

ENVIRONMENTAL PROTECTION AGENCY**40 CFR Part 131****[EPA-HQ-OW-2018-0056; FRL 6322-03-OW]****RIN 2040-AF79****Water Quality Standards; Establishment of a Numeric Criterion for Selenium for the State of California****AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Final rule.

SUMMARY: The Environmental Protection Agency (the EPA or the Agency) is amending a Federal Clean Water Act (CWA) rule, the California Toxics Rule, to promulgate a final, revised statewide chronic freshwater selenium water quality criterion applicable to certain California waters to protect aquatic life and aquatic-dependent wildlife from exposure to toxic levels of selenium. This revised criterion builds upon the science underlying the EPA's current national CWA section 304(a) recommended aquatic life freshwater criterion for selenium.

DATES: This rule is effective on January 16, 2025. The incorporation by reference of certain publications listed in the rule is approved by the Director of the **Federal Register** as of January 16, 2025.

ADDRESSES: The EPA has established a docket for this action under Docket ID No. EPA-HQ-OW-2018-0056. All documents in the docket are listed on the <https://www.regulations.gov> website. Although listed in the index, some information is not publicly available, e.g., confidential business information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available electronically through www.regulations.gov.

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I. General Information**A. Applicability**

Federal water quality standards (WQS) promulgated by the EPA in this rule will be the applicable WQS for certain waters in California for Clean Water Act (CWA) purposes after the effective date of this rule. Specifically, the chronic freshwater selenium criterion in the final rule will apply to California waters in a manner consistent with the California Toxics Rule (CTR) and the EPA's proposed rulemaking for this action (83 FR 64059, December 13, 2018). The freshwater and saltwater aquatic life criteria listed in the CTR apply as follows: (1) the freshwater criteria apply at salinities of 1 part per thousand and below at locations where this occurs 95% or more of the time; (2) saltwater criteria apply at salinities of 10 parts per thousand and above at locations where this occurs 95% or more of the time; and (3) the more stringent of the two apply at salinities between 1 and 10 parts per thousand. As a result, many estuarine waters will be covered by this rule.

WQS serve as the basis for CWA programs, such as National Pollutant Discharge Elimination System (NPDES) permitting and identifying impaired waters under CWA section 303(d). Categories and entities that could potentially be affected by this rule include the following:

Category	Examples of potentially affected entities
Industry	Industries discharging pollutants to certain waters of California.
Municipalities	Publicly owned treatment works or other facilities discharging pollutants to certain waters of California.
Stormwater Management Districts ..	Entities responsible for managing stormwater discharges to certain waters of California.
Agriculture	Agricultural entities discharging to certain waters of California.

This table is not exhaustive but, rather, it provides a guide that identifies entities that could be affected by this action. If you have questions regarding the effect of this action on a particular entity, please consult the person listed

in the **FOR FURTHER INFORMATION CONTACT** section.

B. The EPA's Development of the Final Rule

On November 29, 2018, the Administrator of the EPA signed a proposed rulemaking to establish a

selenium water quality criterion applicable to California that protects aquatic life and aquatic-dependent wildlife in certain waters of California. The proposal was published in the **Federal Register** at 83 FR 64059 on December 13, 2018. For the proposed rulemaking, the EPA provided a 60-day public comment period with a 45-day extension and held two public hearings on March 19 and March 20, 2019, to accept verbal public comments. By the end of the public comment period on March 28, 2019, the EPA received a total of 32 comments on a range of issues submitted by organizations and individuals to the docket for the rule and during the two public hearings.

For the final rule, the EPA carefully considered the public comments and feedback the Agency received on the proposed rulemaking. In relevant sections of the preamble below, the EPA provides brief summaries of certain comments. Some comments addressed issues beyond the scope of this rule. For all the comments the EPA received and the EPA's responses, see the EPA's Response to Comments document in the public docket for this rule: Docket ID No. EPA-HQ-OW-2018-0056.

II. Background

A. Statutory and Regulatory Authority

The CWA establishes the basic structure for regulating pollutant discharges from point sources into the waters of the United States. In the CWA, Congress established the national objective to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. The CWA also sets forth the interim goal of achieving water quality, wherever attainable, that provides for both: (1) the protection and propagation of fish, shellfish, and wildlife; and (2) recreation in and on the water (sections 101(a) and 101(a)(2)). 33 U.S.C. 1251(a), (a)(2). To help achieve these goals, the CWA created two complementary structures for regulating discharges in CWA section 402 NPDES permits: first, technology-based effluent limitations (TBELs) that set a floor for the performance for categories of regulated dischargers; and second, water quality-based effluent limitations (WQBELs) that are established where TBELs are insufficient to meet applicable WQS or site-specific water quality goals. See 33 U.S.C. 1342(a). TBELs in NPDES permits are derived from secondary treatment standards (for publicly owned treatment works), effluent limitations guidelines (CWA sections 301 and 304, 33 U.S.C. 1311 and 1314), new source performance standards (CWA section

306, 33 U.S.C. 1316) promulgated by the EPA, and/or established on a case-by-case basis under section 402(a)(1) of the Act (to the extent that EPA-promulgated effluent limitations are inapplicable). If TBELs are not sufficient to achieve the WQS in the receiving water, the CWA (section 301(b)(1)(c), 33 U.S.C. 1311(b)(1)(c)) and the EPA's NPDES regulation, 40 CFR 122.44(d), require that the permit writer develop more stringent WQBELs.

WQS are the foundation of the water quality-based pollution control programs required by the CWA. Such standards serve as a description of the desired water quality condition for particular waterbodies. In addition, WQS serve as the basis for several CWA programs, including:

- WQBELs in NPDES permits under section 402, 33 U.S.C. 1342;
- Waterbody assessments and establishment of total maximum daily loads (TMDLs) under section 303(d), 33 U.S.C. 1313(d);
- Certifications of Federal licenses and permits under section 401, 33 U.S.C., 1341.

CWA section 303(c) directs states to adopt WQS for their waters subject to the CWA. WQS consist of designated uses of the waters, water quality criteria to protect those uses, and an antidegradation policy to maintain water quality (CWA section 303(c)(2)(A) and (d)(4)(B)). The EPA's regulation at 40 CFR 131.11(a)(1) provides that "[s]uch criteria must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use [and] [f]or waters with multiple use designations, the criteria shall support the most sensitive use."

States are required to review applicable WQS at least once every three years and, if appropriate, revise or adopt new WQS (CWA section 303(c)(1) and 40 CFR 131.20). Any new or revised WQS must be submitted to the EPA for review and approval or disapproval (CWA section 303(c)(2)(A) and (c)(3) and 40 CFR 131.20 and 131.21). Under CWA section 303(c)(4)(B), the Administrator is authorized to determine that a new or revised standard is necessary to meet CWA requirements.

Under CWA section 304(a), the EPA is required to periodically publish national water quality criteria recommendations for states to consider when adopting water quality criteria for particular pollutants to meet the CWA section 101(a)(2) goals. In establishing numeric criteria, states should adopt water quality criteria based on the EPA's CWA section 304(a) criteria, section

304(a) criteria modified to reflect site-specific conditions, or other scientifically defensible methods (40 CFR 131.11(b)(1)). CWA section 303(c)(2)(B) requires states to adopt numeric criteria for all toxic pollutants listed pursuant to CWA section 307(a)(1) for which the EPA has published CWA section 304(a) criteria, where the presence or discharge of those pollutants could reasonably be expected to interfere with maintaining designated uses.

B. Applicable Selenium Criteria in California

The EPA has promulgated selenium water quality criteria for various waterbodies in California. First, in 1992, the EPA promulgated selenium criteria for certain California waters as part of the *Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants; States' Compliance* at 57 FR 60848, December 22, 1992, (hereafter referred to as the National Toxics Rule or NTR),¹ and then again in 2000, as part of the *Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California* at 65 FR 31681, May 18, 2000, (hereafter referred to as the California Toxics Rule or CTR).² In each case, the EPA promulgated the EPA's recommended aquatic life criteria values at the time. In addition to the NTR and CTR selenium criteria, California has also adopted site-specific acute and chronic selenium criteria (California uses the term "objectives" instead of criteria). The criteria that the EPA previously promulgated for California in the NTR,³ together with the criteria promulgated in the CTR and California's site-specific objectives, established WQS for priority toxic pollutants for inland surface waters and enclosed bays and estuaries in California.

For a full summary of the applicable selenium criteria covered by the NTR, the CTR, and California site-specific selenium objectives, please refer to the preamble of the EPA's proposed rulemaking for this action, sections II.B and II.C (83 FR 64059, December 13, 2018). For a discussion on the scope of

¹ The NTR is codified at 40 CFR 131.36. <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-131#131.36>.

² The CTR is codified at 40 CFR 131.38. <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-131/subpart-D/section-131.38>.

³ The CTR Criteria Table at 40 CFR 131.38(b)(1) includes all water quality criteria previously promulgated in the NTR, so that readers can find all Federally promulgated water quality criteria for California in one place. All criteria previously promulgated in the NTR are footnoted as such in the CTR.

California waters covered by this rule, please see section V. of this preamble.

C. California Toxics Rule and Endangered Species Act Consultation

As required by section 7 of the Endangered Species Act (ESA) (16 U.S.C. 1531 *et seq.*), the EPA consulted with the U.S. Fish and Wildlife Service (FWS) and the U.S. National Marine Fisheries Service (NMFS) (collectively, the Services) concerning the EPA's proposed and final CTR. The EPA initiated consultation with the Services in 1994. In March 2000, the Services issued a final Joint Biological Opinion. The final Joint Biological Opinion⁴ recorded commitments by the EPA to: (1) withhold promulgation of (*i.e.*, reserve) the EPA's proposed acute⁵ freshwater aquatic life criterion for selenium in the final CTR; (2) revise the national CWA section 304(a) recommended acute and chronic aquatic life criteria for selenium; and (3) later update the acute and chronic aquatic life criteria for California consistent with the revised national CWA section 304(a) recommendations. As a result, in the May 2000 CTR, the EPA finalized the chronic freshwater selenium criterion⁶ and the acute and chronic saltwater selenium criteria but did not finalize the acute freshwater selenium criterion.

D. Litigation

Section 303(c)(4)(B) of the CWA gives the EPA Administrator authority to promulgate water quality standards for a state where necessary to meet the requirements of CWA section 303. The EPA made an Administrator's determination under section 303(c)(4)(B) of the CWA, included in the 1997 proposed⁷ and 2000 final CTR, that numeric criteria are necessary in California to meet the requirements of section 303(c)(2)(B) to protect the State's

designated uses.⁸ In 2013, two organizations filed a complaint against the EPA in the United States District Court for the Northern District of California. The complaint was based in part on the fact that the EPA had previously determined, in the CTR, that selenium criteria were necessary to implement section 303(c)(2)(B) of the CWA (62 FR 42160, August 5, 1997) and the work to update the reserved freshwater acute selenium criterion from the 2000 CTR had not yet been completed. In 2014, the EPA entered into a consent decree to resolve these claims (*Our Children's Earth Foundation and Ecological Rights Foundation v. U.S. Environmental Protection Agency, et al.*, 13-cv-2857 (N.D. Cal, August 22, 2014)).

Under the terms of the consent decree, the EPA committed to proposing selenium criteria for California fresh waters covered by the original CTR to protect aquatic life and aquatic-dependent wildlife by November 30, 2018. On November 29, 2018, the EPA satisfied this commitment when the Administrator of the EPA signed the proposed rulemaking to establish a selenium water quality criterion applicable to California that protects aquatic life and aquatic-dependent wildlife in certain waters of California. The consent decree also required that the EPA request to initiation of any necessary ESA section 7(a)(2) consultation with the Services on the proposed selenium criteria no later than nine months after the date the EPA proposed the criteria. The EPA satisfied this commitment by initiating ESA consultation with the Services on the proposed selenium criterion on August 12, 2019.

Further, under the consent decree, the EPA is required to finalize its proposed selenium criteria within six months of the later of the following: (1) the date of the EPA's conclusion (if any) that it will not seek ESA section 7(a)(2) consultation because some or all of the proposed selenium criteria have "no effect" on any listed ESA species or designated critical habitat; or (3) the date of written concurrence from the Services with any EPA conclusion that some or all of the proposed selenium criteria are "not likely to adversely affect" listed ESA species or designated critical habitat; or (3) the date of the Services' Biological Opinion(s) concluding any formal consultation on the proposed selenium criteria.

