

**Final Statement of Reasons  
Surface Water Augmentation Using Recycled Water  
Title 22, California Code of Regulations**

**UPDATE OF INFORMATION CONTAINED IN THE INITIAL STATEMENT OF  
REASONS**

As a result of the public comments received during the initial comment period (“45-day comment period<sup>1</sup>”), the State Water Resources Control Board (State Board) revised the regulatory text provided during the 45-day comment period, resulting in an additional comment period (“15-day comment period<sup>1</sup>”). The reasons for the revisions are provided below, under the section of this Final Statement of Reasons (FSOR) titled “Revisions Following the 45-day Comment Period”.

As noted in the Initial Statement of Reasons (ISOR), existing law (Water Code section 13562) requires the State Board to adopt uniform water recycling criteria for Surface Water Augmentation (SWA); subject to the condition that a statutorily mandated Expert Panel has made a finding that the criteria would adequately protect public health. Therefore, the Expert Panel’s finding that the originally proposed regulatory text would adequately protect public health was provided as a document relied upon in the ISOR.

As a result of comments received during the 45-day comment period, the State Board revised the proposed regulations, and elicited public comments during a subsequent 15-day comment period. To ensure continued conformance with existing law, prior to initiating the additional comment period (“15-day comment period”) for proposing the revisions, the State Board requested the Expert Panel to make a finding regarding the revisions. The Expert Panel reviewed the proposed revisions and, by way of a National Water Research Institute (NWRI) memorandum<sup>2</sup> dated November 13, 2017, the Expert Panel made a finding that the SWA regulations, as revised, would adequately protect public health. The Expert Panel’s memorandum was included with the documents provided for the additional 15-day comment period and has been included in the rulemaking file.

Additionally, on October 6, 2017, after completion of the 45-day comment period, Assembly Bill 574 (AB 574), Chapter 528, was signed by the Governor. AB 574 became operative on January 1, 2018, after completion of both the 45-day and 15-day comment periods. AB 574 established mandates and recommendations for the State Board regarding future regulatory actions associated with indirect potable reuse (IPR), as well as direct potable reuse (DPR). The bill revised portions of some sections found in Chapter 7.3, Division 7, of the Water Code that were cited in the ISOR. Although the passage of AB 574 and its revisions to the Water Code do not impact the State Board’s existing statutory mandate to adopt SWA criteria (Water Code section 13562), it should

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<sup>1</sup> Although the comment periods exceeded the statutorily mandated minimum timeframes of 45 days and 15 days, those periods are commonly referred to as “the 45-day comment period” and “the 15-day comment period”.

<sup>2</sup> The Expert Panel was administered by NWRI.

be noted that a statutory definition for “surface water augmentation” no longer exists. Rather, AB 574 established a definition for “reservoir water augmentation” that is broader than the previous definition of “surface water augmentation,” with the intent being that State Board address the broader impact of reservoir water augmentation after the adoption of the SWA regulations, through a future regulatory action.

### **ACRONYMS AND TERMS**

The following is a list of acronyms or abbreviated phrases, used in the subsequent discussions, and their meanings:

- AOP = Advanced Oxidation Process
- CECs = Chemicals of Emerging Concern (also known as Constituents of Emerging Concern)
- CEQA = California Environmental Quality Act
- Department = California Department of Public Health
- DPR = Direct Potable Reuse
- EPA = Environmental Protection Agency
- Expert Panel = The panel of experts convened and utilized in accordance with sections 13562 and 13565 of the Water Code.
- FSOR = Final Statement of Reasons
- GC = General Comment
- GRRP = Groundwater Replenishment Reuse Project
- H&S Code = Health and Safety Code
- IPR = Indirect Potable Reuse
- ISOR = Initial Statement of Reasons
- MCL = Maximum Contaminant Level
- NL = Notification Level
- NPDES = National Pollutant Discharge Elimination System
- NWRI = National Water Research Institute
- PWS = Public Water System
- Regional Board = Regional Water Quality Control Board
- RO = Reverse Osmosis
- SDWA = Safe Drinking Water Act
- State Board = State Water Resources Control Board
- SWA = Surface Water Augmentation
- SWSAP = Surface Water Source Augmentation Project
- SWSAP PWS = Surface Water Source Augmentation Project Public Water System
- SWSAP WRA = Surface Water Source Augmentation Project Water Recycling Agency
- U.S. = United States
- WC = Water Code
- WRA = Water Recycling Agency

**SUMMARY AND RESPONSE TO ORAL AND WRITTEN PUBLIC COMMENTS**  
**45-DAY COMMENT PERIOD**

This regulatory action (SBDDW-16-02) was made available to the public on July 21, 2017, and public comments were accepted until 12:00 p.m. (noon) on September 12, 2017. In anticipation of a request for a public hearing, the State Board held a public hearing in Sacramento on September 7, 2017. The table below presents a record of those having provided written and oral comments on the proposed regulations during the 45-day comment period.

Unless otherwise noted, the number associated with a specific commentator(s) in the comment summaries and responses sections that follow correspond to the numbers assigned to the commentator(s) in the tables below.

**Commentators Providing Written Comments**

<b>No.</b>	<b>Name</b>	<b>Affiliation</b>
<b>1</b>	Adelman, Brenda	Russian River Watershed Protection Committee
<b>2</b>	Borchard, Adam	Association of California Water Agencies
<b>3</b>	Camacho, Norma	Santa Clara Valley Water District
<b>4</b>	Cantrell, Scott	Department of Fish and Wildlife
<b>5</b>	Cox, Michael	Citizen
<b>6</b>	Duerig, G.F.	Zone 7 Water Agency
<b>7</b>	Garabedian, Michael	Friends of the North Fork
<b>8</b>	Hauser, Hillary	Heal the Ocean
<b>9</b>	Helminski, John	City of San Diego
<b>10</b>	Larson, Roberta & West, Jennifer	California Association of Sanitation Agencies & WaterReuse California
<b>11</b>	Lau, Albert & Olney, Brian	Padre Dam Municipal Water District & Helix Water District
<b>12</b>	McGowan, Edo	Citizen
<b>13</b>	McIntyre, Daniel	Dublin San Ramon Services District
<b>14</b>	Paulson, Cindy	California Urban Water Agencies
<b>15</b>	Stewart, Mic	Metropolitan Water District of Southern California
<b>16</b>	Sutley, Nancy	Los Angeles Department of Water and Power

<b>No.</b>	<b>Name</b>	<b>Affiliation</b>
17	Wetterau, Greg	CDM Smith
18	Williams, David R.	Bay Area Clean Water Agencies
19	Yamada, Robert	San Diego County Water Authority
20	Zaldivar, Enrique	Los Angeles Sanitation (City of Los Angeles)
21	Zampiello, Anthony	Main San Gabriel Basin Watermaster

**Commentators Providing Oral Comment at the Public Hearing**

<b>No.</b>	<b>Name</b>	<b>Affiliation</b>
7	Garabedian, Michael	Friends of the North Fork
10	West, Jennifer	WaterReuse
15	Coffey, Brad <sup>a</sup>	Metropolitan Water District of Southern California
19	Roy, Toby <sup>b</sup>	San Diego County Water Authority

a. Brad Coffey served as a representative of Metropolitan Water District of Southern California (MWD) and was also included in Mic Stewart's correspondence that provided MWD's written comments to the State Board. Therefore, Brad Coffey was assigned the same identifying number as Mic Stewart.

b. Toby Roy served as a representative of San Diego County Water Authority (SDCWA) and she was also included Robert Yamada's correspondence that provided SDCWA's written comments to the State Board. Therefore, Toby Roy was assigned the same identifying number as Robert Yamada.

Because those providing oral comments were representatives of organizations that provided written comments, and were either the same individual or the context of their comments were substantially similar to the organization's written comments, the identifying numbers for the oral commentators are shared with those in the written comment table.

The oral comments provided during the public hearing in Sacramento on September 7, 2017, were a summary, subset, and/or were substantially similar to those provided by the same organization in writing during the 45-day comment period. Therefore, a separate section for summarizing oral comments and responding to them is not included. Instead, the State Board addresses the oral comments via its response to the written comments. Transcripts from the public hearing are included in the rulemaking file.

## **General Comments and Responses**

This section addresses comments received that were not directed at a specific section of the proposed SWA regulations. Comments directed at a specific section of the proposed SWA regulations are addressed in the subsequent section.

### **GC1:**

A number of commentators expressed their support of the regulations, as well as their appreciation of State Board staff, the Expert Panel, and/or the clarity and flexibility provided by the regulations. [Commentators 2, 3, 9, 10, 11, 14, 15, 19, 20, and 21]

### **Response:**

*The support and appreciation is noted. Thank you.*

### **GC2:**

Commentators compared the SWA regulations with the existing regulations for GRRP, both in general and specific terms [Commentators 11 and 20].

### **Response:**

*The existing regulations for GRRP are beyond the scope of the proposed regulatory action. Please note that responses to specific comments on this subject may be addressed below in the "Specific Comments" section.*

### **GC3:**

While pointing out that the regulations often require approvals from both the State Board and the Regional Boards, commentator 19 suggested that the regulatory process, via the regulations, could be streamlined if there was a single point of approval. Commentator 19 also encouraged the State Board and Regional Boards to "work together to develop roles and responsibilities for recycled water and potable reuse to optimize regulatory oversight." Similarly, commentator 3 recommended, "Article 5.3 of Division 4 provide for a streamlining of regulatory decision-making processes, including application review and approval, monitoring, reporting, and consulting processes. It was expressed that such streamlining would reduce administrative redundancies, minimize project delays, and eliminate the preparation of duplicative document submissions."

