally been navigation, commerce, and fisheries, including the right to fish, hunt, bathe, swim, to use for boating and general recreation purposes the navigable waters of the state, and to use the

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[150] Central Coast Water Board Response to Petitions, p. 88. *See* Wat. Code, §§ 13241, 13263.
[151] *See* Central Coast Water Board Response to Petitions, pp. 88-89.
[152] *National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419, 446-47.
[153] *Ibid.*
[154] *See Monterey Coastkeeper v. Monterey County Water Resources Agency* (2017) 18 Cal.App.5th 1, 20-21 ("No issue was raised in *National Audubon Society* as to the Porter-Cologne Act's corresponding administrative remedies.")
[155] *State Water Res. Control Bd. Cases* (2006) 136 Cal.App.4th 674, 777-79.
[156] *Ibid*.

bottom of the navigable waters for anchoring, standing, or other purposes.[157] Groundwater is not itself a public trust resource.[158] Here the only public trust resource at issue is the agricultural discharges effects on fisheries. The evidence in the record shows that the Central Coast Water Board safeguarded fisheries with the requirement to meet surface water quality objectives protective of fish and wildlife beneficial uses and by requiring mitigation measures to the extent the General WDRs itself impacts public trust resources.

Even if consideration of the public trust is required, the Central Coast Water Board is not obligated to perform a separate supplemental analysis to determine the effect on the public trust resources if it has already performed an analysis which addresses its obligations under the public trust doctrine.[159] Here the Central Coast Water Board has considered fishery protections in adopting the Basin Plan and its protection of fish and wildlife beneficial uses. Further, the General WDRs require dischargers to meet the water quality objectives over time through its requirements including ranch-level surface discharge monitoring and reporting when water quality objectives are not met.

III. ORDER

For the reasons discussed in this Order:

1. The Central Coast Water Board shall promptly revise the General WDRs consistent with the direction provided herein. All provisions of the General WDRs remain in effect pending revision, however, the Central Coast Water Board shall not take any action related to exceedances of the nitrogen application and nitrogen discharge targets or limits except as specifically authorized by this Order and shall inform its irrigated lands regulatory program stakeholders of this restriction.

2. State Water Board staff shall work with staff of the regional water boards to conduct a review of the data that have been collected by the regional water boards and the other progress that has been made by the California Department of Food and Agriculture, third parties, academics, and others in furtherance of regional water boards' irrigated lands regulatory programs. As part of the review, staff shall make recommendations regarding any changes to the data that are being collected and the sufficiency of the data for an expert panel's evaluation. The review and recommendations shall be presented at a State Water Board meeting as soon as reasonable, but no later than twelve months from the date of this Order.

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[157] *National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419, 434.
[158] *Environmental Law Foundation v. State Water Resources Control Bd.* (2018) 26 Cal.App.5th 844, 859.
[159] *See Citizens for East Shore Parks v. California State Lands Comm*. (2011) 202 Cal.App.4th 549, 577.

CERTIFICATION

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on September 20, 2023.

AYE:	Chair E. Joaquin Esquivel Vice Chair Dorene D'Adamo Board Member Sean Maguire Board Member Laurel Firestone Board Member Nichole Morgan
NAY:	None
ABSENT:	None
ABSTAIN:	None

Courtney Tyler
Clerk to the Board