E. Selenium and Sources of Selenium

Selenium is a naturally occurring, but relatively rare, element present in sedimentary rocks and soils. It is also present in the atmosphere as methyl derivatives of selenium. There are around 40 known selenium-containing minerals, some of which can have as much as 30% selenium, but all are rare and generally occur together with sulfides of metals such as copper, zinc, and lead.⁹ The distribution of organic-enriched sedimentary rocks, black shales, petroleum source rocks, ore deposits, phosphorites, and coals, in which selenium typically co-occurs, is well characterized in the United States.¹⁰ Two major anthropogenic (*i.e.*, human-caused) activities can cause selenium to become mobilized and introduced into aquatic systems. The first is extracting metals, minerals, and fossil fuels; the second is irrigation of selenium-rich soils. Once inorganic selenium is converted into a bioavailable form (*i.e.*, a form that can be absorbed into the body following skin contact, ingestion, or inhalation), it enters the food chain and can bioaccumulate (*i.e.*, can be taken up and retained by an aquatic organism from any surrounding media, *e.g.*, water, food, sediment).

Elevated selenium levels above what is nutritionally required in fish and other wildlife inhibit normal growth and reduce reproductive success through effects that lower embryo survival, most notably teratogenesis (*i.e.*, embryo/larval deformities) (see *2021 Revision to: Final Aquatic Life Ambient Water Quality Criteria for Selenium—Freshwater 2016*, US EPA, Office of Water, EPA 822-R-21-006, August 2021). The deformities associated with exposures to elevated selenium in fish may include skeletal, craniofacial, and fin deformities, and various forms of edema that result in mortality. Elevated selenium exposure in birds can reduce reproductive success including decreased fertility, reduced egg hatchability (embryo mortality), and increased incidence of deformities in embryos.

Scientific studies¹¹ indicate that selenium toxicity to aquatic life and

⁴ Final Joint Biological Opinion dated March 24, 2000, from the National Marine Fisheries Service, Long Beach, California, and the U.S. Fish and Wildlife Service, Sacramento, California, concerning EPA's final rule for the Promulgation of Water Quality Standards: Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California (CTR).

⁵ The proposed freshwater acute selenium criterion in the CTR was as follows: The CMC = $1 / [(f1/CMC1) + (f2/CMC2)]$ where f1 and f2 are the fractions of total selenium that are treated as selenite and selenate respectively, and $f1 + f2 = 1$. CMC1 and CMC2 are the CMCs for selenite and selenate, respectively, or 185.9 µg/L and 12.83 µg/L, respectively. This criterion was in the total recoverable form. CMC is the continuous maximum concentration.

⁶ The final chronic criterion was based on the EPA's 1987 national CWA section 304(a) recommended criterion.

⁷ Proposed California Toxics Rule, 62 FR 42160 (August 5, 1997).

⁸ See the CTR preamble at section E.1., "EPA is using section 303(c)(4)(B) as the legal basis for today's final rule." 65 FR 31687 (May 18, 2000).

⁹ Emsley, John. October 2011. *Nature's Building Blocks: An A-Z Guide to the Elements*, 2nd Edition.

¹⁰ Presser TS, Piper DZ, Bird KJ, Skorupa JP, Hamilton SJ, Detwiler SJ, Huebner MA. 2004. *The Phosphoria Formation: a model for forecasting global selenium sources to the environment*. In: JR Hein, editor. *Life cycle of the phosphoria formation: From deposition to post-mining environment*. New York (NY): Elsevier. P 299–319. See Figures 1 and 2.

¹¹ Scientific studies used in the development of this rulemaking can be found in this rule's docket,

aquatic-dependent wildlife is driven by diet (*i.e.*, the consumption of selenium-contaminated prey) rather than by direct exposure to dissolved selenium in the water column. Unlike other bioaccumulative contaminants, such as mercury, the single largest step in selenium accumulation in aquatic environments occurs at the base of the food web when algae and other particulate material take up selenium from water. The vulnerability of a species to selenium toxicity is determined by a number of factors, in addition to the amount of contaminated prey consumed. Those factors include a species' sensitivity to selenium, its population status, and the duration, timing, and life stage of exposure. In addition, the hydrologic conditions and water chemistry of a waterbody affect bioaccumulation; in general, slow-moving, calm waters or lentic waters enhance the production of bioavailable forms of selenium (selenite), while faster-moving waters or lotic waters limit selenium uptake by aquatic life and aquatic-dependent wildlife given the rapid movement and predominant form of selenium (selenate). The EPA considered these and other factors in determining the selenium criterion for California.

III. Final Freshwater Chronic Selenium Criterion

A. The EPA's Approach

In 2016, the EPA published a revised national CWA section 304(a) recommended chronic freshwater aquatic life criterion for selenium to better account for bioaccumulation through the food chain in different ecosystems, and published an erratum in 2021, *2021 Revision to: Final Aquatic Life Ambient Water Quality Criterion for Selenium—Freshwater 2016*, US EPA, Office of Water, EPA 822-R-21-006, August 2021.¹² For purposes of clarity in this preamble, all subsequent references to the EPA's current national CWA section 304(a) recommended

chronic freshwater criterion for selenium refers to its 2021 published version. The recommended chronic freshwater criterion is comprised of four criterion elements, two of which are fish tissue concentrations and two of which are water column concentrations. The recommended elements are: (1) a fish egg-ovary element of 15.1 milligram per kilogram (mg/kg) dry weight; (2) a fish whole-body element of 8.5 mg/kg dry weight or a muscle element of 11.3 mg/kg dry weight; (3) a water column element of 3.1 µg/L in lotic aquatic systems and 1.5 µg/L in lentic aquatic systems; and (4) a water column intermittent exposure element derived from the chronic water column element to account for potential chronic effects from short-term exposures (one value for lentic and one value for lotic aquatic systems).

As stated previously, on November 29, 2018, the EPA Administrator signed the proposed rulemaking to establish a selenium water quality criterion that protects aquatic life and aquatic-dependent wildlife in certain fresh waters of California. The EPA proposed its recommended 2016 CWA section 304(a) selenium criterion for freshwater with two modifications to the criterion. First, the EPA proposed adding a bird tissue criterion element derived to protect aquatic-dependent wildlife to the EPA's national CWA section 304(a) selenium criterion. Second, the EPA proposed replacing the EPA's national CWA section 304(a) selenium monthly average exposure water column (lentic or lotic) criterion element (referred to as the default water column criterion element) with a performance-based approach (PBA) for translating a tissue criterion element into a corresponding water column criterion element on a site-specific basis and took comment on whether to keep the default water column criterion element, in addition to the PBA, in the final rule.

In this rule, the EPA considered the methodology and information used to

derive the current national CWA section 304(a) recommended selenium criterion, additional information specific to aquatic-dependent wildlife in California, and the public comments and feedback the EPA received on the proposed rulemaking in order to ensure broad protection for both aquatic and aquatic-dependent species. The final freshwater chronic selenium criterion for certain waters in California adds a bird tissue criterion element to the national CWA section 304(a) selenium criterion, consistent with the proposed rulemaking, in addition to the PBA. The EPA also included the default water column criterion element from the EPA's national CWA section 304(a) selenium criterion, in addition to the PBA in the final rule. The PBA will allow the State to develop a site-specific water column element to be used instead of the default water column criterion element. For a further discussion of the EPA's final chronic freshwater selenium criterion and what the EPA considered in finalizing this rule, see section III.C of this preamble and also refer to the EPA's Response to Comments document in the public docket for this rule.

As mentioned previously, the chronic freshwater selenium criterion in this final rule will apply to California waters in a manner consistent with the CTR and the EPA's proposed rulemaking for this action (83 FR 64059, December 13, 2018).

The promulgated criterion establishes levels of selenium that protect California's aquatic life and aquatic-dependent wildlife designated uses (California uses the term "beneficial uses" instead of designated uses) for certain waters of California consistent with California's implementation of the CTR. California's applicable designated (beneficial) uses for the protection of aquatic life and aquatic-dependent wildlife are listed in table 1 of this preamble.

TABLE 1—APPLICABLE DESIGNATED (BENEFICIAL) USES FOR CALIFORNIA¹³

Use	Abbreviation	Definition
Warm Freshwater Habitat	WARM	Uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
Cold Freshwater Habitat	COLD	Uses of water that support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
Migration of Aquatic Organisms	MIGR	Uses of water that support habitats necessary for migration or other temporary activities by aquatic organisms, such as anadromous fish.

as well as dockets EPA-HQ-OW-2004-0019 and EPA-HQ-OW-2015-0392.

¹² In 2021, the EPA identified that the following text was missing from the second sentence in

footnote 4 in the selenium criterion table: "When selenium inputs are increasing" and issued an erratum. The EPA corrected footnote 4 to state: "4. Water column values are based on dissolved total selenium in water and are derived from fish tissue

values via bioaccumulation modeling. When selenium inputs are increasing, water column values are the applicable criterion element in the absence of steady-state condition fish tissue data."

TABLE 1—APPLICABLE DESIGNATED (BENEFICIAL) USES FOR CALIFORNIA ¹³—Continued

Use	Abbreviation	Definition
Spawning, Reproduction, and/or Early Development.	SPWN	Uses of water that support high quality aquatic habitats suitable for reproduction and early development of fish.
Estuarine Habitat	EST	Uses of water that support estuarine ecosystems including, but not limited to, preservation or enhancement of estuarine habitats, vegetation, fish, shellfish, or wildlife (e.g., estuarine mammals, waterfowl, shorebirds).
Wildlife Habitat	WILD	Uses of water that support terrestrial ecosystems including, but not limited to, preservation or enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.
Rare, Threatened, or Endangered Species.	RARE	Uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or Federal law as rare, threatened or endangered.

B. Administrator's Determination of Necessity

As previously noted, in the 1997 proposed and 2000 final CTR, the EPA Administrator determined under CWA section 303(c)(4)(B) that selenium criteria were necessary in California. In the 1997 proposed CTR, the EPA proposed both acute and chronic freshwater selenium criteria. In the 2000 final CTR, the EPA promulgated a chronic freshwater selenium criterion; withheld promulgation of (*i.e.*, reserved) an acute freshwater selenium criterion; and committed to revising the national CWA section 304(a) recommended acute and chronic aquatic life criteria for selenium and later updating the acute and chronic aquatic life criteria for California consistent with the revised national CWA section 304(a) recommendations. The Services incorporated the EPA's commitments as Terms and Conditions in the final Joint Biological Opinion for the CTR.

In November 2018, the EPA proposed a revised chronic selenium criterion based on the EPA's current national CWA section 304(a) recommended criterion for selenium, which only includes a chronic criterion. The EPA's current national CWA section 304(a) recommendation does not include a separate acute criterion because selenium is bioaccumulative and toxicity primarily occurs through dietary exposure. Although selenium may cause acute toxicity at high concentrations, the most harmful effect on aquatic organisms is due to its bioaccumulative properties; these chronic effects occur at lower concentrations of selenium in aquatic organisms than acute effects. In addition, as discussed further in section III.C of this preamble, application of the

intermittent exposure criterion element (that the EPA is promulgating as part of the chronic criterion) to single day, high exposure events will provide protection from the most important selenium toxicity effect, reproductive toxicity, by protecting against selenium bioaccumulation in the aquatic ecosystem resulting from short-term, high exposure events. Since the time of the EPA's proposed rulemaking in November 2018, the EPA is not aware of any significant scientific updates to alter the scientific basis underlying the EPA's current national CWA section 304(a) recommended freshwater chronic selenium criterion. As a result, the EPA is not including a separate freshwater acute selenium criterion.

Accordingly, promulgation of the freshwater chronic selenium criterion in this rule completes the EPA's action pursuant to the Administrator's Determination as it pertains to selenium criteria, as provided in the 1997 and 2000 preambles to the CTR.

In addition, this promulgation satisfies the Services' Term and Condition included in the final Joint Biological Opinion for the CTR to update the selenium criterion for California consistent with the current national CWA section 304(a) recommendations (see section II.C. of this preamble). For more information about the ESA consultation completed for this final rule, see section IV. of this preamble.

C. Final Chronic Selenium Criterion for California's Fresh Waters

In this final rule, the EPA is promulgating its current national CWA section 304(a) recommended chronic selenium criterion for certain fresh waters in California (including the default water column criterion element), with the addition of a bird tissue criterion element and a performance-based approach (PBA) ¹⁴ for translating

a tissue criterion element into a corresponding water column criterion element on a site-specific basis. In its proposed rulemaking, the EPA solicited comment on whether to replace the default water column criterion element from the Agency's 2016 CWA section 304(a) selenium criterion with the PBA, replace the PBA with the default water column criterion element from the Agency's 2016 CWA section 304(a) selenium criterion, or include both. As discussed further in this section and in the EPA's Response to Comments document in the public docket for this rule, the EPA is including both the default water column criterion element and the PBA in its promulgation of the chronic criterion; a site-specific water column value developed using the PBA may be used in place of the default (lentic or lotic) water column criterion element.

The final freshwater chronic selenium criterion for California is depicted in table 2 of this preamble.