### **Response:**

*Thank you for the suggestions regarding the roles and responsibilities of the State Board and Regional Boards. The suggestion is beyond the scope of the regulations, with the purpose of the proposed regulations being the establishment of SWA criteria that would adequately protect public health. In addition to issuing a water reclamation permit, the role of the Regional Boards is to address issues necessary for maintaining a healthy ecosystem through the issuance of an NPDES permit for the discharge into a surface water reservoir. As a result, both the State Board and Regional Boards will*

*generally both be involved in the review and approval of the submittals required in the proposed regulations.*

Similarly, commentator 16 expressed concern regarding the complexities associated with the roles of entities involved in SWSAPs and that the definitions for a SWSAP WRA and SWSAP PWS may not be sufficient; in particular, when the SWSAP WRA and SWSAP PWS are “thought of as one and the same entity.” The commentator suggested two options. The first option asked to consider “combining the roles of the WRA and PWS to be the same entity,” where the PWS would be responsible party for obtaining and administering Regional Board permits. The second option sought to allow a Memorandum of Understanding (MOU) between the different entities where the roles could be clearly defined between the agencies. Commentator 16 also recommended that the State Board streamline the process for assigning new beneficial uses or the re-designation process for SWSAPs to avoid potential delays or complications.

**Response:**

*Regarding the first suggested option, although in some cases the entity (or entities) receiving a permit to discharge recycled water into a reservoir and the entity supplying drinking water to the public may be under the same organization or municipality (e.g., City of Los Angeles), the roles of those entities vary. Furthermore, for many projects it would not be feasible to combine the roles of the WRA and PWS as a single entity. Consistent with the proposed definitions, the entity placing recycled water into a surface water reservoir is permitted and governed by state and federal Clean Water Act provisions through the Regional Boards, while the entity subsequently treating the raw surface water from the reservoir and supplying the treated water to customers as a drinking water is permitted and governed by state Porter-Cologne Water Quality Control Act and federal Safe Drinking Water Act provisions through the State Board (specifically, through the State Board’s Division of Drinking Water). It’s also unclear how “combining the roles,” if they could be, would more clearly define and distinguish those roles (the apparent goal of the second option suggested). The proposed regulations includes requirements specific to a SWSAP WRA and the SWSAP PWS for providing clarity of their respective responsibilities and, as a result, their roles.*

*Regarding the second suggested option, the commentator’s proposed option is consistent with the proposed requirement in section 60320.301 for the two entities (the SWSAP WRA and the SWSAP PWS) to develop and implement a “joint plan”, as opposed to a document referred to as an “MOU.” Sharing the commentator’s concerns and as noted in the ISOR, the State Board believes coordination between the entities engaging in a SWSAP is crucial and is the basis for the requirement. In short, the State Board believes the joint plan provides the necessary flexibility to best address the multitude of scenarios.*

*Lastly, the establishment of requirements pertaining to the process of designated use assignments is beyond the scope of the proposed regulatory action. The proposed regulatory action establishes minimum criteria for adequately protecting public health if SWSAP WRAs and SWSAP PWSs choose to engage in SWA.*

**GC4:**

Commentator 17 suggested that the regulations should clarify the role of the wastewater management agency (WMA) in achieving pathogen reduction (section 60320.308) and the training requirements (section 60320.322).

**Response:**

*Proposed section 60301.853 provides a definition for a SWSAP WRA. The commentator does not provide a proposed definition for “wastewater management agency” (WMA), nor how a WMA would be distinguished from the definition provided for a SWSAP WRA. Regardless, if an agency meets the definition of SWSAP WRA, whether referred to by the commentator as a WRA or WMA, the requirements of the proposed regulations would apply to them. Based on commentator’s reference to a “WMA” operating treatment facilities that would supply “in whole or part” (see section 60301.853) a SWSAP, the WMA would be considered a SWSAP WRA under the proposed regulation, making the need for the suggested revision unnecessary.*

**GC5:**

Commentator 15 noted that the proposed regulations do not establish a clear set of criteria or process for determining whether a project would be a SWSAP and would be governed under the regulations. The commentator suggested that the State Board “identify a clear set of criteria, or indicate a case-by-case evaluation process with general criteria” that would address *de facto* and *de minimis* discharges to surface waters used as sources of drinking water.

**Response:**

*The statutory charge of the State Board is to develop criteria that would adequately protect public health for the “planned” placement of recycled water into a surface water reservoir used as a source of domestic drinking water supply. While *de facto* reuse occurs in many parts of California, addressed via NPDES permits, by its very nature *de facto* reuse is not indirect potable reuse in that it is not the use of recycled water with the intention of replenishing, augmenting, or becoming a source of drinking water. In addition, *de facto* discharges are not direct discharges to a reservoir used as a source of drinking water; they occur upstream of a reservoir. The purpose of the proposed regulatory action is to regulate direct discharges to a reservoir, as part of a planned potable reuse project. The suggestion to address *de facto* reuse in the proposed regulation is beyond the scope of the regulations. Furthermore, even if the statutory mandate was broad enough to require the SWA regulations to address the scenarios mentioned, without an unambiguous recommendation being provided, it’s hard to envision how any “case-by-case evaluation process with general criteria” would satisfy the commentator’s desire for a clear set of criteria that would address any uncertainty of what constitutes a SWSAP.*

**GC6:**

Commentator 15 suggested that the SWSAP WRA's engineering report for a SWSAP should include "an approach to manage nutrients to ensure protection of downstream drinking water uses." In support, while specifically mentioning phosphorus, the commentator describes nutrients' potential to disrupt the ecology of the reservoir that may result in taste and odor issues or production of cyanobacterial toxins. The commentator suggested that the regulations should establish control of nutrients for SWSAPs on a case-by-case basis, in consultation with the reservoir owner and operator, based on reservoir conditions, and that the control mechanisms be identified in the WRA SWSAP's engineering report.

**Response:**

*The State Board agrees that changes to a reservoir's nutrient levels, as a result of changes to the reservoir's source of supply, should be proactively monitored to avoid potential problems that may ultimately impact the drinking water supply (or the operation of the PWS's surface water treatment plant) – whether the change in nutrient levels is a result of a SWSAP or otherwise. The State Board recognizes the concern, to a limited extent, by the reservoir monitoring requirements found in section 60320.326 (see subsection (b), in particular), which requires monitoring for constituents such as temperature, total nitrogen, temperature, dissolved oxygen, chlorophyll a, along with total and dissolved phosphorus. That said, like the commentator, the State Board recognizes that more prescriptive actions would be dependent on case-by-case scenarios, which would therefore be better addressed via other means, including but not limited to, the SWSAP-WRA/SWSAP-PWS joint plan and/or the SWSAP-WRA's NPDES permit (where ecological protections would be expected to be addressed). In addition, the regulations do not preclude the issue from being addressed in the SWSAP-WRA's engineering report.*

**GC7 (Commentator 12):**

Commentator 12 submitted a brief "designed as a primer for planners and policy makers not familiar with the interaction of sewage byproducts and disease." The commentator's brief provides no comments directed at any section or requirement in the proposed regulations. As a result, the comments and opinions presented in the brief are being addressed as a general comment, which is summarized as follows:

- The brief "presents an argument that accelerating risks from antimicrobial resistance, virulence, and pandemic, especially as now found emerging in the world community, may be related to the disposal of inadequately treated sewage and its byproducts, including recycled water."

- The commentator noted concerns regarding "the impact of disinfecting with chlorine enhances virulence as well as creating resistant bacteria" and that "virulence enhanced and resistant bacteria adversely impact the immune system and may render existing antimicrobial drugs useless." Such concerns, primarily associated with the effects of chlorine use, is prevalent throughout the commentator's brief.



- In support of the commentator's concerns regarding antibiotic resistant genes and bacteria, the commentator presented information and thoughts pertaining chiefly to sewage sludge/biosolids, irrigation of crops using recycled water, sewage wastes discharged to the environment, and/or land applications of sewage sludge.
- While referring to studies and information indicating the existence of resistant bacteria in recycled water, the commentator queries, "Thus if we are finding these levels of pathogens in reclaimed water, what would we find in sewage sludge?"
- The commentator questioned the "wastewater industry dogma and standards" and, while referring to a particular Web site, asserted that "high-level officials within [U.S.] EPA may have conspired with sludge industry scientists to falsify data and thus to deliberately obscure the adverse health impacts from land applied sludge." The commentator subsequently opined, "Unfortunately, the principal regulatory body, U.S. EPA seems to be essentially oblivious to these concepts, yet it has been promoting the land application of sewer sludge."