In the proposed rulemaking, the EPA solicited comment on two potential criteria structures: (1) one criterion that protects both the applicable aquatic life and aquatic-dependent wildlife designated uses; and (2) two separate criteria with one intended to protect the applicable aquatic life designated uses and one intended to protect the applicable aquatic-dependent wildlife designated uses. Most commenters requested that the EPA keep the proposed option of one criterion.

criticism derivation methodology, with associated implementation procedures) rather than a specific outcome (*e.g.*, numeric criterion or concentration of a pollutant) in its water quality standards regulation. In instances where the EPA promulgates a water quality standard (including a performance-based approach) for a state or authorized Tribe, the EPA is held to the same policies, procedures, analyses, and public participation requirements for that water quality standard as the state or authorized Tribe. See 40 CFR 131.22(c). The concept of a *performance-based approach* was first described in the **Federal Register** document *EPA Review and Approval of State and Tribal Water Quality Standards—Final Rule* (65 FR 24641–24653; April 27, 2000).

¹³ Refer to document titled "Applicable Designated (Beneficial) Uses for California," in the docket associated with this rulemaking, to find designated uses captured in the California Regional Water Quality Control Boards' Water Quality Control Plans (*i.e.*, Regional Boards' Basin Plans).

¹⁴ A *performance-based approach* relies on the state or authorized Tribe adopting a process (*i.e.*, a

After considering comments, the EPA is finalizing the rule as proposed, meaning that one criterion (with multiple criterion elements as shown in table 2 of this preamble) will be used to protect both aquatic life and aquatic-dependent wildlife designated uses in the waters covered by this rule. The one criterion consists of the following criterion elements: fish egg-ovary tissue, fish muscle or whole-body tissue, bird egg tissue, default water column (lentic and lotic), intermittent exposure water column, and a PBA for translating the tissue criterion elements into corresponding water column criterion elements on a site-specific basis.

The tissue criterion elements consist of (1) a fish egg-ovary criterion element of 15.1 mg/kg dry weight, (2) a fish whole-body criterion element of 8.5 mg/kg dry weight or a fish muscle criterion element of 11.3 mg/kg dry weight, and (3) a bird egg criterion element of 11.2 mg/kg dry weight. The fish egg-ovary tissue (from which all other fish tissue elements were derived) and bird egg tissue criterion elements were developed to protect aquatic and aquatic-dependent wildlife populations from impacts caused by selenium: they reflect biological uptake of selenium through diet, which is the predominant pathway for selenium toxicity, and are most predictive of the observed biological endpoint of concern, reproductive toxicity.

The water column criterion elements consist of (1) the default water column

criterion element for lentic waters, 1.5 µg/L, or for lotic waters, 3.1 µg/L and (2) the intermittent exposure water column criterion element. In addition to the default water column criterion element, EPA is also promulgating the PBA *Method for Translating Selenium Tissue Criterion Elements into Site-specific Water Column Criterion Elements for California, Version 2, December 2024*, which is available in the docket for this rulemaking and incorporated by reference as part of this rule.

The chronic selenium criterion applies to the entire aquatic community, including aquatic-dependent wildlife. Based on the analysis in the accompanying Technical Support Document (TSD) to this rule (*FINAL Aquatic Life and Aquatic-Dependent Wildlife Selenium Water Quality Criterion for Freshwaters of California (December 2024)*) and the EPA's previous work (*2021 Revision to: Final Aquatic Life Ambient Water Quality Criterion for Selenium—Freshwater 2016*, US EPA, Office of Water, EPA 822-R-21-006, August 2021), as well as currently available data, fish and birds are considered the most sensitive aquatic and aquatic-dependent taxa to selenium effects, respectively.

The available data indicate that applying the criterion in table 2 of this preamble would protect aquatic life and aquatic-dependent wildlife from the toxic effects of selenium, recognizing that the bird tissue criterion element is independently applicable from and

equivalent to the fish tissue criterion elements; the fish egg-ovary criterion element supersedes all other fish tissue elements; the fish tissue criterion elements (egg-ovary, whole-body, and/or muscle) supersede water column criterion elements for aquatic life when fish tissue is measured; and the bird tissue criterion element supersedes water column criterion elements for aquatic-dependent wildlife when bird egg tissue is measured. This hierarchy reflects the fact that fish and bird tissue concentrations provide the most robust and direct information on potential selenium effects in fish and birds. See section III.D Implementation of the Final Chronic Selenium Criterion in California of this preamble for the discussion regarding implementation of the final chronic selenium criterion and one exception to the hierarchy described above when selenium inputs are increasing.

The EPA is promulgating the following chronic criterion in new paragraph (b)(1)(i) of 40 CFR 131.38. The EPA is also making revisions to footnote q in the criteria table in paragraph (b)(1) and clarifying edits regarding the applicability of this criterion in paragraphs (c)(3)(ii) and (iii). The EPA is not amending or revising the contents of the table in (b)(1) and language in 40 CFR 131.38, except as specified in the preceding two sentences.

Table 2: California Freshwater Selenium Ambient Chronic Water Quality Criterion for Protection of Aquatic Life and Aquatic-Dependent Wildlife

Media Type	Bird Tissue	Fish Tissue ¹		Water Column ⁴	
Criterion Element	Bird Egg ²	Egg-Ovary ²	Fish Whole-Body or Muscle ³	Monthly Average Exposure ⁵	Intermittent Exposure ⁶
Magnitude	11.2 mg/kg dw	15.1 mg/kg dw	8.5 mg/kg dw whole-body or 11.3 mg/kg dw muscle (skinless, boneless filet)	1.5 µg/L in lentic aquatic systems 3.1 µg/L in lotic aquatic systems	$WQC_{int} = \frac{WQC_{30-day} - C_{bkgrnd}(1 - f_{int})}{f_{int}}$
Duration	Instantaneous measurement ⁷	Instantaneous measurement ⁷	Instantaneous measurement ⁷	30 days	Number of days/month with an elevated concentration
Frequency	Not to be exceeded	Not to be exceeded	Not to be exceeded	Not more than once in three years on average	Not more than once in three years on average

1. Fish tissue criterion elements are expressed as steady-state.
2. Fish egg-ovary supersedes any whole-body, muscle, or water column criterion elements for aquatic life when fish egg-ovary are measured, except as noted in footnote 4. Bird egg supersedes water column criterion elements for aquatic-dependent wildlife when bird eggs are measured, except as noted in footnote 4. The bird tissue criterion element is independently applicable from and equivalent to the fish tissue criterion elements.
3. Fish whole-body or muscle tissue supersedes the water column criterion elements when both fish tissue and water concentrations are measured, except as noted in footnote 4.
4. Water column criterion elements are based on dissolved total selenium in water and are derived from fish tissue and bird tissue criterion elements via bioaccumulation modeling. When selenium inputs are increasing, water column criterion elements are the applicable criterion elements in the absence of steady-state condition fish tissue or bird tissue data.
5. The water column criterion element, which applies independently to the respective aquatic life and aquatic-dependent wildlife uses, is applicable for all CWA purposes and consists of a water column value of 1.5 µg/L in lentic aquatic systems and 3.1 µg/L in lotic aquatic systems unless or until a site-specific water column criterion element is derived for a particular waterbody following the methodology described in *Method for Translating Selenium Tissue Criterion Elements into Site-specific Water Column Criterion Elements for California, Version 2, December 2024*. This publication is incorporated by reference into this section with the approval of the Director of the *Federal Register* under 5 U.S.C. 552(a) and 1 CFR part 51. All approved material is available at EPA, OW Docket, EPA West, Room 3334, 1301 Constitution Ave., NW, Washington, DC, 20004; phone: (202) 566-2426; website: <https://www.epa.gov/wqs-tech/water-quality-standards-establishment-numeric-criterion-selenium-fresh-waters-california>. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit www.archives.gov/federal-register/cfr/ibr-locations or email fr.inspection@nara.gov.
6. Where WQC_{30-day} is the applicable water column monthly criterion element, C_{bkgrnd} is the average background selenium concentration, and f_{int} is the fraction of any 30-day period during which elevated selenium concentrations occur, with f_{int} assigned a value ≥ 0.033 (corresponding to 1 day).
7. Fish tissue and bird tissue data provide instantaneous point measurements that reflect integrative accumulation of selenium over time and space in bird or fish population(s) at a given site.

Performance-Based Approach (PBA) for Translating Tissue Criterion Elements to Site-Specific Water Column Criterion Elements

As part of the criterion depicted in table 2 of this preamble, the EPA is incorporating by reference the PBA, *Method for Translating Selenium Tissue Criterion Elements into Site-specific Water Column Criterion Elements for California, Version 2, December 2024*. The PBA is a methodology that the State may use to translate the bird and fish tissue criterion elements into water column criterion elements on a site-specific basis.

If the State chooses to use the PBA, the State will coordinate with the EPA at the beginning of the process. The PBA is itself incorporated by reference into this rule and thus is part of the applicable WQS that the EPA is promulgating. As such, California is not required to adopt and submit the outcomes that result from using the PBA (*i.e.*, water column criterion elements for site-specific waterbodies) to the EPA for CWA section 303(c) review. In this rule, the EPA is promulgating the PBA as a scientifically defensible methodology that is sufficiently detailed and has suitable safeguards to ensure predictable, repeatable outcomes that will protect California's applicable beneficial uses. If California chooses to use the PBA for a particular site, each resulting site-specific water column criterion element would be applicable for CWA purposes, without the need for separate EPA approval under CWA section 303(c).

The PBA provides two methodologies for deriving a site-specific water column criterion element: (1) the mechanistic modeling approach; and (2) the empirical bioaccumulation factor (BAF) approach:

(1) The mechanistic modeling approach uses scientific knowledge of the physical and chemical processes underlying bioaccumulation to establish a relationship between the concentrations of selenium in the water column and the concentration of selenium in the tissue of aquatic and aquatic-dependent organisms. This approach enables formulation of site-specific models of trophic transfer of selenium through aquatic food webs and translation of the tissue elements into an equivalent site-specific water column element. It is also the approach the EPA used to develop the national CWA section 304(a) recommended selenium water column criterion elements.

(2) The empirical BAF approach establishes a site-specific relationship between water column selenium

concentrations and fish or bird tissue selenium concentrations by measuring both directly and using the relationship between the concentrations to determine a site-specific water column criterion element.

As stated in footnote 5 of criterion, the default water column criterion element, consisting of a water column value of 1.5 µg/L dissolved total selenium in lentic aquatic systems and 3.1 µg/L dissolved total selenium in lotic aquatic systems, applies for all CWA purposes according to the hierarchy of the criterion, unless a site-specific water column criterion element is derived following the PBA.

If California decides to use the PBA to translate the applicable fish tissue or bird tissue criterion elements into site-specific water column criterion elements, those translated values would be applicable for, and protective of, the use for which the translation was completed. For example, if California used the PBA to translate the fish tissue criterion element into a water column criterion element, that water column criterion element would protect aquatic life; if California used the PBA to translate the bird tissue criterion element into a water column criterion element, that water column criterion element would protect aquatic-dependent wildlife.

The EPA looks forward to coordinating and working with the State to ensure consistency with the PBA methodology before implementation in other CWA programs. Importantly, for public transparency, the EPA recommends California maintain a list of the resulting site-specific water column criterion elements. The EPA also recommends that California make its analyses and the underlying data used for each site-specific water column derivation available on a publicly accessible State website.

As with other criteria, the State maintains discretion to adopt new or revised site-specific criteria and submit them to the EPA in accordance with CWA section 303(c) and EPA's implementing regulations at 40 CFR part 131. This could arise in the context of an entirely different criterion, an alternative water column criterion element, or an alternative tissue to water column derivation methodology. Please refer to section VI, Conditions When Federal Standards Would Be Withdrawn of this preamble for a discussion regarding the applicability of California-adopted, EPA-approved WQS in light of this Federal promulgation.

If the State chooses not to follow the PBA as prescribed, the State would need to adopt and submit site-specific water

column criterion elements to the EPA for CWA section 303(c) review and approval in accordance with the procedures at 40 CFR part 131 in order to rely on them as applicable WQS for other CWA programs such as the TMDL and NPDES permitting programs. This is because the new value would not derive from or comply with applicable WQS (see 40 CFR 122.44(d)).¹⁵

In the proposed rulemaking, the EPA took comment on whether the national CWA section 304(a) recommended water column criterion element (lentic and lotic) should be included as a default, in addition to or in place of the PBA, in the final selenium criterion. Most commenters supported including the PBA in the final rule, and some requested that the default water column criterion element not be included in the final rule. However, several comments highlighted implementation concerns, such as gaps in protection before the PBA can be used to develop site-specific water column criterion elements, anticipated burdens on industry to rely on the PBA to derive site-specific water column criterion elements, and new discharger considerations that could be mitigated by including the default water column criterion element, in addition to the PBA.

In consideration of these public comments and to maintain consistency with the EPA's latest scientific recommendation to ensure protection of aquatic life and aquatic-dependent wildlife from exposure to toxic levels of selenium, as articulated in the EPA's current national CWA section 304(a) recommended freshwater aquatic life criterion for selenium and the TSD accompanying this final rule, the EPA decided to include the default water column criterion element as part of the California selenium criterion for the final rule, in addition to the PBA. This will ensure protection from excessive selenium in certain waters in California when tissue data are unavailable. Specifically, water column data and criterion elements can be applied for CWA implementation purposes when tissue data are unavailable. When all of the criterion elements are applied together, the tissue and water column criterion elements protect aquatic life and aquatic-dependent wildlife from the chronic effects of exposure to selenium in waterbodies. This will also help ensure that California is able to implement the Federally promulgated selenium criterion as soon as it is effective under the CWA.

The EPA also specifically solicited comment on whether it would be

¹⁵ 82 FR 25628, April 27, 2000.

appropriate to include a method for a larger scale (e.g., ecoregional or state-wide) water column translation from fish or bird egg tissue in the PBA, and if so, what methods are available and appropriate for this large-scale translation. Most commenters agreed that a larger-scale translation method was not appropriate, finding the PBA was more appropriate and scientifically defensible on a waterbody site-specific scale, given the highly localized conditions that affect selenium bioaccumulation. After taking into consideration all comments, EPA decided to keep the allowable application of the PBA limited to an individual waterbody or waterbody segment. Developing a water column translation for a larger geographic area involves additional considerations that are not included in the PBA. These additional considerations are likely unique to the geographic area and would be better addressed through an individual site-specific criteria process by the State. California retains the ability to develop a site-specific criterion for a larger site, such as a watershed or ecoregion. Any such state-adopted, site-specific criterion must be submitted to the EPA for review and approval pursuant to CWA section 303(c) and the EPA's implementing regulations at 40 CFR part 131 to be effective for CWA purposes.

The EPA intends for the PBA to be severable from the remainder of the final selenium criterion in this rule. As explained above, the EPA has chosen to promulgate the PBA as part of the criterion, providing one means for the State to translate the bird and fish tissue criterion elements into water column criterion elements on a site-specific basis. The EPA included the PBA in this final rule to provide an efficient means to account for site-specific information to inform the applicable water column criterion element. The removal of the PBA would not change how the overall rule functions. The final selenium criterion protects aquatic life and aquatic-dependent wildlife through the applicable tissue and water column criterion elements for all the specified waters in California. In contrast, as discussed above, California's use of the PBA in the final rule is optional and not mandatory. As such, the tissue and water column criterion elements apply independently of the PBA and function separately to meet the requirements of CWA section 303(c). In the absence of the PBA, the other criterion elements of the final selenium criterion will still protect the designated uses for aquatic life and aquatic-dependent wildlife in

accordance with CWA section 303(c) and the EPA's implementing regulations. In other words, the final selenium criterion, with the criterion elements absent the PBA, still functions as the applicable criterion to protect the designated uses. Further, California could pursue other options in lieu of using the PBA to adopt site-specific selenium criteria. For example, as with other criteria, the State maintains discretion to adopt new or revised site-specific criteria and submit them to the EPA in accordance with CWA section 303(c) and the EPA's implementing regulations at 40 CFR part 131. Accordingly, the EPA intends this portion of the rule to be severable from the remainder of the rule.

Intermittent Exposure Criterion Element

Although selenium may cause acute toxicity at high concentrations (i.e., toxicity from a brief but highly elevated concentration of selenium in the water), chronic dietary exposure poses the highest risk to aquatic life and aquatic-dependent wildlife. Chronic toxicity occurs primarily through maternal transfer of selenium to eggs and causes subsequent reproductive effects, such as larval and embryo structural deformity, edema, and mortality. Because chronic effects of selenium are observed at lower concentrations than acute effects, the chronic criterion is expected to protect aquatic and aquatic-dependent communities from any potential acute effects of selenium. However, some high concentration, short-term exposures could be detrimental by causing significant long-term, residual, bioaccumulative effects (i.e., by the introduction of elevated selenium load into the system). Therefore, the EPA is also promulgating the intermittent exposure criterion element within the chronic criterion to prevent long-term detrimental effects from these high concentration, short-term exposures.

The EPA's intermittent exposure criterion element is derived mathematically from either the default water column criterion element or the performance-based, site-specific monthly water column criterion element, using the equation shown in Table 2 of this preamble. The equation expresses the intermittent exposure water column criterion element in terms of the 30-day default water column criterion element, as appropriate, while accounting for the fraction in days of any 30-day period the intermittent spikes occur and for the background concentration occurring during the remaining time. The intermittent exposure criterion element calculation is consistent with the EPA's current

national CWA section 304(a) recommended chronic freshwater aquatic life criterion for selenium. It is meant to be used in situations where a noncontinuous discharge containing selenium is present in the waterbody of interest.

D. Implementation of the Final Chronic Selenium Criterion in California

Identification of Impaired Waters and TMDL Development

WQS provide the basis for identifying impaired waters (waters not attaining the applicable WQS) and developing TMDLs pursuant to CWA section 303(d). With the promulgation of this multi-element criterion, all criterion elements will be available for assessment purposes. If multiple types of data are collected at a site, they will be used for implementation purposes according to the hierarchical structure of the selenium criterion. For purposes of assessing attainment of the WQS based on the criterion and as mentioned in section III.C of this preamble, the bird tissue criterion element is independently applicable from the fish tissue criterion elements. Specifically, if the bird tissue criterion element is exceeded, the criterion is not being attained for the applicable aquatic-dependent wildlife designated uses, and if the fish tissue criterion element is exceeded (using the hierarchy for fish tissue), the criterion is not being attained for the applicable aquatic life designated uses. For aquatic-dependent wildlife, the bird egg tissue element supersedes the water column elements if both are measured. For aquatic life, the fish egg-ovary tissue criterion element supersedes the muscle or whole-body criterion elements and all fish tissue criterion elements supersede water column criterion elements. However, there is one exception to this hierarchy. When selenium is increasing due to new inputs, footnote 4 of the criterion specifies that the water column criterion elements must be used when steady-state fish or bird tissue data are not available for each respective use, as discussed further below. Also, the default water column criterion element applies for CWA purposes for each respective designated use unless site-specific water column criterion elements are derived following the methodology described in the PBA, or site-specific water column criterion elements that do not follow the methodology prescribed by the PBA are adopted by California and approved by the EPA pursuant to CWA section 303(c) and the EPA's implementing regulations.

Selenium concentrations in fish and bird tissue are primarily a result of selenium bioaccumulation via dietary exposure. In both the EPA's current national CWA section 304(a) recommended aquatic life criterion for selenium and this California selenium rulemaking, steady-state refers to conditions where sufficient time has passed after the introduction of a new or increased input of selenium into a waterbody or watershed of a waterbody such that fish tissue concentrations of selenium are no longer increasing in the long-term average or multi-year average. For a tissue measurement to be meaningful, the water from which the sample is taken should not be experiencing or have recently experienced new inputs of selenium. When there are new selenium inputs to a waterbody, fish tissue data and bird tissue data may not fully represent the potential effects on the aquatic ecosystem, making the use of the water column criterion elements more appropriate to protect the entire aquatic ecosystem. New inputs are defined as new anthropogenic activities resulting in the release of selenium into a lentic or lotic aquatic system.¹⁶ These "new inputs" are both new and increased inputs of selenium and are referring to the release of a substantial amount of additional selenium from either anthropogenic point or nonpoint sources into a waterbody or watershed. New inputs do not refer to seasonal variability of selenium that occurs naturally within a system (e.g., spring run-off events or precipitation-driven pulses) or *de minimis* inputs to a watershed or waterbody.¹⁷

The water column criterion elements take precedence over the fish tissue criterion elements and the bird egg tissue criterion element until tissue data have returned to a steady-state condition after a new input of selenium. In the interim, in systems with new inputs, the EPA recommends California sample tissue and water and use site-specific data to gain a better understanding of the selenium bioaccumulation dynamics in a receiving water and to determine if and

when steady-state conditions have been reached.

California has flexibility to determine how to evaluate individual and composite samples for each taxon. Tissue data provide instantaneous point measurements that reflect integrative accumulation of selenium over time and space in fish or birds at a given site. This final selenium criterion provides California with flexibility in how the State can interpret a discrete bird egg or fish tissue sample to represent a given species' population at a site. Generally, fish and bird egg tissue samples collected to calculate average tissue concentrations (often in composites) for a species at a site are collected during one sampling event, or over a short interval due to logistical constraints and the cost for obtaining samples. The State should clearly describe its decision-making process in its assessment methodology.

NPDES Permitting

Under the CWA, WQS are used to derive WQBELs in NPDES permits for point source discharges, thereby limiting the amount of pollutants that may be discharged into a waterbody to attain and maintain its designated uses. The EPA is promulgating the default water column criterion element and the option for California to use the PBA to translate tissue criterion elements into site-specific water column criterion elements, which can be used to facilitate implementation, e.g., NPDES permitting. However, these water column criterion elements would not prevent California from also using the tissue criterion elements for monitoring and regulating pollutant discharges where appropriate.

As with assessments, all criterion elements are available for NPDES permitting. When multiple data types are available for making permitting decisions, the hierarchy of the criterion will determine which data type will take precedence. In addition, as described above, when selenium is increasing due to new inputs, footnote 4 of the criterion specifies that the water column criterion elements must be used when steady-state fish or bird tissue data are not available.

When implementing the selenium criterion under the NPDES permits program, California may need to establish additional implementation procedures due to the unique components of the selenium criterion. Where California uses a water column criterion element only (as opposed to using both the water column and fish tissue or bird tissue criterion elements) for conducting reasonable potential

determinations and establishing WQBELs per 40 CFR 122.44(d), it may be appropriate for the State to evaluate existing implementation procedures for other water column aquatic life criteria. However, if California also decides to use the selenium fish tissue criterion elements and bird tissue criterion elements for NPDES permitting purposes, additional State WQS implementation procedures will likely be needed to determine the need for and development of WQBELs necessary to ensure that the tissue criterion element(s) are met.

E. Incorporation by Reference

The regulatory text incorporates one EPA document by reference, specifically, the EPA's *Method for Translating Selenium Tissue Criterion Elements into Site-specific Water Column Criterion Elements for California, Version 2, December 2024*, discussed in section III.C of this preamble. The EPA has made, and will continue to make, this document available electronically at its website (<https://www.epa.gov/wqs-tech/water-quality-standards-establishment-numeric-criterion-selenium-fresh-waters-california>) and through www.regulations.gov at the docket associated with this rulemaking.

IV. Endangered Species Act

Section 7(a)(2) of the ESA requires that each Federal agency ensure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat. For this rule, the EPA transmitted a Biological Evaluation to NMFS and FWS on November 23, 2022.

On June 21, 2024, the EPA received a final Biological Opinion from FWS that determined that the EPA's action is likely to adversely affect but will not jeopardize the continued existence of bonytail, razorback sucker, Santa Ana sucker, tidewater goby, unarmored threespine stickleback, arroyo toad, California red-legged frog, foothill yellow-legged frog, light-footed Ridgway's rail, Yuma Ridgway's rail, and California least tern. FWS also concurred with the EPA that the action may affect but is not likely to adversely affect the other Federally listed species and designated critical habitats for all species that were included in the consultation, including the longfin smelt for which the FWS provided supplemental concurrence with the EPA on October 29, 2024, that the action may

¹⁶ USEPA. 2021. 2021 Revision to: Aquatic Life Ambient Water Quality Criterion for Selenium—Freshwater 2016. EPA 822-R-21-006. U.S. Environmental Protection Agency, Office of Water, Washington, DC. <https://www.epa.gov/system/files/documents/2021-08/selenium-freshwater2016-2021-revision.pdf>.

¹⁷ USEPA. 2024. Technical Support for Adopting and Implementing the EPA's 2016 Selenium Criterion in Water Quality Standards. EPA-820-R-24-001. U.S. Environmental Protection Agency, Office of Water, Washington, DC. <https://www.epa.gov/system/files/documents/2024-03/selenium-adopting-tsd.pdf>.

affect but is not likely to adversely affect that species.¹⁸

On August 28, 2024, the EPA received a final Biological Opinion from NMFS that determined that the EPA's action is likely to adversely affect but will not jeopardize the continued existence of Central California Coast coho salmon, Southern Oregon/Northern California Coast coho salmon, Southern California steelhead, Central Valley steelhead, Northern California steelhead, Central California Coast steelhead, South-Central California Coast steelhead, Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, Central California Coast Chinook salmon, the Southern distinct population segment of North American green sturgeon, nor is the proposed action likely to result in the destruction or adverse modification of critical habitat for these species. NMFS also concurred with the EPA that the action may affect but is not likely to adversely affect the other Federally listed species and the designated critical habitat for the other species that were included in the consultation.

The EPA's receipt of these final Biological Opinions and concurrences from the Services concludes the consultation for this rule under ESA section 7(a)(2). Documents associated with this ESA consultation are available in the docket associated with this rule (Docket ID: EPA-HQ-OW-2018-0056).