**Response:**

*The State Board acknowledges the efforts of the commentator in preparing the primer. However, the purpose of the public comment period on proposed regulations is to obtain comments specific to the proposed SWA regulations. The primer does not provide specificity towards the regulations. In fact, the primer is focused primarily on land application of biosolids (sewage sludge) and, to a lesser extent, irrigation using recycled water. Those are not the subjects of the proposed regulatory action.*

*Although biosolids and irrigation using recycled water is related to IPR from the limited standpoint that each involves sewage as an origin, IPR involves multiple levels of treatment, such as the treatment criteria described in the proposed regulatory action. So, even if the commentator's statements regarding antibiotic resistance were intended to apply to the proposed regulations (which is not apparent), the commentator does not appear to take into consideration that there are several means of treatment beyond simple chlorination that are utilized for IPR, nor that an statutorily-mandated Expert Panel made a finding that the proposed regulations would adequately protect public health. The proposed regulations require levels of treatment well beyond simple chlorination and/or those used for non-potable reuse, to ensure the health of the public is protected from pathogens and other contaminants.*

*Similarly, commentator 12's statements regarding "wastewater industry dogma" and assertions of inappropriate action (or non-action) regarding U.S. EPA are not directed toward the proposed regulatory action. The State Board is the agency proposing the subject regulations, not the U.S. EPA. In fact, to date, the U.S. EPA has no regulations directly pertaining to IPR. The State Board recommends that the commentator consider that the proposed SWA regulations were reviewed by two separate panels of experts in the fields related to proposed regulations. The ISOR provides details regarding the statutory mandates associated with the two panels of experts, including the Expert Panel charged with making a finding regarding public health.*

**GC8:**

While asserting that an NPDES permit would not be appropriate given the water quality of the effluent discharged to the reservoir as a result of the advanced treatment process, commentator 11 recommended that the State Board develop an alternative permitting mechanism under the proposed regulations. The commentator suggested that the process be similar to the process for groundwater recharge (a.k.a. groundwater replenishment) and expressed concern that a process involving issuance of an NPDES permit would “send the wrong message about the extent that the SWRCB, DDW and SWA project developers go through to ensure high levels of public health protection.”

**Response:**

*The federal Clean Water Act – the provisions of which the state of California must administer and be no less stringent - prohibits the discharge of pollutants through a point source into a water of the United States, unless an NPDES permit has been issued. NPDES permits ensure that such discharges do not adversely affect public health and that healthy ecosystems are maintained. The proposed regulations only establish minimum criteria for the protection of public health and do not preclude more stringent requirements from being necessarily administered under an NPDES permit, to ensure healthy ecosystems are maintained. Regardless of the level of treatment provided, the origin of the water being discharged is wastewater, which is then being discharged to a water of the United States. It should also be noted that some groundwater replenishment projects include issuance of NPDES permits (where discharges to the waters of the U.S. are involved), and that the proposed regulatory action is not the appropriate means of establishing an alternative to the NPDES permitting process. The commentator’s apparent desire to establish a process that would circumvent the requirements of the federal Clean Water Act are beyond the scope of the proposed regulatory action. The commentator may also be interested in the comments and responses provided for GC3.*

**GC9 (Commentator 7):**

Commentator 7 submitted a letter providing a range of comments, varying and primarily general in nature, as opposed to comments directed toward specific regulatory text comments directed at any section or requirement in the proposed regulations. As a result, the comments and opinions presented by the commentator are being addressed as a general comment, which is summarized as follows:

- While acknowledging the legislative mandate to adopt SWA regulations, the commentator asserts that the proposed regulations result in a “deregulation of drinking water”.

**Response:**

*The proposed regulations do not deregulate drinking water, and the commentator did not include a citation from the proposed regulations to support the commentator’s claim. The commentator should note that the proposed regulations do not repeal any*

*existing drinking water requirement; rather, the regulations would establish additional requirements for a PWS choosing to engage in SWA.*

- The commentator expressed concerns about “accelerating wastewater reuse in a manner that could set this trend back due to identified but unaddressed concerns about this proposal,” while listing the following: Disregards public safety; disregards the work of concerned scientists; is proposed without disclosure of the wide ranging health, environmental and cost impacts of wastewater reuse, and; which is based on goals to increase the volume of reuse based on an old and incomplete voluntary survey of water reuse.

**Response:**

*The focus of the proposed regulations is protection of public health, and takes into account concerns related to recycled water and addresses public health concerns. As noted in the ISOR, existing law (Water Code section 13562) requires the State Board to adopt uniform water recycling criteria for Surface Water Augmentation; subject to the condition that a statutorily mandated Expert Panel has made a finding that the criteria would adequately protect public health. The Expert Panel - preeminent in the fields of wastewater and water treatment, microbiological and chemical monitoring, toxicology, epidemiology, risk assessment, and public health protection – made a finding that proposed regulations adequately protect public health. The science-based regulations apply to those choosing to engage in a SWSAP; they are not based on “an old and incomplete voluntary survey” and goals established by legislators are beyond the scope of the proposed regulatory action. Environmental concerns related to the discharge of treated wastewater to the accepting waterbodies will be addressed through the Regional Boards’ permitting process.*

- The commentator stated that “all present and future expert meetings must be open to the public” and expressed concern that “the regulations were not written by the Board, but by an expert committee limited and narrow in membership.”

**Response:**

*As previously noted, although the Expert Panel provided input, the proposed regulations were written by State Board staff and subsequently reviewed by the Expert Panel. The State Board convened an Expert Panel in accordance with existing law, resulting in an Expert Panel with broad experience. The Expert Panel’s meeting minutes were provided on the State Board’s Web site, as well as NWRI’s Web site. In addition, all of the Advisory Group’s meetings were open to the public. Among other things, the Advisory Group consulted with the State Board on the selection of the Expert Panel. The commentator was free to attend those meetings. In addition, as noted in the ISOR, the proposed regulations were also reviewed by a separate group of experts, pursuant to the Health and Safety Code, which was independent from the Expert Panel required under the Water Code. Additionally, the issuance of NPDES permits for individual projects involves a robust public process, including a public comment period and the opportunity to address the relevant regional board at a public hearing.*

- Following reference to hundreds of years of intent to separate wastewater from drinking water, the commentator asserted that proposed regulations will “reverse the momentum of these histories,” stating that wastewater and established drinking water reservoirs would now be combined. The commentator also expressed concerns regarding discharges from the Colfax wastewater plant, a 1999 odor issue, and the proposed regulation’s failure to address such concerns.

**Response:**

*Although experience historically taught humankind to separate untreated (or poorly treated) wastewater from directly affecting sources of drinking water, the two remained connected via the hydrological cycle, with sufficient natural and/or engineered treatment processes differentiating a protected source from one that is not. In fact, many surface water sources used as a raw drinking water supply are influenced by municipal wastewater discharges to some degree. The proposed regulations establish treatment requirements for wastewater that ensure the effluent quality delivered to a raw drinking water source are no less protective than common surface water sources used as raw drinking water sources and known to be protective of public health. Water that leaves the reservoir is then subsequently subject to robust and effective water treatment, before being distributed to customers. The commentator appears to have not taken into consideration the level of treatment the wastewater will undergo, nor the success of other forms of IPR, when opining on this topic.*

*In addition, as noted in the ISOR, the State Board was directed by the California’s legislature to develop and adopt SWA regulations, if a statutorily mandated Expert Panel made a finding that the regulations were protective of public health. As indicated in the ISOR, through the adoption of the proposed regulations, the State Board will meet its statutorily mandated legislative directives. The commentator may wish to consider directing such comments to legislators. Regarding comments about Colfax, the comments are not relevant to SWA and are therefore beyond the scope of the proposed regulatory action.*

- While noting that state law requires the adoption of uniform water recycling criteria, the commentator asserts that the proposed regulations are not uniform.

**Response:**

*The proposed regulation’s minimum standards and requirements would apply to all persons in California intending to choose to engage in SWA, thus being a uniform set of criteria. Although the criteria allow some flexibility, the criteria for being allowed such flexibility is applied uniformly in that the all of the regulated community must meet those criteria.*

- The commentator asserted that the proposed regulations were the result of the “use of experts with narrow and inadequate ranges and areas of expertise to the point of incompleteness of effort.” As an example, commentator 7 stated “the panel was specifically authorized to involve USEPA,” while providing a link and brief description of Christian Daughton’s work associated with personal care product contamination.

**Response:**

*As indicated in the ISOR and noted in previous responses to the commentator, the State Board was required by law to convene a panel of experts for the purpose of advising the State Board on the proposed regulations, and included the need for the panel of experts to make a determination as to whether the proposed regulations would adequately protect public health. The law clearly indicates the areas of expertise required of the panel members. The members were preeminent scientists in those areas and were chosen in consultation with legislatively mandated Advisory Group, which included a representative from the U.S. EPA. Furthermore, the Expert Panel itself included a representative from the U.S. EPA. Emerging contaminants, such as those associated with personal care products, were taken into consideration in the development of the proposed regulations. The claim that the expertise involved during the regulatory process was narrow, inadequate, and incomplete because a particular individual of the commentator's preference was not included, is unfounded. The State Board developed the proposed regulations in accordance with state law.*

▪ Commentator 7 asserted that the State Board's Division of Drinking Water failed to address the environmental impacts of the regulations. In support of the claim, the commentator noted that water discharged from wastewater treatment plants has: "many environmental, water quality, water rights and other purposes;" that it's a mistaken argument that "wastewater discharged into the ocean is wasted," and; that the project "falls under exceptions to the exemption to the cited CEQA exemption."