V. Applicability of the EPA-Promulgated Water Quality Standards

This final rule for a chronic selenium freshwater criterion applies to certain waters of California in a manner consistent with the CTR where the protection of aquatic life and aquatic-dependent wildlife are designated uses, which includes the waters of the San Luis National Wildlife Refuge and the Los Banos State Wildlife Refuge.

The final rule does not apply to California waters where site-specific selenium criteria have been adopted, nor does it apply to California waters where selenium criteria have been promulgated in the NTR. In other words, this final rule does not apply to waters of the San Francisco Bay

upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta, the San Joaquin River from Sack Dam to Vernalis, Mud Slough (north), Salt Slough, or constructed and reconstructed water supply channels in the Grassland watershed listed in Appendix 40 of the Central Valley Regional Water Quality Control Board's Basin Plan because these waters have applicable selenium criteria from the NTR and/or approved Central Valley Regional Water Quality Control Board site-specific objectives.

Lastly, the final rule does not apply to surface waters that are tributaries to the Salton Sea because California adopted, and EPA-approved, site-specific water quality objectives for these waters.

As noted previously, this action adds clarifying language to the regulatory provisions regarding applicability of the CTR based on the salinity level of the waterbody in paragraphs (c)(3)(ii) and (iii) of 40 CFR 131.38. The added language is not intended to affect the substance of those applicability provisions.

The State of California has nine Regional Water Quality Control Boards (Regional Boards), each located in and overseeing different areas of the State. Each Regional Board has a regional water quality control plan (Basin Plan) that sets forth EPA-approved designated (beneficial) uses for the waterbodies it oversees. The criterion will become the applicable CWA-effective criterion for CWA implementation purposes by each of the Regional Boards after the effective date of this rule (*i.e.*, 30 days after the date of publication of this rule in the **Federal Register**).

VI. Conditions When Federal Standards Would Be Withdrawn

Under the CWA, Congress gave states the primary responsibility for developing and adopting WQS for their waters (CWA section 303(a) through (c)). Although the EPA is promulgating a selenium criterion for the protection of aquatic life and aquatic-dependent wildlife for certain waters of California, California continues to have the option to adopt and submit to the EPA selenium criteria for the State's waters consistent with CWA section 303(c) and the EPA's implementing regulations at 40 CFR part 131.

If California adopts and submits selenium criteria for the protection of aquatic and aquatic-dependent wildlife for California (fresh water and/or salt water), the EPA will approve California's criteria if those criteria meet the requirements of section 303(c) of the CWA and the EPA's implementing regulation at 40 CFR part 131. If the

EPA's Federally promulgated criteria are more stringent than the State's criteria, the EPA's Federally promulgated criteria are and will be the applicable water quality standard for purposes of the CWA until the EPA withdraws those Federally promulgated standards. The EPA would expeditiously undertake such a rulemaking to withdraw the Federal criteria if and when California adopts and the EPA approves corresponding criteria. After the EPA's withdrawal of Federally promulgated criteria, the State's EPA-approved criteria would become the applicable criteria for CWA purposes. If the State's adopted criteria are as stringent or more stringent than the Federally promulgated criteria, then the State's criteria would become the CWA applicable WQS upon the EPA's approval (40 CFR 131.21(c)).

VII. Alternative Regulatory Approaches

The EPA's WQS regulation at 40 CFR part 131 provides several tools that California has available to use at its discretion when implementing or deciding how to implement this selenium criterion. Among other things, the EPA's regulation: (1) specifies how states and authorized Tribes¹⁹ establish, modify or remove designated uses; (2) specifies the requirements for establishing criteria to protect designated uses, including criteria modified to reflect site-specific conditions; (3) specifies the requirements for states and authorized Tribes to adopt WQS variances that provide time to achieve the applicable WQS; and (4) allows states and authorized Tribes to authorize the use of compliance schedules in NPDES permits to meet WQBELs derived from the applicable WQS. Each of these approaches are discussed in more detail in the next sections of this preamble.

Designated Uses

The EPA's action applies to certain waters of California where the protection of aquatic life and aquatic-dependent wildlife are designated uses. The regulation at 40 CFR 131.10 provides information on establishing, modifying, and removing designated uses. If California removes designated uses such that no aquatic life or aquatic-dependent wildlife uses apply to any particular waterbody or waterbody segment affected by this rule and adopts the highest attainable use,²⁰ the State

¹⁸ FWS proposed to list the San Francisco Bay-Delta distinct population segment of longfin smelt as an endangered species on October 7, 2022 (87 FR 60957) and finalized the rule on July 30, 2024 (89 FR 61029) with an effective date of August 29, 2024. The San Francisco Bay-Delta distinct population segment of longfin smelt had not been identified as part of the consultation in the EPA's biological evaluation or the FWS's Biological Opinion that the EPA received on June 21, 2024, before the final rule was signed. As such, the EPA worked with FWS to address this species listing prior to signing the final rule.

¹⁹ For purposes of this rule, an Indian Tribe that obtains EPA approval to administer a WQS program under CWA section 303(c) for its reservation is referred to as an "authorized Tribe."

²⁰ If a state or authorized Tribe adopts a new or revised WQS based on a use attainability analysis,

must also adopt criteria to protect the newly designated highest attainable use consistent with 40 CFR 131.11. It is possible that criteria other than the Federally promulgated criteria would protect the highest attainable use. If the EPA were to find removal or modification of the designated use and the adoption of the highest attainable use and criteria to protect that use is consistent with CWA section 303(c) and the implementing regulations at 40 CFR part 131, the EPA would approve the revised WQS. The EPA would then undertake a rulemaking to withdraw the corresponding Federally promulgated WQS for the relevant water(s).

Site-Specific Criteria

The regulation at 40 CFR 131.11 specifies requirements for modifying water quality criteria to reflect site-specific conditions. In the context of this rulemaking, a site-specific criterion (SSC) is an alternative value to the Federal selenium criterion that would be applied on an area-wide or waterbody-specific basis that meets the regulatory test of protecting the designated uses, being scientifically defensible, and ensuring the protection and maintenance of downstream WQS. In this context, as discussed in section III.C of this preamble, SSC are different than a site-specific water column criterion element developed through the PBA incorporated by reference in this final rule. A SSC may be more or less stringent than the otherwise applicable Federal criterion. A SSC may be called for when further scientific data and analyses indicate that a different selenium concentration (e.g., a different fish tissue or bird tissue criterion element) may be needed to protect the aquatic life and aquatic-dependent wildlife-related designated uses in a particular waterbody or portion of a waterbody. Any such state-adopted SSC will need to be submitted to the EPA for review and approval pursuant to CWA section 303(c) and the EPA's implementing regulation at 40 CFR part 131.

then it must also adopt the highest attainable use (40 CFR 131.10(g)). Highest attainable use is the modified aquatic life, wildlife, or recreation use that is both closest to the uses specified in section 101(a)(2) of the Act and attainable, based on the evaluation of the factor(s) in 40 CFR 131.10(g) that preclude(s) attainment of the use and any other information or analyses that were used to evaluate attainability. There is no required highest attainable use where the state demonstrates the relevant use specified in section 101(a)(2) of the Act and sub-categories of such a use are not attainable (see 40 CFR 131.3(m)).

WQS Variances

California's WQS provide sufficient authority to apply WQS variances when implementing a Federally promulgated criterion for selenium, as long as such WQS variances are adopted consistent with 40 CFR 131.14 and submitted to the EPA for review and approval under CWA section 303(c). The EPA's regulation at 40 CFR 131.3(o) defines a WQS variance as a time-limited designated use and criterion, for a specific pollutant or water quality parameter, that reflects the highest attainable condition during the term of the WQS variance. WQS variances adopted in accordance with 40 CFR 131.14 (including a public hearing consistent with 40 CFR 131.20(b)) provide a flexible but defined pathway for states and authorized Tribes to meet their NPDES permit obligations by allowing dischargers the time they need (as demonstrated by the state or authorized Tribe) to make incremental progress toward meeting WQS that are not immediately attainable but may be in the future. When adopting a WQS variance, states and authorized Tribes specify the interim requirements of the WQS variance by identifying a quantitative expression that reflects the highest attainable condition during the term of the WQS variance, and describing the pollutant control activities expected to occur over the specified term of the WQS variance.

WQS variances help states and authorized Tribes focus on improving water quality, rather than pursuing a downgrade of the underlying water quality goals through modification or removal of a designated use, as a WQS variance cannot lower currently attained water quality. NPDES permit limits can be written to comply with the WQS variance rather than the underlying WQS for the specified term of the WQS variance. If dischargers are still unable to meet the WQBELs derived from the applicable WQS once a WQS variance term is complete, the state or authorized Tribe may adopt a subsequent WQS variance if adopted consistent with 40 CFR 131.14.

Compliance Schedules

The EPA's regulation at 40 CFR 122.47 allows permitting authorities to include compliance schedules in their NPDES permits, when appropriate and where authorized by the state or authorized Tribe. The EPA's regulation at 40 CFR 131.15 requires that states and authorized Tribes that choose to allow the use of NPDES permit compliance schedules adopt specific provisions

authorizing their use and obtain EPA approval under CWA section 303(c) to ensure that a decision to allow permit compliance schedules is transparent and allows for public input (80 FR 51022, August 21, 2015). The EPA's approval of a state or authorized Tribe's permit compliance schedule authorizing provision as a WQS pursuant to 40 CFR 131.15 ensures that any NPDES permit that contains a compliance schedule meets the requirement that the level of water quality to be achieved by the WQBEL derive from and comply with all applicable WQS (40 CFR 122.44(d)(1)(vii)(A)).

California is authorized to administer the NPDES program and has adopted several mechanisms to specify compliance schedules in NPDES permits. In 2008, California adopted a statewide compliance schedule authorizing provision that the EPA subsequently approved under CWA section 303(c), the *Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits*, State Water Resources Control Board Resolution No. 2008-0025, April 15, 2008. This EPA-approved regulation authorizes the use of permit compliance schedules consistent with 40 CFR 131.15, and is not affected by this rule. The compliance schedule authorizing provision will allow California, as the permitting authority, to specify compliance schedules in permits, as appropriate, for the purpose of achieving compliance with a WQBEL based on the selenium criterion promulgated in this final rule, which is more stringent than the existing criteria for California, as soon as possible.

VIII. Economic Analysis

To best inform the public of the potential impacts of this rule, the EPA evaluated the potential costs associated with State implementation of the EPA's selenium criterion based on available information. This analysis is documented in *Economic Analysis for the Final Selenium Water Quality Criterion for the State of California*, which can be found in the docket for this rule. For this analysis, the EPA assumed that California fully implements its existing selenium criteria (i.e., "baseline criteria") and estimated the incremental impacts for compliance with the selenium criterion in this rule. To facilitate this analysis, the EPA interpreted the criterion as the default water column criterion element (i.e., a lentic and lotic value) from the EPA's current CWA section 304(a) selenium criterion for fresh water. For point source costs, the EPA assumed any NPDES-permitted facility that

discharges selenium would have reasonable potential and would be subject to effluent limits and would incur compliance costs if it chose to continue discharging. The EPA also evaluated nonpoint sources that contribute selenium loadings to waters that would be considered impaired for selenium under the final criterion and evaluated whether they would incur incremental costs for additional best management practices. The total annualized cost of this final rule was estimated to range from \$28.34 million to \$44.84 million at a 2% discount rate. See *Economic Analysis for the Final Selenium Water Quality Criterion for the State of California* for a detailed summary of the information and assumptions the EPA relied on to estimate potential costs to implement the final rule.

IX. Statutory and Executive Orders

A. Executive Order 12866 (Regulatory Planning and Review) and Executive Order 14094 (Modernizing Regulatory Review)

This action is not a significant regulatory action as defined in Executive Order 12866, as amended by Executive Order 14094, and was therefore not subject to a requirement for Executive Order 12866 review.

B. Paperwork Reduction Act (PRA)

This action does not impose any new information-collection burden under the PRA. This action does not directly contain any information collection, reporting, or record-keeping requirements. The Office of Management and Budget (OMB) has previously approved the information collection requirements contained in the existing regulations at 40 CFR part 131 and has assigned OMB control number 2040-0049.

C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. This action will not impose any requirements on small entities.

The EPA-promulgated WQS are implemented through various water quality control programs, including the NPDES program, which limits discharges to navigable waters except in compliance with a NPDES permit. CWA section 301(b)(1)(C) ²¹ and the EPA's

implementing regulations at 40 CFR 122.44(d)(1) introductory text and (d)(1)(i) provide that all NPDES permits shall include any limits on discharges that are necessary to meet applicable WQS. Thus, under the CWA, the EPA's promulgation of WQS establishes standards that the State implements through the NPDES permit process. While the State has discretion in developing discharge limits, as needed, to meet the WQS, those limits, per the regulation at 40 CFR 122.44(d)(1)(i), "must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above any [s]tate water quality standard, including [s]tate narrative criteria for water quality."