**Response:**

*The State Board's mandate was to adopt criteria for SWA that would be protective of public health. Other issues, such as water rights, discharges to the ocean, etc., are beyond the scope of the regulations. The commentator has not provided any information or facts supporting the contention that exceptions set forth in CEQA Guidelines section 15300.2 preclude reliance on the exemption set forth in CEQA Guidelines section 13308.*

▪ The commentator stated that the "Federal Clean Water Act Industrial Pretreatment Program needs to be enforced throughout California and Pretreatment audits must be considered as part of allowing surface water augmentation." The commentator then provided his experience with pretreatment programs and noted that pretreatment is integral to the "Clean Water Act, Porter Cologne and safe drinking water laws and programs from biosolids to potable reuse" and noted that the U.S. EPA delegated the pretreatment program to California.

**Response:**

*The proposed regulations do not absolve any entity from having to comply with the laws, regulations, and requirements associated with pretreatment programs. In fact, proposed section 60320.306 specifically references the need to administer an industrial pretreatment and pollutant source control program, and further builds on those requirements.*

- The commentator stated that the “inattention and vagueness regarding unregulated chemicals and contaminants must be dispelled with public lists of results of testing source water for all constituents [sic] of concern.” The commentator then proceeded to mention a number of subjects, concerns, and suggestions including: references to water agency statements at a 2007 law conference; a recommendation that the State Board support the development of MCLs and NLs; a vague reference to “one constituent [sic] of concern group assembled by the Board;” the need to identify “State, USEPA and other including international programs and efforts to create MCLs;” the recommendation that the State Board “needs a state plan to address the identification and management of these constituents [sic], chemicals, compounds [sic], ARB and ARG;” as well as a link to two articles discussing unregulated constituents in drinking water.

**Response:**

*The suggestions, largely consisting of recommendations on how the State Board should be administrating its policies and procedures, are not specific to the proposed regulatory action and are beyond the scope of the proposed regulation. The commentator should note that the proposed regulation includes a requirement to utilize specific advanced treatment processes, as well as extensive monitoring for unregulated contaminants.*

- While noting that the proposed regulations include requirements for utilization of surrogates and indicators, the commentator makes the following suggestion: “An appendix, table or other appropriate means needs to accompany the regulations listing each indicator and surrogate in the regulation and the limitations, discussion of the concerns about the use of specific indicators/surrogates and general concerns about them, and the alternatives to indicators and surrogates. This must be considered in the development of the regulations.” The commentator then asserts that “the use of indicators is widely recognized to be inadequate.” To support his claim, the commentator includes two partial paragraphs from a scientific article. The essence of the partial paragraphs is citing the perspective that bacterial indicators (e.g., fecal and/or total coliforms) “do not always reflect the risk from many important pathogens.”

**Response:**

*The proposed regulations do not utilize the monitoring of bacterial indicators as a means of ensuring pathogens, such as enteric viruses mentioned in the article, are properly addressed. Rather, the regulation requires a SWSAP WRA to demonstrate that its treatment process will result in the significant  $\log_{10}$  reduction requirements cited in the regulation for enteric viruses, as well as the significant  $\log_{10}$  reductions for *Cryptosporidium* and *Giardia*. Surrogates and indicators are used to verify that the treatment processes are functioning as designed, ensuring the proper reduction of pathogens. Because those treatment processes vary, along with the means of ensuring they’re properly functioning, confining indicators to those cited in a regulation would not be functional.*

*Based on the comments, the commentator fails to recognize that the regulation addresses enteric viruses (the focus of the article), without relying on an assumption*

*that low bacterial monitoring results would necessarily mean acceptable levels of enteric viruses. Therefore, the comments provided by the commentator are not relevant.*

*Furthermore, the commentator's broad claim that the use of indicators is inadequate, implied by the commentator to mean all indicators under all circumstances, is not supported by the partial paragraphs cited by the commentator, which refers specifically to bacterial indicators.*

*As previously noted, the commentator should consider that an Expert Panel - preeminent in the fields of wastewater and water treatment, microbiological and chemical monitoring, toxicology, epidemiology, risk assessment, and public health protection – made a finding that proposed regulations adequately protect public health.*

▪ The commentator asserted that, “the regulations must not be approved without comprehensive international review of up to date practices and science on Antibiotic Resistant Bacteria and Genes”. The commentator provided several references in his discussion for consideration, most notably a European Union Commission Joint Research Center (JRC) report and a Scientific Committee on Health, Environmental and Emerging Risks (SCHEER) report. The commentator also referenced excerpts from the Expert Panel’s report on the “Evaluation of the Feasibility of Developing Uniform Water Recycling Criteria for Direct Potable Reuse” (DPR report), including a phrase in the report stating, “...finished potable water is likely to reduce ARB and ARG concentrations in recycled water to levels well below those found in conventional treated drinking water” and recommendations made by the Expert Panel on the subject of antibiotic resistant bacteria (ARB) and antibiotic resistant genes (ARG). The commentator describes the former finding from the Expert Panel report as a philosophical statement.

***Response:***

*As noted in the ISOR, the adoption of the proposed regulation is contingent on a statutorily mandated Expert Panel making a finding that the proposed criteria would adequately protect public health. The Expert Panel made such a finding and the State Board followed the statutorily mandated process for the development of the regulations, which also included another scientific review from a panel of experts independent from the Expert Panel.*

*As noted by the commentator, the JRC and SCHEER reports (referenced by the commentator) concern water reuse in agricultural irrigation and aquifer recharge. The subject of the proposed regulations is SWA. In addition, while citing the SCHEER report the commentator expresses that the report “documents issues and factors that demonstrate the need for [r]egulations and reinforces our support for immediate further work on the regulations.” Indeed, the State Board is proposing to adopt regulations.*

*Regarding the commentator's references to the Expert Panel and their report, it appears the commentator misconstrued the nature of the Expert Panel findings and recommendations. For example, when asserting that the Expert Panel's finding in its DPR report was a philosophical statement, the commentator failed to recognize the data detailed in the report supporting the Expert Panel's statement, which indicate significant*

*reductions in ARB and ARG with less robust treatment than required by the proposed regulations. The commentator also did not include the full context of Expert Panel's statement, which began with "Considering all the available information,...". Thus, the State Board disagrees that the Expert Panel's statement was a philosophical statement. With respect to the Expert Panel's recommendations in their DPR report, the commentator claims the Expert Panel's recommendations state that, "we should be more guarded," yet the Expert Panel does not. That said, the State Board agrees with the Expert Panel's recommendations and that concerns with ARG and ARB should be addressed at a broader national level. After all, there are always benefits to the scientific community from additional research. Moreover, the Expert Panel that authored the DPR report cited by the commentator (which is not the subject of the proposed regulation), is the same Expert Panel that made a finding that the proposed regulation would adequately protect public health.*

▪ While providing the statement "Walkerton, Canada E.coli strain 517:H7 dangerous outbreak and Flint criminal prosecutions for saying water is good when it is known otherwise" and citing background related to those incidents, the commentator asked the following questions: "Where is the line between the water boards, water sources and water suppliers saying or implying in these regulations and in this regulatory process that the augmented drinking water would be safe? What is this line when these regulations are issued without attention to identified potential hazards to the public and to the environment?"

**Response:**

*The incidents described by the commentator are not applicable to the proposed regulatory action. With respect to the commentator's questions, which may have been intended as rhetorical, a statutorily mandated Expert Panel – which was **not** composed of "water boards, water sources and water suppliers" – made a finding that the proposed regulation would adequately protect public health.*

▪ The commentator expressed the desire for the comment period to have been longer "so that the public and the Board can get involved." The commentator also noted that he asked for 10 minutes to speak during the public hearing, but was limited to three minutes.

**Response:**

*To ensure sufficient time for public review and comment, the Administrative Procedure Act establishes minimum timeframes for which a proposed regulation must be available to the public for comments. The State Board exceeded the statutorily mandated minimum timeframe.*

*The State Board chose to have a public hearing on the proposed regulations, which included time limits to ensure a schedule would be maintained that would allow each member of the public time to present oral comments. There is no limit with respect to written comments.*



**GC10 (Commentator 5):**

Commentator 5 submitted a letter that included a list of 20 specific questions, as well as several comments interspersed throughout the letter. The comments varied and were primarily general in nature, as opposed to comments directed toward specific regulatory text, comments directed at any section, or requirements in the proposed regulations. As a result, the comments and opinions presented by the commentator are being addressed as a general comment, which is summarized below. The numbers assigned to the comments below correspond to the numbered comments provided by the commentator.

1. “Has or will staff be directed to first focus on fact finding and then focus on drafting the language of the new rule(s)?”

**Response:**

*The “fact finding” aspect of the regulatory process occurred prior to drafting the proposed regulations.*

2. “What outputs are being sought, and what is required organizationally and operationally to best serve the desired goals?”

**Response:**

*As noted in the ISOR, the intent is to adopt uniform recycling criteria for surface water augmentation that would adequately protect public health. Such projects would be issued permits and be overseen by the State Board and Regional Water Quality Control Boards.*

3. “Is it the Board’s hope that Staff will develop performance-based standards and incentives that enable individual PWS operators to do the right thing?”

**Response:**

*The proposed standards are included in the proposed regulations. The proposed regulations do not inhibit PWS operators from the ability to do the right thing. PWS (and WRA) compliance with the proposed and existing regulations will result in public health being adequately protected.*

4. “Will the Board direct Staff to do the fact finding necessary to consider the quality of the effluent prior to discharge into a reservoir used by one or more PWS’?”

**Response:**

*With respect to the proposed regulations, the “fact finding” aspect of the regulatory process occurred prior to drafting the proposed regulations, which included consideration - by the State Board, as well as the scientific peer reviewers and the Expert Panel identified in the proposed regulatory action - of the quality of the effluent prior to discharge to the reservoir. It should be noted that subsequent fact-finding will occur, for example, during the review of the SWSAP’s engineering report and issuance of a permit for the SWSAP.*

- Commentator 5 suggested that, “Adding the effluent to surface water impoundments creates dilution, and this might be an unintended incentive for lax characterization, monitoring, and control. Risk transfer might be unacceptable when operators can take shelter in ‘the State made me do it.’”

**Response:**

*The proposed regulatory action does not require anyone nor any entity to engage in surface water augmentation. Furthermore, the proposed regulations include minimum requirements for ‘characterization, monitoring, and control’ for those that choose to engage in surface water augmentation. Treatment and water quality requirements are the primary methods used in the proposed regulation to assure acceptable recycled water quality. Mixing recycled water with reservoir water is considered a supplemental reliability benefit.*

5. “Will the tertiary treated water added back into the drinking water system be at all moments as safe as the normal drinking water without blended POTW effluent?”

**Response:**

*The wastewater will be subject to primary and secondary treatment, filtration, disinfection, and advanced treatment, as described in the regulations, prior to being discharged to the surface water reservoir. After that, the reservoir water will then be further treated by the PWS’s SWTP before being distributed to consumers for consumption. Drinking water from a surface water augmentation project complying with the proposed regulation will be no less safe than drinking water using conventional sources.*

6. “Will there be potential excursions and certain trace contaminants for which dilution will be relied upon for attenuation, either by design or by accident?”

**Response:**

*Attenuation by the reservoir is not part of the treatment process. In other words, the attenuation by the reservoir is not relied upon to meet contaminant limits or standards. Instead, the reservoir provides an additional means of reliability, as well as time to respond to and address a potential water quality excursion in a timely manner.*

7. “How will safety be assured in light of the fact that at any moment there could be a discharge upstream of the public sewerage treatment plant (POTW) that carries unusual and serious consequences?”

**Response:**

*The proposed regulations establish a number of requirements to address the concerns, including mandates for enhanced source (sewage entering the POTW) control, monitoring, advanced treatment to reduce a wide variety of contaminants, reservoir attenuation of contaminant spikes, etc.*

- The commentator expressed appreciation that the focus of the regulations would be ensuring safety. The commentator then noted two considerations. The first

suggested that, “it will be necessary to engage in outreach, including mainstream media advertising, to build public understanding and trust in the efficacy of the chosen administrative and engineering controls.” The second suggested that the “same educational and behavioral outreach needs to help ensure that all sewer users, including residential users, are refraining from the discharge of pollutants that add significant risk to the wastewater reuse loop.”

**Response:**

*Regarding the first suggestion, the proposed regulations mandate a minimum of three public hearings prior to operation of a SWA project. That said, it is not the State Board’s place to advertise for (or against) an entity that may want to engage in SWA. The purpose of the proposed regulatory action is to establish uniform criteria for SWA that are protective of public health. The process and methods a project proponent utilizes to engage/educate its customers (beyond those required in the regulation) or, for example, city council members, to make the decision whether or not to engage in a SWA project is responsibility of the project proponent.*

*Regarding the second suggestion, the State Board agrees. Enhanced source water control requirements (sewage entering the POTW) are included in the proposed action.*

8. “Will any funding be available for local advertising and education to the water users?”

**Response:**

*The question is beyond the scope of the proposed regulatory action. The purpose of the proposed regulatory action is to establish minimum requirements for assuring the public’s health is adequately protected.*

9. “Does the Board anticipate additional testing requirements for initial characterization, and will those include an “open scan” for all possible manmade chemicals, or will the water reuse simply be tested according to the existing drinking water schema?”

**Response:**

*Yes, the State Board anticipated additional constituent monitoring beyond those required via drinking water standards. Proposed Section 60320.320, in particular, addresses the topic.*

10. “If testing will simply be in accordance with existing maximum contaminant concentrations, does Board and Staff feel the existing schema is adequate, and if so, why?”

**Response:**

*Please see the previous response.*

11. “What directions will be given to Staff regarding the point of compliance, the place where compliance samples will be drawn for testing?”

**Response:**

*In general, as noted in the proposed regulations, compliance monitoring will take place prior to discharge into the reservoir. In addition, the PWS will be required to demonstrate compliance with drinking water standards prior to supplying the public with drinking water (although some drinking water standards, such as those pertaining to disinfection byproducts, require compliance monitoring within the distribution system).*

12. “How can a public trust the water when it knows itself what tends to go down the drain and can only imagine what might go down the commercial POTW drain?”

**Response:**

*The question may be rhetorical in nature, since the State Board could not know how to gain the trust of each individual; however, the State Board consulted with an Expert Panel to review the proposed regulations and make a finding as to whether the criteria would adequately protect public health. Their finding that the criteria would adequately protect public health, coupled with a peer review from an additional set of experts indicating that the criteria would be adequately protective of public health, as well as the State Board’s experience and expertise, should provide a significant sufficient level of trust for most of the public. The public water systems proposing a project covered by the proposed regulation can develop a public outreach program that builds on the requirements of the proposed regulations.*

▪ While opining on treated sewage being added into the equation, commentator 5 (perhaps rhetorically) asked, “Who can say what the trace contaminants are, let alone whether or not they are safe individually and synergistically at the concentrations present at the end of a faucet?”

**Response:**

*State law (Water Code section 13565(a)(2)) required the Expert Panel to include, among other qualifications, a toxicologist, an epidemiologist, and a microbiologist. The Expert Panel made a finding that the proposed regulations would adequately protect public health. The State law also required State Board staff to consider specific sources of information in the development of the regulations that directly address the types of contaminants that could be present in wastewater.*

▪ The commentator questioned the point at which compliance is measured and suggested that, “the best point is in the water intended for reconsumption prior to it being added back into any point in the drinking water system.”

**Response:**

*Please see previous comments, where the issue was addressed in more detail. The proposed regulations require testing for compliance with MCLs prior to blending, which would be more protective and conservative than monitoring for compliance after blending. That said, the proposed regulations do not exempt a PWS from its compliance monitoring under existing drinking water laws and regulations.*

13. “Should the Board direct Staff to look trace contaminants from purely a public health risk perspective, without consideration of economic factors?”

**Response:**

*Proposed section 60320.320, in particular, addresses the need to monitor for additional chemical and constituent monitoring.*

▪ The commentator stated that, “It may be possible that POTW effluent reuse is economically impossible for many PWS’ if they are not allowed to transfer risk to the water consumers as compared to the current supply.”

**Response:**

*If a PWS and/or a WRA determines that a SWA project would not be economically desirable, they would not be expected to choose to engage in a SWA project. In addition, the proposed regulations require the project proponent to first demonstrate adequate financial capability (as well as technical and managerial capability). There is no process established to allow a ‘transfer of risk to the water consumers’ for any reason, including economic. The proposed regulations are designed to achieve limits on risk (to ensure safety) no less than those expected of other drinking water supplies. In other words, the proposed regulations are designed to meet or exceed the same risk-based goals used to regulate conventional water sources.*

14. “What process (equation?) will be used to find acceptable compromise in the face of public risk versus PWS user cost?”

**Response:**

*There is no compromise between public health and economic considerations with the proposed regulations. Please see previous response.*

15. “Are their legally-prescribed limits to what Staff can do as far as balancing cost versus safety, and if so is there anyway the public can help eliminate some of the barriers?”

**Response:**

*When a drinking water maximum contaminant level is established, the Health & Safety Code requires that the MCL consider economic and technical feasibility, with emphasis on public health, when establishing the MCL. That process is beyond the scope of the proposed regulatory action.*

▪ The commentator stated, “Economic considerations will require weight in the process. Compromise will be necessary and will cause some degree of risk. If the public is made aware of legislative hurdles to a practicable solution, perhaps watchful persons can use that knowledge to approach the responsible Legislators in a positive way.”

**Response:**

*The comment is beyond the scope of the proposed regulatory action. That said, the commentator should note that with respect to the proposed regulations, there is no compromise between public health and economic considerations.*

16. “Does the Board and Staff anticipate language to try to curtail reuse being piped to some users while not to others?”

**Response:**

*The proposed language does not include this subject. The purpose of the proposed regulations is to establish criteria that would adequately protect public health. It would be the responsibility of the PWS and its customers to decide whether to proceed with a project covered by the proposed regulations.*

17. “How can we avoid this, but in a way that does not inadvertently drive cost for local PWS’?”

**Response:**

*Although it is unclear what “this” refers to, the State Board has previously addressed this subject, raised by the commentator 5, in this (GC10) section. Please refer to previous responses provided.*

18. “How will local PWS realities be characterized prior to proceeding with drafting the language of new rules?”