As a result of this action, the State of California must ensure that NPDES permits it issues include any limitations on discharges necessary to comply with the WQS established in the final rule. While California's implementation of the rule may ultimately result in new or revised permit conditions for some dischargers, including small entities, the EPA's action, by itself, does not impose any of these requirements on small entities; that is, these requirements are not self-implementing.

D. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate as described in UMRA, 2 U.S.C. 1531-1538, and does not significantly or uniquely affect small governments. The action imposes no enforceable duty on any state, local, or Tribal governments or the private sector.

E. Executive Order 13132 (Federalism)

This action does not have federalism implications. The EPA believes, however, that this action may be of significant interest to state governments. Consistent with the EPA's policy to promote communications between the EPA and state and local governments, the EPA consulted with California early in the process of developing this rulemaking to provide the State with an opportunity to provide meaningful and timely input.

On several occasions starting in February 2018, the EPA discussed the development of this rule with the

California State Water Resources Control Board and several Regional Water Quality Control Boards. Early in this process, the EPA clarified that if and when the State decides to develop and establish its own selenium standards, the EPA would assist the State in its process. During these discussions, the EPA also explained: the scientific basis for the fish and bird tissue elements of the selenium criterion and the methodologies for translating the tissue elements to water column values; the external peer review process and the comments the EPA received on the derivation of the criterion; the EPA's consideration of those comments and responses; possible alternatives for criteria or a criterion matrix; the assumptions and data being used in the economic analysis associated with the rule; and the overall timing of the Federal rulemaking effort. The EPA took these discussions with the State into account during the drafting of this final rule.

F. Executive Order 13175 (Consultation and Coordination With Indian Tribal Governments)

This action does not have Tribal implications as specified in Executive Order 13175. This rule does not impose substantial direct compliance costs on federally recognized Tribal governments, nor does it substantially affect the relationship between the Federal Government and Tribes, or the distribution of power and responsibilities between the Federal Government and Tribes. Thus, Executive Order 13175 does not apply to this action.

Consistent with the EPA Policy on Consultation and Coordination with Indian Tribes, during the development of this action, the EPA offered Tribal leaders of potentially affected Tribes in California government-to-government consultation on the proposed selenium rulemaking. The Torres Martinez Desert Cahuilla Indian Tribe responded, with questions and concerns about selenium monitoring in the tributaries to the Salton Sea. The tributaries to the Salton Sea have State-adopted and EPA-approved site-specific water quality criteria (objectives) in place that are not affected by this rule.

G. Executive Order 13045 (Protection of Children From Environmental Health and Safety Risks)

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern environmental health or safety risks that the EPA has reason to believe may disproportionately affect children, per

²¹ 301(b), *Timetable for achievement of objectives*: In order to carry out the objective of the chapter there shall be achieved not later than July 1, 1977, any more stringent limitation, including those necessary to meet water quality standards,

treatment standards, or schedules of compliance, established pursuant to any State law or regulations (under authority preserved by section 1370 of the title) or any other Federal law or regulation, or required to implement any applicable water quality standard established pursuant to the chapter.

the definition of “covered regulatory action” in section 2–202 of the Executive order. Therefore, this action is not subject to Executive Order 13045 because it does not concern an environmental health risk or safety risk. This rule relates to protection of aquatic life and aquatic-dependent wildlife. Since this action does not concern human health, the EPA’s Policy on Children’s Health also does not apply.

H. Executive Order 13211 (Actions That Significantly Affect Energy Supply, Distribution, or Use)

This action is not a “significant energy action” because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. This action impacts water quality standards, which do not regulate the supply, distribution, or use of energy.

I. National Technology Transfer and Advancement Act of 1995

This rule does not involve technical standards.

J. Executive Order 12898 (Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations) and Executive Order 14096 (Revitalizing Our Nation’s Commitment to Environmental Justice for All)

The EPA believes that the human health and environmental conditions that exist prior to this action do not result in disproportionate and adverse effects on communities with environmental justice concerns. In the EPA’s *Economic Analysis for the Final Selenium Water Quality Criterion for the State of California* (economic analysis document), which can be found in the docket for this rule, Exhibit 5–2 illustrates the geographic distribution of waters where available data indicate elevated levels of selenium. These waters are located throughout the State. An analysis of proximity to minority and low-income populations might or might not reveal patterns of association that differ from waters that are not impaired. However, making definitive connections between waters monitored for water quality and the effects of selenium from the use of these resources would likely depend on many other local factors, such as accessibility to and availability of alternative water sources.

The EPA believes that this action is not likely to result in new disproportionate and adverse effects on communities with environmental justice concerns. The freshwater criterion for selenium in California does not address human health impacts, and only applies to aquatic life and aquatic-dependent

wildlife uses. This rule will support the health and abundance of aquatic life and aquatic-dependent wildlife in California and will, therefore, not only benefit those species but also benefit all communities that rely on or use these ecosystems. The EPA finds that, as compared to higher-income populations, low-income populations tend to rely more on fishing as a food source,²² and therefore, this rule may benefit low-income communities. This and other EPA actions with goals of protecting fishing resources are a high priority for the EPA. The potential benefits associated with this final rule are also addressed in the economic analysis document.

To achieve the benefits associated with a final rule, the EPA recognizes that some facilities may need to add pollution control measures and incur additional compliance costs over time to meet any WQBELs needed to achieve the promulgated selenium criterion. The EPA used the California Communities Environmental Health Screening Tool: CalEnviroScreen 4.0 tool developed by California Office of Environmental Health Hazard Assessment and determined that none of the facilities identified in the EPA’s *Economic Analysis for the Final Selenium Water Quality Criterion for the State of California* that would incur additional annual costs, are located in communities with elevated environmental justice concerns. This is one line of evidence that these communities would not bear a disproportionate share of the burden with promulgation of this rule. To further explore the anticipated impacts, the EPA analyzed two facilities identified in the EPA’s economic analysis that may incur additional compliance costs over time to meet any WQBELs needed to achieve the promulgated selenium criterion. For illustrative purposes, the EPA first analyzed the Michelson Water Reclamation Plant (WRP), which serves an area located in parts of Orange County. Using CalEnviroScreen 4.0, the EPA examined education level, poverty level, and unemployment level within the service area. Some areas showed low environmental justice concerns (high education, low poverty, and low unemployment), whereas other areas in the county had slightly higher environmental justice concerns (moderate education levels, poverty,

and unemployment). There did not appear to be a clear pattern of disproportionate impacts to specific communities. As presented in the economic analysis document, the EPA estimates that pollution control upgrades to the Michelson WRP could potentially result in a total cost of \$4,856,000. The population served by Michelson WRP is 331,500 people, which would result in a per-person increased cost of \$14.65 per year. The average household size in Orange County (the area served by Michelson WRP) is 3.01²³ people per household, resulting in an estimated additional average household cost of \$44.09 per year, or \$3.67 per month. This potentially modest increase in monthly sewerage bill of \$3.67 per household per month appears unlikely to disproportionately impact low-income populations, populations with low education levels, and/or communities with low employment rates.

The second facility that the EPA has included in this analysis for illustrative purposes may incur annual costs due to implementing pollution control upgrades is the Auburn Wastewater Treatment Plant (WWTP). The Auburn WWTP serves 13,800 people in the city of Auburn in Placer County. Using the CalEnviroScreen 4.0 tool, the EPA examined education level, poverty level, and unemployment level within the service area. Auburn showed relatively high education levels, moderate poverty levels, and moderate unemployment levels. There did not appear to be a clear pattern of disproportionate impacts to specific communities. As presented in the economic analysis document, the EPA estimates that pollution control upgrades to the Auburn WWTP could potentially result in a total cost of \$491,000. The population served by the Auburn WWTP is 13,800 people, which would result in a per-person increased cost of \$35.58 per year. The average household size in Auburn is 2.15²⁴ people per household, resulting in an estimated additional average household cost of \$76.50 per year, or \$6.37 per month. This potentially modest increase in monthly sewerage bill of \$6.37 per household per month appears unlikely to disproportionately impact low-income populations, populations with low education levels, and/or communities with low employment rates.

These examples show that while these communities only have moderate environmental justice concerns

²² Von Stackelberg, K., et al. (2017). Results of a national survey of high-frequency fish consumers in the United States. *Environmental Research* 158, 126–136. <https://bgc.seas.harvard.edu/assets/vonstackelberg2017.pdf>.

²³ <https://www.census.gov/quickfacts/orange-county-california>.

²⁴ <https://www.census.gov/quickfacts/auburn-city-california>.

(according to CalEnviroScreen), the low-income portions of these communities would not incur a significant burden as a result of this final rule. Overall, the EPA anticipates that the abovementioned benefits will ultimately outweigh these potential pass-through sewerage costs and that this rule will help address any environmental justice concerns by benefitting aquatic species and the communities that may rely on or use them.

In addition to Executive Order 12898, and in accordance with Title VI of the Civil Rights Act of 1964, each Federal agency shall ensure that all programs or activities receiving Federal financial assistance that affect human health or the environment do not directly, or through contractual or other arrangements, use criteria, methods, or practices that discriminate on the basis of race, color, or national origin. With that directive in mind, in August 2011 the Environmental Justice Interagency Working Group established a Title VI Committee to address the intersection of agencies' environmental justice efforts with their Title VI enforcement and compliance responsibilities. While the EPA only has an oversight role for CWA implementation, if California receives Federal funds for CWA implementation, the State is legally prohibited from discriminating on the basis of race,

color, or national origin under Title VI when engaging in CWA implementation activities. Additionally, and in compliance with Executive Order 12898, the EPA expects that California will consider disproportionately high and adverse human health and environmental effects on minority and low-income populations when implementing this rulemaking under the CWA.

The information supporting this Executive Order review is contained in the EPA's *Economic Analysis for the Final Selenium Water Quality Criterion for the State of California*, the California Communities Environmental Health Screening Tool: CalEnviroScreen 4.0 tool developed by California Office of Environmental Health Hazard Assessment, and the 2022 United States census data for Orange County, California and Auburn, California.

K. Congressional Review Act (CRA)

This action is subject to the CRA, and the EPA will submit a rule report to each House of Congress and to the Comptroller General of the United States. This action is not a "major rule" as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 131

Environmental protection,
Incorporation by reference, Indians-

lands, Intergovernmental relations,
Reporting and recordkeeping
requirements, Water pollution control.

Michael S. Regan,
Administrator.

For the reasons set forth in the preamble, the EPA amends 40 CFR part 131 as follows:

PART 131—WATER QUALITY STANDARDS

■ 1. The authority citation for part 131 continues to read as follows:

Authority: 33 U.S.C. 1251 *et seq.*

■ 2. Amend § 131.38 by adding a heading for paragraph (b) and revising paragraphs (b)(1) and (c)(3)(ii) and (iii) to read as follows:

§ 131.38 Establishment of numeric criteria for priority toxic pollutants for the State of California.

* * * * *

(b) *Criteria.* (1) Criteria for priority toxic pollutants in the State of California as described in table 1 to this paragraph (b)(1):

Table 1 to Paragraph (b)(1)

BILLING CODE 6560–50–P

A		B		C		D	
		Freshwater		Saltwater		Human health (10 ⁻⁶ risk for carcinogens) for consumption of:	
Number Compound	CAS No.	Criterion maximum conc. ^d (µg/L) B1	Criterion continuous conc. ^d (µg/L) B2	Criterion maximum conc. ^d (µg/L) C1	Criterion continuous conc. ^d (µg/L) C2	Water and organisms (µg/L) D1	Organisms only (µg/L) D2
1. Antimony	7440360					14 a,s	4300 a,t
2. Arsenic ^b	7440382	340 i,m,w	150 i,m,w	69 i,m	36 i,m		
3. Beryllium	7440417					n	n
4. Cadmium ^b	7440439	4.3 e,i,m,w,x	2.2 e,i,m,w	42 i,m	9.3 i,m	n	n
5a. Chromium (III)	16065831	550 e,i,m,o	180 e,i,m,o			n	n
5b. Chromium (VI) ^b	18540299	16 i,m,w	11 i,m,w	1100 i,m	50 i,m	n	n
6. Copper ^b	7440508	13 e,i,m,w,x	9.0 e,i,m,w	4.8 i,m	3.1 i,m	1300	
7. Lead ^b	7439921	65 e,i,m,z	2.5 e,i,m,z	210 i,m	8.1 i,m	n	n
8. Mercury ^b	7439976	[Reserved]	[Reserved]	[Reserved]	[Reserved]	0.050 a	0.051 a
9. Nickel ^b	7440020	470 e,i,m,w	52 e,i,m,w	74 i,m	8.2 i,m	610 a	4600 a
10. Selenium ^b	7782492	p	q,l	290 i,m	71 i,m	n	n
11. Silver ^b	7440224	3.4 e,i,m		1.9 i,m			
12. Thallium	7440280					1.7 a,s	6.3 a,t
13. Zinc ^b	7440666	120 e,i,m,w,x	120 e,i,m,w	90 i,m	81 i,m		
14. Cyanide ^b	57125	22 o	5.2 o	1 r	1 r	700 a	220,000 a,j
15. Asbestos	1332214					7,000,000 fibers/L k,s	
16. 2,3,7,8-TCDD (Dioxin)	1746016					0.0000000 13 c	0.000000014 c
17. Acrolein	107028					320 s	780 t
18. Acrylonitrile	107131					0.059 a,c,s	0.66 a,c,t
19. Benzene	71432					1.2 a,c	71 a,c
20. Bromoform	75252					4.3 a,c	360 a,c
21. Carbon Tetrachloride	56235					0.25 a,c,s	4.4 a,c,t
22. Chlorobenzene	108907					680 a,s	21,000 a,j,t