**Response:**

*The language for the proposed rule has been drafted. The purpose of the public comment period is to gather and respond to public comment on the proposed regulations. The State Board recommends that the commentator refer to the proposed regulatory language (and the above responses) to determine whether local PWS realities will be, or have been, characterized.*

- The commentator opined about potential impacts on disadvantaged communities.

**Response:**

*The comment is beyond the scope of the proposed regulatory action. However, it should be noted that the minimum treatment requirements included in the proposed regulation apply to all communities that may choose to engage in SWA and were developed to be protective of public health, regardless of the composition of the public, including economic or social status. Additionally, the State Board considers impacts to disadvantaged communities as part of its decision-making; however, it is unclear how the proposed regulations will impact disadvantaged communities in a different or disproportionate manner when compared to other communities.*

19. “Would the Board be willing to direct staff to release a written communication plan for public review and comment prior to undertaking rule making work?”

**Response:**

*The Administrative Procedure Act establishes criteria for the purpose of ensuring that the public has the opportunity to review and provide comments on proposed regulations. The notice of proposed rulemaking and the documents associated with proposed regulatory action serve the suggested purpose.*

▪ While stating that “rules that finally emerge for thirty-day review often seem to go far beyond anything presented in the public meetings,” the commentator expressed concerns about “conceptual discussions at public meetings often being a far cry from the language the finally emerges at the end.”

**Response:**

*The regulatory action must conform to the requirements of the Administrative Procedure Act (APA), which requires a public comment period of no less than 45 days. All relevant documents, including the full text of the regulations being proposed, was included for public review and was available prior to the public hearing. Per the APA, any substantive changes to the proposed regulations or the addition of further supporting references must be provided to the public for an additional comment period. The commentator is apparently referring to previous State Board actions that did not have to comply with the same requirements under the APA as the proposed regulatory action.*

20. “Finally, does the Board intend to ask staff to be sure that the rulemaking drives toward local empowerment under a performance-based process?”

**Response:**

*The language for the proposed regulations has been drafted. The purpose of the public comment period is to gather and respond to public comments on the proposed regulations, and make any necessary revisions. The State Board recommends that the commentator refer to the proposed language (and the above responses) to determine whether the regulation “drives toward local empowerment under a performance-based process”.*

▪ While opining about the need to provide safe water for human consumption, the commentator summarized and reiterated various concerns, subsequently concluding that allowing a publically-owned treatment works’ effluent to be utilized by a PWS will “require real innovation.”

**Response:**

*The State Board is proposing to establish uniform water recycling criteria that adequately protect public health, as mandated by the Water Code (section 13562). Please see the responses previously addressing the comments by commentator 5 in this (GC10) section, as well as the documents that were provided for public comment.*

**GC11:**

Although supportive of recycled water projects because they can be beneficial to the environment by reducing the reliance on surface water diversions, commentator 4 asserted that the proposed regulations could be improved “if they contained the necessary requirements to ensure the protection of natural resources as a result of surface water augmentation projects.” The commentator provided examples of concerns related to impacts on water bodies resulting from reduced discharges (e.g., dewatering of effluent-reliant habitats resulting in ecological degradation of public trust resources) and direct impacts to reservoir water quality affecting reservoir ecosystems. The commentator opined that “it appears that the Expert Panel and the scientific peer review pursuant Health and Safety Code §57004 limited their evaluations of surface water augmentation to parameters for the protection of potable use of reservoir water and did not consider criteria for the protection of ecological resources.”

**Response:**

*The proposed SWA regulations would establish minimum uniform water recycling criteria for the purpose of adequately protecting public health with respect to the planned placement of recycled water into a surface water reservoir that is used as a source of domestic drinking water supply. National Pollutant Discharge Elimination System (NPDES) permits ensure that such discharges do not adversely affect public health **and** that healthy ecosystems are maintained. The proposed regulations only establish minimum criteria for the protection of public health and do not preclude more stringent requirements being necessarily administered under an NPDES permit, to ensure healthy ecosystems are maintained. The proposed regulations would not preclude Regional Boards, via their authority and responsibility, from imposing more stringent requirements when issuing a waste discharge and/or water recycling permit to water recycling agencies that may choose to engage in SWA, including having to meet NPDES requirements established by the U.S. Environmental Protection Agency. Some of the commentator’s concerns will also be addressed via completion of the SWSAP’s CEQA process.*

**GC 12 (Commentator 1):**

Commentator 1 submitted a letter providing a range of comments, both general and specific in nature. Because the specific concerns were primarily focused on the ISOR, as opposed to comments directed toward specific regulatory text or comments directed at any section or requirement in the proposed regulations, the comments and concerns presented by the commentator are being addressed as a general comment, which are summarized as follows:

- The commentator’s introductory comments raised a number of issues. The commentator indicated that, in response to previous State Board actions, the commentator had provided numerous documents on the impacts of very low doses of minute amounts of estrogenic chemicals (later referred to by the commentator as endocrine disrupting chemicals) and the commentator included some of them as part of her comments. Commentator 1 asserted that the State Board has neither commented on nor disputed them. Further, focusing on endocrine disrupters, the commentator



stated that, to her knowledge, there are no studies that look at the combined exposures or multiple routes of exposure to individuals from such chemicals. In addition, the commentator asserted that the Scientific Panel (presumably referring to the Expert Panel convened by the State Board) just examined epidemiological studies and not the actual biological studies conducted by endocrinologists themselves; and that there were no endocrinologists on the Panel. Commentator 1 also indicated that there might not be reliable technologies that can regularly remove all endocrine disrupting chemicals from the waste stream, questioned the consequence of treatment failures, and lamented that the focus was on accomplishing advanced treatment and getting the toxins out and not on a range of biological results. The commentator further claimed that the State Board has ignored the endocrine impacts as it moves forward in the practice of adding treated wastewater to the drinking water supply. Additionally, the commentator asserted that such chemicals are linked to health effects in humans ranging from cancer to transgender issues, and stated that, "Meeting drinking water MCL's says nothing about avoiding these problems, and unfortunately, Health Departments have avoided this issue." Finally, the commentator expressed concern about allowing permits and projects to move forward until the concerns expressed in the comment letter regarding potential impacts from endocrine disrupting chemicals are fully addressed.

**Response:**

*The commentator's reference to previous personal experiences with other State Board actions, dating back to 2008, are not specific to the proposed regulations and are beyond the scope of the proposed regulatory action. With respect to the commentator's concerns regarding endocrine disrupting chemicals and their potential impact on human health, the State Board shares the commentator's concern. Indeed, the State Board considered the health impacts associated with the presence of potential endocrine disrupting chemicals (as well as other CECs). However, because it is not possible to identify every chemical contaminant in wastewater and its potential as an endocrine disrupter, the proposed regulations utilize additional means for addressing the concern. For example, the proposed regulations are intended to identify an array of chemical contaminants in the wastewater source, including those that may be potential endocrine disrupters, through both source control measures and analytical monitoring. In addition, the required minimum advanced treatment processes are designed to remove a broad spectrum of chemicals, including those identified through source control and monitoring, as well as those chemicals that have previously been identified as possible endocrine disrupters. As a result, the effluent of the advanced treatment processes that will be augmenting an existing raw drinking water reservoir, will lead to a drinking water that will be no less protective of public health than other sources of surface water used for drinking water. Furthermore, the proposed regulations are designed to address reliability issues and responses to failures through the Operations Plan, continuous monitoring of treatment processes' performance, and other requirements.*

*In addition, while keeping in mind the advanced treatment processes required by the proposed regulations address more contaminants than regulated MCLs, the State Board disagrees with the commentator's contention that "Meeting drinking water MCL's says nothing about avoiding these problems, and unfortunately, Health Departments have avoided this issue." For example, perchlorate, an anti-thyroid contaminant is a*

*regulated contaminant with an established MCL for drinking water because of its potential effects on an endocrine gland (the thyroid). Further, while the State Board agrees that some contaminants have adverse effects may occur at low concentrations, there will be less endocrine disruption at low exposures to the contaminant in question than there is at higher exposures. It should also be noted that for non-carcinogens in drinking water, risk calculations include a term called the “relative source contribution,” which takes into account exposures from food, air, etc., in addition to exposures from drinking water. Carcinogens are subject to stringent regulations too, recognizing that there may be cumulative risks from exposures to multiple contaminants.*

*Regarding the makeup of the Expert Panel, as noted in the ISOR, the Water Code mandated minimum requirements for the makeup of the Expert Panel. Those statutory mandates were met. The Expert Panel included a toxicologist and health effect issues were examined. The State Board believes that the proposed regulations have sufficient safeguards to ensure public health is protected, which will allow the permitting of projects in a prudent manner.*

Commentator 1 provided a number of comments apparently meant to pertain to the ISOR, as opposed to objections or recommendation to the specific adoption, amendment, or repeals in the proposed regulations or the procedures utilized by the State Board for the proposed regulatory action. Nevertheless, the State Board offers the following summary of comments and responses:

- The commentator indicated that the proposed regulations mention the need to meet MCLs. She stated that if the biological studies supporting the MCLs did not evaluate the health effects on certain sensitive populations and did not address the concept of low dose impacts, then the studies might not provide the full range of risk possibilities.

**Response:**

*The process by which MCLs are developed is not germane to the proposed regulation. However, the commentator may wish to note that the section of law under which MCLs are developed may be found in the California SDWA (section 116365 et al.). The process requires that risk assessments for contaminants consider the adverse health effects the contaminant has on members of subgroups that comprise a meaningful portion of the general population, including, but not limited to, infants, children, pregnant women, the elderly, individuals with a history of serious illness, or other subgroups that are identifiable as being at greater risk of adverse health effects than the general population when exposed to the contaminant in drinking water.*

- The commentator made the following statement: “On page 16 [of the ISOR] it mentions that a report will be required if more than 10% of samples for quarter don’t meet surrogate or operational standard. That means that 10% can exceed current legal standards, not to mention exceed the true level at which harm can occur with ED (Endocrine Disrupting) chemicals.”

**Response:**

*The 10 percent exceedance value refers to meeting operational design standards for the advanced treatment process. As noted in the ISOR (page 15), “one could not necessarily conclude that a failure to meet a surrogate and/or operational standards would necessarily result in effluent being produced that may not ultimately be adequately protective of public health. However, an inability to consistently meet the surrogate and/or operational standards could be an indication of poor RO and AOP treatment operation; increasing the likelihood that the effluent produced could be substandard.”*

*A 10 percent exceedance does not mean that 10 percent of quarterly samples will exceed current legal standards (i.e., MCLs), nor does it mean that there will be excessive exposure to unregulated contaminants, including endocrine disrupting chemicals. Monitoring and compliance with MCLs in the effluent discharged to the reservoir is established via proposed sections 60320.302(h) and 60320.312. Furthermore, the advanced treatment effluent monitoring results would not be reflective of the drinking water served to the public since the effluent will be attenuated by existing water in the reservoir and be further treated at the PWS’s SWTP prior to distribution. The monitoring required in the proposed regulation does not preclude a PWS from having to comply with existing drinking water monitoring and compliance requirements.*

▪ The commentator expressed concerns similar to those provided in the commentator’s introductory statements. In addition, the commentator stated, “I wonder about aging infrastructure and leaking toxins from pipes. Are any lead pipes still used? Does the plastic pipe leach endocrine disrupting chemicals in its life history? Furthermore, there are many pipes involved after the final test and before reaching the mouth of a human. What are the potential effects, especially in poor neighborhoods where upkeep is minimal, to the water actually being used? Is that considered at all, especially since many of these toxins bioaccumulate?”

**Response:**

*Regarding the comments that are similar in nature to the introductory comments, please see the previous responses. Regarding infrastructure concerns, including potential environmental justice concerns, those issues are beyond the scope of the proposed regulatory action.*

▪ The commentator reiterated concerns similar to those provided in the commentator’s introductory statements, stating, “Since the State does not consider endocrine disruption controls as yet, how will having certified labs and workers help in regards to such exposures? It doesn’t seem as though quarterly monitoring will be adequate to control toxins that harm in the parts per billion range. Also, you will be dealing with surrogates, so most chemical toxins won’t even be directly monitored.”

**Response:**

*Please see the previous responses to comments provided on these subjects by the commentator. In brief, assurance of the quality of the water being protective of public health is not dependent on quarterly monitoring.*

- Similar to commentators 7 and 12, commentator 1 expressed concern regarding antibiotic resistant bacteria and posed the question, “Are pathogens in the water tested for antibiotic resistance? How can quality of drinking water be assured if not?”

**Response:**

*The proposed regulations do not require pathogens to be tested for antibiotic resistance. Rather, the proposed regulations are designed to reduce pathogens whether they are antibiotic resistant or not. The proposed regulations will achieve pathogen removal that will result in reducing the risk of infectious disease transmission to a level that is equivalent to or below the acceptable risk level for drinking water not associated with the use of recycled water. The commentator may wish to see the comments from commentators 7 and 12 and responses provided regarding this topic. In brief, the use of conservative surrogates and operational parameters with continuous monitoring provide an ongoing assurance that the treatment processes are achieving the pathogenic organism removal and/or reduction for which they were designed and demonstrated to achieve.*

- Regarding unregulated contaminants, commentator 1 opined, “It seems like possible treatment barriers should be well established before implementation begins.” In addition, while citing text in the ISOR regarding actions to be taken in the event of treatment failures, the commentator noted that “Some failures may be more serious than others and all should be reported immediately, if possible.”

**Response:**

*The text cited by the commentator refers to treatment processes designed to achieve pathogenic reductions. Although a broad interpretation of ‘unregulated contaminants’ may include pathogenic organisms, CECs are more commonly considered to be synonymous with unregulated chemical contaminants. Regarding pathogens, please see the previous responses. Regarding CECs, please see previous responses and note that utilizing well-established treatment barriers (the advanced treatment process) for the removal of CECs is a requirement of the proposed regulations. With respect to failures, the State Board agrees that some failures are more serious than others and, accordingly, the proposed regulations require follow-up actions commensurate with the seriousness of the failure. The commentator should also keep in mind that the highly treated recycled water is discharged into a reservoir under specific conditions (required by the proposed regulation) that allow an adequate opportunity to respond to the short-term failure before reaching the PWS’s SWTP, which provides yet another treatment barrier.*

- Commentator 1 questioned the relationship between the table on page 20 of the ISOR and the proposed regulations. In addition, concerns were expressed regarding missed communication and their impact, and questioned what enforcement actions may be taken to assure “treatment steps are completed appropriately”.

**Response:**

*The table shows how the overall log<sub>10</sub> pathogenic reductions for enteric virus, Giardia cysts, and Cryptosporidium oocysts were derived. As described in the ISOR, the overall log<sub>10</sub> pathogenic reductions provided the basis for the requirements in the proposed regulations related to pathogenic organism control. Regarding communication breakdowns, the regulations establish a set of criteria and requirements that help assure proactive actions take place, in the event of a communication breakdown, such that there is sufficient time to respond to an incident to ensure the public is adequately protected. Necessary enforcement actions will be taken by the appropriate permitting/regulatory agency. Those actions are beyond the scope of the regulations.*

▪ The commentator asked the following: “Why is quarterly monitoring of wastewater to be added to reservoir, considered adequate, especially since that appears to be the most risky of the drinking water/ wastewater combination? We also wonder how frequently pathogens will be monitored?” In addition, while noting that the level of monitoring is very detailed, the commentator opined that it is “relatively infrequent.”

**Response:**

*Please see the previous responses to comments provided on these subjects by the commentator. Treatment performance would be required to be continuously monitored utilizing surrogates. The State Board does not believe that continuous monitoring of treatment processes is infrequent.*

▪ While expressing concerns about treatment failures, commentator 1 questioned what happens in an emergency.

**Response:**

*During an emergency resulting from a treatment failure that would impact a SWA project, the SWSAP WRA and SWSAP PWS would implement the procedures in the joint plan, operations plans, and/or emergency plans. The details of such procedures would be dependent on the circumstances, the SWSAP WRA and SWSAP PWS, and the nature of the emergency. For example, the proposed regulations require a SWSAP PWS to have a plan in place that would include moving to an alternative supply and no longer use the reservoir in question, or move to other treatment mechanisms.*

▪ While referring to page 26 of the ISOR regarding additional chemical and contaminant monitoring, commentator 1 asked, “What would it take to get the State to require testing for EDs on a regular basis? If the State won’t even acknowledge the existence of low dose effects of endocrine disrupting chemicals, what good would it do to measure all the others?.” The commentator further questioned the role of endocrine disrupting chemicals with respect to “the burgeoning explosion of massive health care facilities in major population centers.”

**Response:**

*The commentator’s assertions in form of questions and opinions on “the burgeoning explosion of massive health care facilities in major population centers” are not directed*

*at the proposed regulations and appear rhetorical in nature. Nevertheless, the commentator may wish to note that additional monitoring may be required for contaminants that are known or suspected to be present at levels anticipated to be of health concern. For example, the proposed regulations require a source control program to identify chemicals of concern, including potential endocrine disruptors, at levels that would result in necessary additional monitoring. Perchlorate, an endocrine disrupting chemical (previously mentioned), serves as an example of a contaminant moving from an unregulated contaminant to one having an MCL.*

▪ Reflecting further on endocrine disrupting chemicals and noting the mandate that an Expert Panel make a finding that the SWA criteria adequately protect public health, the commentator posed the following question: “How can you not do more with this regulation before you head into programs that continue to inject disease causing chemicals directly into our bodies, our children and our planet?”

**Response:**

*Endocrine disruptors, like other chemicals of concern and those of emerging concern, continue to be the subject of the State Board’s attention and were considered in the development of the proposed regulations. The State Board has met the statutory mandates for the establishment of the proposed SWA regulations, including the requirement that the State Board shall not adopt SWA criteria “unless and until the expert panel adopts a find that the proposed criteria adequately protect public health.” The Expert Panel has made such a finding.*

▪ In closing, the commentator reiterated concerns regarding endocrine disruptors, questioned the makeup of the Expert Panel, expressed concerns about ethical nature of NWRI (including an excerpt from Wikipedia on the topic of conflict of interest), assertions of collusion between NWRI and the regulated community, and assertions that the State Board engaged in “a major effort involving this organization and State Water Board staff included public relations campaigns to convince people that drinking wastewater is a safe thing to do.”