23. Chlorodibromomethane	124481					0.41 a,c,y	34 a,c
24. Chloroethane	75003						
25. 2-Chloroethylvinyl Ether	110758						
26. Chloroform	67663					[Reserved]	[Reserved]
27. Dichlorobromomethane	75274					0.56 a,c,y	46 a,c
28. 1,1-Dichloroethane	75343						
29. 1,2-Dichloroethane	107062					0.38 a,c,s	99 a,c,t
30. 1,1-Dichloroethylene	75354					0.057 a,c,s	3.2 a,c,t
31. 1,2-Dichloropropane	78875					0.52 a	39 a
32. 1,3-Dichloropropylene	542756					10 a,s	1,700 a,t
33. Ethylbenzene	100414					3,100 a,s	29,000 a,t
34. Methyl Bromide	74839					48 a	4,000 a
35. Methyl Chloride	74873					n	n
36. Methylene Chloride	75092					4.7 a,c	1,600 a,c
37. 1,1,2,2-Tetrachloroethane	79345					0.17 a,c,s	11 a,c,t
38. Tetrachloroethylene	127184					0.8 c,s	8.85 c,t
39. Toluene	108883					6,800 a	200,000 a
40. 1,2-Trans-Dichloroethylene	156605					700 a	140,000 a
41. 1,1,1-Trichloroethane	71556					n	n
42. 1,1,2-Trichloroethane	79005					0.60 a,c,s	42 a,c,t
43. Trichloroethylene	79016					2.7 c,s	81 c,t
44. Vinyl Chloride	75014					2 c,s	525 c,t
45. 2-Chlorophenol	95578					120 a	400 a
46. 2,4-Dichlorophenol	120832					93 a,s	790 a,t
47. 2,4-Dimethylphenol	105679					540 a	2,300 a
48. 2-Methyl-4,6-Dinitrophenol	534521					13.4 s	765 t
49. 2,4-Dinitrophenol	51285					70 a,s	14,000 a,t
50. 2-Nitrophenol	88755						
51. 4-Nitrophenol	100027						
52. 3-Methyl-4-Chlorophenol	59507						
53. Pentachlorophenol	87865	19 f,w	15 f,w	13	7.9	0.28 a,c	8.2 a,c,j

54. Phenol	108952					21,000 a	4,600,000 a,j,t
55. 2,4,6-Trichlorophenol	88062					2.1 a,c	6.5 a,c
56. Acenaphthene	83329					1,200 a	2,700 a
57. Acenaphthylene	208968						
58. Anthracene	120127					9,600 a	110,000 a
59. Benzidine	92875					0.00012 a,c,s	0.00054 a,c,t
60. Benzo(a)Anthracene	56553					0.0044 a,c	0.049 a,c
61. Benzo(a)Pyrene	50328					0.0044 a,c	0.049 a,c
62. Benzo(b)Fluoranthene	205992					0.0044 a,c	0.049 a,c
63. Benzo(ghi)Perylene	191242						
64. Benzo(k)Fluoranthene	207089					0.0044 a,c	0.049 a,c
65. Bis(2-Chloroethoxy)Methane	111911						
66. Bis(2-Chloroethyl)Ether	111444					0.031 a,c,s	1.4 a,c,t
67. Bis(2-Chloroisopropyl)Ether	108601					1,400 a	170,000 a,t
68. Bis(2-Ethylhexyl)Phthalate	117817					1.8 a,c,s	5.9 a,c,t
69. 4-Bromophenyl Phenyl Ether	101553						
70. Butylbenzyl Phthalate	85687					3,000 a	5,200 a
71. 2-Chloronaphthalene	91587					1,700 a	4,300 a
72. 4-Chlorophenyl Phenyl Ether	7005723						
73. Chrysene	218019					0.0044 a,c	0.049 a,c
74. Dibenzo(a,h)Anthracene	53703					0.0044 a,c	0.049 a,c
75. 1,2 Dichlorobenzene	95501					2,700 a	17,000 a
76. 1,3 Dichlorobenzene	541731					400	2,600
77. 1,4 Dichlorobenzene	106467					400	2,600
78. 3,3'-Dichlorobenzidine	91941					0.04 a,c,s	0.077 a,c,t
79. Diethyl Phthalate	84662					23,000 a,s	120,000 a,t
80. Dimethyl Phthalate	131113					313,000 s	2,900,000 t
81. Di-n-Butyl Phthalate	84742					2,700 a,s	12,000 a,t
82. 2,4-Dinitrotoluene	121142					0.11 c,s	9.1 c,t
83. 2,6-Dinitrotoluene	606202						
84. Di-n-Octyl Phthalate	117840						

85. 1,2-Diphenylhydrazine	122667					0.040 a,c,s	0.54 a,c,t
86. Fluoranthene	206440					300 a	370 a
87. Fluorene	86737					1,300 a	14,000 a
88. Hexachlorobenzene	118741					0.00075 a,c	0.00077 a,c
89. Hexachlorobutadiene	87683					0.44 a,c,s	50 a,c,t
90. Hexachlorocyclopentadiene	77474					240 a,s	17,000 a ₃ ,t
91. Hexachloroethane	67721					1.9 a,c,s	8.9 a,c,t
92. Indeno(1,2,3-cd) Pyrene	193395					0.0044 a,c	0.049 a,c
93. Isophorone	78591					8.4 c,s	600 c,t
94. Naphthalene	91203						
95. Nitrobenzene	98953					17 a,s	1,900 a ₃ ,t
96. N-Nitrosodimethylamine	62759					0.00069 a,c,s	8.1 a,c,t
97. N-Nitrosodi-n-Propylamine	621647					0.005 a	1.4 a
98. N-Nitrosodiphenylamine	86306					5.0 a,c,s	16 a,c,t
99. Phenanthrene	85018						
100. Pyrene	129000					960 a	11,000 a
101. 1,2,4-Trichlorobenzene	120821						
102. Aldrin	309002	3 g		1.3 g		0.00013 a,c	0.00014 a,c
103. alpha-BHC	319846					0.0039 a,c	0.013 a,c
104. beta-BHC	319857					0.014 a,c	0.046 a,c
105. gamma-BHC	58899	0.95 w		0.16 g		0.019 c	0.063 c
106. delta-BHC	319868						
107. Chlordane	57749	2.4 g	0.0043 g	0.09 g	0.004 g	0.00057 a,c	0.00059 a,c
108. 4,4'-DDT	50293	1.1 g	0.001 g	0.13 g	0.001 g	0.00059 a,c	0.00059 a,c
109. 4,4'-DDE	72559					0.00059 a,c	0.00059 a,c
110. 4,4'-DDD	72548					0.00083 a,c	0.00084 a,c
111. Dieldrin	60571	0.24 w	0.056 w	0.71 g	0.0019 g	0.00014 a,c	0.00014 a,c
112. alpha-Endosulfan	959988	0.22 g	0.056 g	0.034 g	0.0087 g	110 a	240 a
113. beta-Endosulfan	33213659	0.22 g	0.056 g	0.034 g	0.0087 g	110 a	240 a

114. Endosulfan Sulfate	1031078					110 a	240 a
115. Endrin	72208	0.086 w	0.036 w	0.037 g	0.0023 g	0.76 a	0.81 a,j
116. Endrin Aldehyde	7421934					0.76 a	0.81 a,j
117. Heptachlor	76448	0.52 g	0.0038 g	0.053 g	0.0036 g	0.00021 a,c	0.00021 a,c
118. Heptachlor Epoxide	1024573	0.52 g	0.0038 g	0.053 g	0.0036 g	0.00010 a,c	0.00011 a,c
119-125. Polychlorinated biphenyls (PCBs)			0.014 u		0.03 u	0.00017 c,v	0.00017 c,v
126. Toxaphene	8001352	0.73	0.0002	0.21	0.0002	0.00073 a,c	0.00075 a,c
Total Number of Criteria ^h		22	21	22	20	92	90

- a. Criteria revised to reflect the Agency q1* or RfD, as contained in the Integrated Risk Information System (IRIS) as of October 1, 1996. The fish tissue bioconcentration factor (BCF) from the 1980 documents was retained in each case.
- b. Criteria apply to California waters except for those waters subject to objectives in Tables III-2A and III-2B of the San Francisco Regional Water Quality Control Board's (SFRWQCB) 1986 Basin Plan that were adopted by the SFRWQCB and the State Water Resources Control Board, approved by the EPA, and which continue to apply. For copper and nickel, criteria apply to California waters except for waters south of Dumbarton Bridge in San Francisco Bay that are subject to the objectives in the SFRWQCB's Basin Plan as amended by SFRWQCB Resolution R2-2002-0061, dated May 22, 2002, and approved by the State Water Resources Control Board. The EPA approved the aquatic life site-specific objectives on January 21, 2003. The copper and nickel aquatic life site-specific objectives contained in the amended Basin Plan apply instead.
- c. Criteria are based on carcinogenicity of 10 (-6) risk.
- d. Criteria Maximum Concentration (CMC) equals the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time without deleterious effects. Criteria Continuous Concentration (CCC) equals the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4 days) without deleterious effects. ug/L equals micrograms per liter.
- e. Freshwater aquatic life criteria for metals are expressed as a function of total hardness (mg/L) in the water body. The equations are provided in matrix at paragraph (b)(2) of this section. Values displayed above in the matrix correspond to a total hardness of 100 mg/l.

- f. Freshwater aquatic life criteria for pentachlorophenol are expressed as a function of pH, and are calculated as follows: Values displayed above in the matrix correspond to a pH of 7.8. $CMC = \exp(1.005(pH) - 4.869)$. $CCC = \exp(1.005(pH) - 5.134)$.
- g. This criterion is based on 304(a) aquatic life criterion issued in 1980, and was issued in one of the following documents: Aldrin/Dieldrin (EPA 440/5-80-019), Chlordane (EPA 440/5-80-027), DDT (EPA 440/5-80-038), Endosulfan (EPA 440/5-80-046), Endrin (EPA 440/5-80-047), Heptachlor (440/5-80-052), Hexachlorocyclohexane (EPA 440/5-80-054), Silver (EPA 440/5-80-071). The Minimum Data Requirements and derivation procedures were different in the 1980 Guidelines than in the 1985 Guidelines. For example, a “CMC” derived using the 1980 Guidelines was derived to be used as an instantaneous maximum. If assessment is to be done using an averaging period, the values given should be divided by 2 to obtain a value that is more comparable to a CMC derived using the 1985 Guidelines.
- h. These totals simply sum the criteria in each column. For aquatic life, there are 23 priority toxic pollutants with some type of freshwater or saltwater, acute or chronic criteria. For human health, there are 92 priority toxic pollutants with either “water + organism” or “organism only” criteria. Note that these totals count chromium as one pollutant even though the EPA has developed criteria based on two valence states. In the matrix, the EPA has assigned numbers 5a and 5b to the criteria for chromium to reflect the fact that the list of 126 priority pollutants includes only a single listing for chromium.
- i. Criteria for these metals are expressed as a function of the water-effect ratio, WER, as defined in paragraph (c) of this section. $CMC = \text{column B1 or C1 value} \times WER$; $CCC = \text{column B2 or C2 value} \times WER$.
- j. No criterion for protection of human health from consumption of aquatic organisms (excluding water) was presented in the 1980 criteria document or in the 1986 Quality Criteria for Water. Nevertheless, sufficient information was presented in the 1980 document to allow a calculation of a criterion, even though the results of such a calculation were not shown in the document.
- k. The CWA 304(a) criterion for asbestos is the MCL.
- l. See paragraph (b)(1)(i) of this section.
- m. These freshwater and saltwater criteria for metals are expressed in terms of the dissolved fraction of the metal in the water column. Criterion values were calculated by using the EPA's Clean Water Act 304(a) guidance values (described in the total recoverable fraction) and then applying the conversion factors in § 131.36(b)(1) and (2).

- n. The EPA is not promulgating human health criteria for these contaminants. However, permit authorities should address these contaminants in NPDES permit actions using the State's existing narrative criteria for toxics.
- o. These criteria were promulgated for specific waters in California in the National Toxics Rule ("NTR"), at § 131.36. The specific waters to which the NTR criteria apply include: Waters of the State defined as bays or estuaries and waters of the State defined as inland, i.e., all surface waters of the State not ocean waters. These waters specifically include the San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta. This section does not apply instead of the NTR for this criterion.
- p. No acute criterion applies except as follows. A criterion of 20 µg/L was promulgated for specific waters in California in the NTR in the total recoverable form and still applies to waters of the San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta; waters of Salt Slough; Mud Slough (north); and the San Joaquin River, Sack Dam to the mouth of Merced River. The State of California adopted and the EPA approved site-specific acute criteria that still apply to the San Joaquin River, mouth of Merced to Vernalis; Salt Slough; constructed and reconstructed water supply channels in the Grassland watershed listed in Appendix 40 of the State of California Central Valley Regional Water Quality Control Board Basin Plan; and all surface waters that are tributaries to the Salton Sea.
- q. The chronic criterion specified in paragraph (b)(1)(i) of this section applies except as follows. A chronic criterion of 5 µg/L was promulgated for specific waters in California in the NTR in the total recoverable form and still applies to waters of the San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta; waters of Salt Slough; Mud Slough (north); and the San Joaquin River, Sack Dam to Vernalis. Paragraph (b)(1)(i) does not apply instead of the NTR for these waters. The State of California adopted and the EPA approved a site-specific criterion for the Salt Slough, constructed and reconstructed water supply channels in the Grassland watershed listed in Appendix 40 of the State of California Central Valley Regional Water Quality Control Board Basin Plan, and all surface waters that are tributaries to the Salton Sea; therefore, paragraph (b)(1)(i) does not apply to these waters.
- r. These criteria were promulgated for specific waters in California in the NTR. The specific waters to which the NTR criteria apply include: Waters of the State defined as bays or estuaries including the Sacramento-San Joaquin Delta within California Regional Water Board 5, but excluding the San Francisco Bay. This section does not apply instead of the NTR for these criteria.
- s. These criteria were promulgated for specific waters in California in the NTR. The specific

waters to which the NTR criteria apply include: Waters of the Sacramento-San Joaquin Delta and waters of the State defined as inland (i.e., all surface waters of the State not bays or estuaries or ocean) that include a MUN use designation. This section does not apply instead of the NTR for these criteria.

t. These criteria were promulgated for specific waters in California in the NTR. The specific waters to which the NTR criteria apply include: Waters of the State defined as bays and estuaries including San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta; and waters of the State defined as inland (i.e., all surface waters of the State not bays or estuaries or ocean) without a MUN use designation. This section does not apply instead of the NTR for these criteria.

u. PCBs are a class of chemicals which include aroclors 1242, 1254, 1221, 1232, 1248, 1260, and 1016, CAS numbers 53469219, 11097691, 11104282, 11141165, 12672296, 11096825, and 12674112, respectively. The aquatic life criteria apply to the sum of this set of seven aroclors.

v. This criterion applies to total PCBs, e.g., the sum of all congener or isomer or homolog or aroclor analyses.

w. This criterion has been recalculated pursuant to the 1995 Updates: Water Quality Criteria Documents for the Protection of Aquatic Life in Ambient Water, Office of Water, EPA-820-B-96-001, September 1996. See also Great Lakes Water Quality Initiative Criteria Documents for the Protection of Aquatic Life in Ambient Water, Office of Water, EPA-80-B-95-004, March 1995.

x. The State of California has adopted and the EPA has approved site specific criteria for the Sacramento River (and tributaries) above Hamilton City; therefore, these criteria do not apply to these waters.

y. The State of California adopted and the EPA approved a site-specific criterion for New Alamo Creek from Old Alamo Creek to Ulati Creek and for Ulati Creek from Alamo Creek to Cache Slough; therefore, this criterion does not apply to these waters.

z. The State of California adopted and the EPA approved a site-specific criterion for the Los Angeles River and its tributaries; therefore, this criterion does not apply to these waters.

Media Type	Bird Tissue	Fish Tissue ¹		Water Column ⁴	
Criterion Element	Bird Egg ²	Egg-Ovary ²	Fish Whole-Body or Muscle ³	Monthly Average Exposure ⁵	Intermittent Exposure ⁶
Magnitude	11.2 mg/kg dw	15.1 mg/kg dw	8.5 mg/kg dw whole-body or 11.3 mg/kg dw muscle (skinless, boneless filet)	1.5 µg/L in lentic aquatic systems 3.1 µg/L in lotic aquatic systems	$WQC_{int} = \frac{WQC_{30-day} - C_{bkgrnd}(1 - f_{int})}{f_{int}}$
Duration	Instantaneous measurement ⁷	Instantaneous measurement ⁷	Instantaneous measurement ⁷	30 days	Number of days/month with an elevated concentration
Frequency	Not to be exceeded	Not to be exceeded	Not to be exceeded	Not more than once in three years on average	Not more than once in three years on average

1. Fish tissue criterion elements are expressed as steady-state.
2. Fish egg-ovary supersedes any whole-body, muscle, or water column criterion elements for aquatic life when fish egg-ovary are measured, except as noted in footnote 4. Bird egg supersedes water column criterion elements for aquatic-dependent wildlife when bird eggs are measured, except as noted in footnote 4. The bird tissue criterion element is independently applicable from and equivalent to the fish tissue criterion elements.
3. Fish whole-body or muscle tissue supersedes the water column criterion elements when both fish tissue and water concentrations are measured, except as noted in footnote 4.
4. Water column criterion elements are based on dissolved total selenium in water and are derived from fish tissue and bird tissue criterion elements via bioaccumulation modeling. When selenium inputs are increasing, water column criterion elements are the applicable criterion elements in the absence of steady-state condition fish tissue or bird tissue data.
5. The water column criterion element, which applies independently to the respective aquatic life and aquatic-dependent wildlife uses, is applicable for all CWA purposes and consists of a water column value of 1.5 µg/L in lentic aquatic systems and 3.1 µg/L in lotic aquatic systems unless or until a site-specific water column criterion element is derived for a particular waterbody following the methodology described in *Method for Translating Selenium Tissue Criterion Elements into Site-specific Water Column Criterion Elements for California, Version 2, December 2024*. This publication is incorporated by reference into this section with the approval of the Director of the *Federal Register* under 5 U.S.C. 552(a) and 1 CFR part 51. All approved material is available at EPA, OW Docket, EPA West, Room 3334, 1301 Constitution Ave., NW, Washington, DC, 20004; phone: (202) 566-2426; website: <https://www.epa.gov/wqs-tech/water-quality-standards-establishment-numeric-criterion-selenium-fresh-waters-california>. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit www.archives.gov/federal-register/cfr/ibr-locations or email fr.inspection@nara.gov.
6. Where WQC_{30-day} is the applicable water column monthly criterion element, C_{bkgrnd} is the average background selenium concentration, and f_{int} is the fraction of any 30-day period during which elevated selenium concentrations occur, with f_{int} assigned a value ≥ 0.033 (corresponding to 1 day).
7. Fish tissue and bird tissue data provide instantaneous point measurements that reflect integrative accumulation of selenium over time and space in bird or fish population(s) at a given site.

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(ii) *Priority toxic pollutants*. Table 1 to this paragraph (b)(1) lists all of the EPA's priority toxic pollutants whether or not criteria guidance are available. Blank spaces indicate the absence of national criteria guidance under CWA

section 304(a). Because of variations in chemical nomenclature systems, this listing of toxic pollutants does not duplicate the listing in appendix A to 40 CFR part 423. The EPA has added the Chemical Abstracts Service (CAS)

registry numbers, which provide a unique identification for each chemical.

(iii) *Criteria recommendations not included in table 1 to this paragraph (b)(1)*. The following chemicals have organoleptic-based criteria recommendations that are not included

in table 1: zinc, 3-methyl-4-chlorophenol.

(iv) *Freshwater and saltwater aquatic life criteria.* Freshwater and saltwater aquatic life criteria apply as specified in paragraph (c)(3) of this section.

* * * * *

(c) * * *

(3) * * *

(ii) For waters in which the salinity is equal to or greater than 10 parts per thousand 95% or more of the time, the applicable criteria are the saltwater criteria in column C, except for selenium in waters of the San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta where the applicable criteria are the freshwater criteria in column B of the National Toxic Rule ("NTR") at § 131.36.

(iii) For waters in which the salinity is between 1 and 10 parts per thousand as defined in paragraphs (c)(3)(i) and (ii) of this section, the applicable criteria are the more stringent of the freshwater or saltwater criteria, except for selenium in waters of the San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta where the applicable criteria are the freshwater criteria in column B of the NTR. However, the Regional Administrator may approve the use of the alternative freshwater or saltwater criteria if scientifically defensible information and data demonstrate that on a site-specific basis the biology of the water body is dominated by freshwater aquatic life and that freshwater criteria are more appropriate; or conversely, the biology of the water body is dominated by saltwater aquatic life and that saltwater criteria are more appropriate. Before approving any change, the EPA will publish for public comment a document proposing the change.

* * * * *

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 174

[EPA-HQ-OPP-2022-0231; FRL-12399-01-OCSPP]

Brevibacillus Laterosporus Mpp75Aa1.1 and Bacillus Thuringiensis Vpb4Da2 Proteins; Exemptions From the Requirement of a Tolerance

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This regulation establishes exemptions from the requirement of a tolerance for residues of the *Brevibacillus laterosporus* Mpp75Aa1.1 and *Bacillus thuringiensis* Vpb4Da2 proteins (hereafter Mpp75Aa1.1 and Vpb4Da2 proteins) in or on the food and feed commodities of corn: corn, field; corn, sweet, and corn, pop when used as plant-incorporated protectants (PIP) in corn. Bayer CropScience LP., submitted a petition to EPA under the Federal Food, Drug, and Cosmetic Act (FFDCA), requesting these exemptions. These regulations eliminate the need to establish maximum permissible levels for residues of Mpp75Aa1.1 and Vpb4Da2 proteins.

DATES: This regulation is effective December 17, 2024. Objections and requests for hearings must be received on or before February 18, 2025, and must be filed in accordance with the instructions provided in 40 CFR part 178 (see also Unit I.C. of the **SUPPLEMENTARY INFORMATION**).

ADDRESSES: The docket for this action, identified by docket identification (ID) number EPA-HQ-OPP-2022-0231, is available at <https://www.regulations.gov>. Please review the visitor instructions and additional information about the docket available at <https://www.epa.gov/dockets>.

FOR FURTHER INFORMATION CONTACT: Madison Le, Biopesticides and Pollution Prevention Division (7511M), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Washington, DC 20460-0001; main telephone number: (202) 564-5754; email address: BPPDFRNotices@epa.gov.

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this action apply to me?

You may be potentially affected by this action if you are an agricultural producer, food manufacturer, or pesticide manufacturer. The following list of North American Industrial Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers determine whether this document applies to them. Potentially affected entities may include:

- Crop production (NAICS code 111).
- Animal production (NAICS code 112).
- Food manufacturing (NAICS code 311).
- Pesticide manufacturing (NAICS code 32532).

B. How can I get electronic access to other related information?

You may access a frequently updated electronic version of 40 CFR part 174 through the Office of the Federal Register's e-CFR site at <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-E/part-174>.

C. How can I file an objection or hearing request?

Under FFDCA section 408(g), 21 U.S.C. 346a(g), any person may file an objection to any aspect of this regulation and may also request a hearing on those objections. You must file your objection or request a hearing on this regulation in accordance with the instructions provided in 40 CFR part 178. To ensure proper receipt by EPA, you must identify docket ID number EPA-HQ-OPP-2022-0231, in the subject line on the first page of your submission. All objections and requests for a hearing must be in writing and must be received by the Hearing Clerk on or before February 18, 2025. Addresses for mail and hand delivery of objections and hearing requests are provided in 40 CFR 178.25(b).

In addition to filing an objection or hearing request with the Hearing Clerk as described in 40 CFR part 178, please submit a copy of the filing (excluding any Confidential Business Information (CBI)) for inclusion in the public docket. Information not marked confidential pursuant to 40 CFR part 2 may be disclosed publicly by EPA without prior notice. Submit the non-CBI copy of your objection or hearing request, identified by docket ID number EPA-HQ-OPP-2022-0231, by one of the following methods:

Federal eRulemaking Portal: <https://www.regulations.gov>. Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be CBI or other information whose disclosure is restricted by statute.

Mail: OPP Docket, Environmental Protection Agency Docket Center (EPA/DC), (28221T), 1200 Pennsylvania Ave. NW, Washington, DC 20460-0001.

Hand Delivery: To make special arrangements for hand delivery or delivery of boxed information, please follow the instructions at <https://www.epa.gov/dockets/where-send-comments-epa-dockets>.

Additional instructions on commenting or visiting the docket, along with more information about dockets generally, is available at <https://www.epa.gov/dockets>.