**Response:**

*The State Board supports the commentator’s right to express opinions and make such assertions; however, the State Board strongly disagrees with them. Although the comments warrant no response because they’re not a specific objection or recommendation regarding the adoption, amendment, or repeal of the proposed regulation, the State Board offers the following general thoughts: The sole objective of the State Board was the development and adoption of SWA regulations that would be protective of public health. After all, the employees of the State Board also make up a portion of the public whose PWS may be choose to engage in a SWA project.*

*The State Board followed and met the statutory requirements set forth by California’s legislators for the very purpose of ensuring SWA criteria would be protective of public health. Furthermore, notwithstanding the opinions expressed by commentator 1 regarding the Expert Panel, the commentator appears to fail to take into consideration that an additional scientific peer review was performed by other experts, from the public*

*sector, which was separate and independent of the Expert Panel's review. The State Board had no input regarding the selection of the scientific peer reviewers. Please see previous responses regarding concerns associated with endocrine disruptors.*

### **Specific Comments and Responses**

#### **Article 1, Chapter 3, Division 4, Title 22**

##### **Section 60301.120:**

*No comments received.*

##### **Section 60301.450:**

*No comments received.*

##### **Section 60301.850.5:**

*No comments received.*

##### **Section 60301.851:**

*Commentator 15 expressed concern that the proposed definition doesn't address the situation where recycled water is placed into a constructed water conveyance system upstream of a reservoir and, therefore, requested the State Board to expand the definition.*

##### **Response:**

*The State Board's charge was to establish criteria for "surface water augmentation" that would adequately protect public health. The scope of proposed section 60301.851 is consistent with the definition of "surface water augmentation" that was established in section 13561(d) of the Water Code at the time the mandate to adopt regulations for SWA was established (2010's Senate Bill 918). Although the State Board recognizes that utilizing constructed systems conveying water to the reservoir (such as the California Aqueduct and Colorado River Aqueduct) may broaden available options, it is currently beyond the scope of the proposed regulatory action.*

*It should be noted that 2017's Assembly Bill 574 (Chapter on 528) – operative January 1, 2018 - established a definition for "reservoir water augmentation", which includes consideration of recycled water placed into a constructed system conveying water to such a reservoir. As a result, the State Board anticipates it will be addressing the commentator's recommendation in a future regulatory action, as recommended by Assembly Bill 574.*

**Section 60301.852:**

*No comments received.*

**Section 60301.853:**

Commentator 20, while comparing the proposed SWA regulations with the existing regulations for GRRP and expressing a desire for consistency between the two, noted that the former uses “SWSAP WRA” while the latter uses “Project Sponsor”.

**Response:**

*While existing section 60301.670 and the existing GRRP regulations are not part of the proposed regulatory action, the State Board offers the following thoughts: although the desire to use the same terms for agencies involved in all forms of IPR projects may be understandable in some circumstances, the State Board believes two different terms, for two different forms of IPR, would be beneficial as well. In addition, SWA involves two entities – the SWSAP WRA and the SWSAP PWS – which could be considered ‘project sponsors.’ As a result, the single term ‘project sponsor’ was not sufficient. The State Board will consider the comment in future revisions to the Groundwater Replenishment regulations.*

*Please note: After the release of the proposed regulations for the 45-day comment period, the State Board noticed that the reference in this section, intended to be the “Regional Water Quality Control Board,” was missing the word “Control.” Therefore, the correction was included in the proposed regulations provided for the subsequent 15-day comment period. [See “Revisions Following the 45-day Comment Period”]*

**Article 5.3, Chapter 3, Division 4, Title 22**

**Section 60320.300:**

*No comments received.*

**Section 60320.301:**

**Subsection (a):**

Commentator 20, while comparing the proposed SWA regulations with the existing regulations for GRRP and expressing a desire for consistency between the two, noted that the former refers to “State Board” in subsection (a), while the latter uses “Department” and defines it as “the California Department of Public Health or its successor with authority to regulate public water systems.”

In addition, commentator 20 questioned why the proposed SWA regulations refer to the submittal of a “joint plan”, while the GRRP regulations refer to a “report.” Further, the commentator purports “report” to be defined in the GRRP regulations, while “joint plan” is not.



**Response:**

*Existing section 60301.180, previously adopted with the GRRP regulations, is not part of the proposed regulatory action. Nevertheless, it should be noted that at the time the GRRP regulations were adopted, California's Drinking Water Program was within California's Department of Public Health, with its transfer to the State Board imminent, but still pending. With that knowledge, section 60301.180 was crafted to accommodate the potential transfer. On July 1, 2014, subsequent to the adoption of the GRRP regulations under the Department, the transfer became effective. Therefore, the SWA regulations refer to "State Board" accordingly. The State Board anticipates addressing this issue via future revisions to the GRRP regulations, but that is beyond the scope of this proposed regulatory action.*

*As previously noted, the existing GRRP regulations are not part of the proposed regulatory action. As acknowledged by commentator 20, the requirement in GRRP regulations is different. So, although a similar term could be used, it should not be unexpected that a different term may be used for a different requirement. The State Board finds that "joint plan" is more descriptive of its purpose than "report." That said, the requirements of the joint plan are provided in proposed section 60320.301(a) and are not dependent on the terminology used, any more than the requirements for the report in GRRP regulations being dependent on it being referred to as a "report." It should also be noted that the GRRP regulations did not include a definition for "report."*

Commentator 15 recommended that the roles and responsibilities of a SWSAP WRA, SWSAP PWS, and reservoir owner and operator should be clearly defined in a joint plan to ensure operating and compliance responsibilities are appropriately designated. While identifying section 60320.322 as the section requiring a joint plan, the commentator suggested that it be further expanded to ensure responsibilities of the parties for all phases of the project are established.

**Response:**

*The State Board agrees that close coordination between all parties involved in a SWSAP is crucial, which is the primary reason for the requirement for developing a joint plan. The general criteria for a joint plan are identified in proposed section 60320.301, which includes a requirement for a SWSAP WRA to notify a SWSAP PWS of operational changes that may adversely affect the quality of the recycled water to be delivered to the surface water reservoir. Recognizing that detailed and specific roles and responsibilities of the parties may vary greatly, the State Board proposed general and broad criteria so that the details and specific roles and responsibilities may be addressed with consideration of case-by-case circumstances. That said, to the extent possible, the regulations establish specific responsibilities throughout the proposed regulations for both the SWSAP WRA and the SWSAP PWS.*

*Notwithstanding the parties' obligations and responsibilities under the state and federal Clean Water Act and Safe Drinking Water Act (and their implementing regulations) and permits, the State Board would expect a joint plan to expand on the responsibilities of the various parties for all phases of the project, as suggested by the commentator. The regulations do not preclude a joint plan from addressing the areas of*

*concern expressed by the commentator, including a SWSAP PWS's desire to be involved in the review of data prior to submission, assignment of roles and responsibilities of parties, etc.*

In addition - while noting that no time frames for review and approval (by regulatory agencies) of a joint plan is included in the proposed regulations - commentator 15 recommends the establishment of maximum timelines for review and approval be included in the regulation.

**Response:**

*As resources allow, the State Board's Division of Drinking Water and the Regional Water Boards will continue to work closely to reduce the potential for delays in project permitting and implementation, as the Drinking Water Program has done during the permitting and implementing processes for other potable reuse projects. In addition and aside from possible resource limitations, as noted previously by the commentator, SWA projects will involve a diverse and complex set of scenarios and party involvement, which do not lend themselves to a particular uniform maximum time limit.*

While referring to several sections requiring corrective actions and notification of State Board and/or Regional Boards, and specifically using section 60320.(a)(1) as an example, commentator 8 noted that, "Nowhere in the document is language that spells out specifics for physical remediation/removal of contaminated water from the drinking water supply." As a result, the commentator recommended adding language that would require the SWSAP WRA to submit procedures "for providing an alternate source of water supply while a compromised reservoir is remediated."

**Response:**

*The requirement to identify corrective actions in proposed section 60320.301(a) is not limited to notification of the State Board and Regional Boards, and the corrective actions taken in the event a reservoir were to become compromised would fall within the broad scope of the joint plan. Depending on the agreement reached via the joint plan, the responsibility of implementing those corrective actions may fall on either party, or even partial responsibility of both parties. Therefore, the State Board finds it unnecessary, and too limiting and prescriptive, to mandate that the responsible party must be the SWSAP WRA.*

*That said, the purpose of the regulatory action is the establishment of criteria that would adequately protect public health, not direct the remediation of a compromised reservoir. As a public water system responsible for providing a reliable source of drinking water that meets all drinking water standards, per proposed section 64668.10(b), the SWSAP PWS must contemplate the scenario where they may not be able to use the reservoir as a source of drinking water for an extended period of time.*

**Subsection (d):**

Commentator 20 suggested that the monitoring frequency is not concisely defined or stated, and requests clarification on what constitutes "complete compliance monitoring".

The comment was made in conjunction with an unrelated reference to GRRP regulations section.

Commentator 19 stated that the reference to “assumptions made” is unclear and recommended deleting the language and, instead, referring to “scientific reasoning” as the basis.

**Response:**

*The previously adopted GRRP regulations are not part of the proposed regulatory action and the section of the GRRP regulations cited by the commentator (presumably referring to section 60320.101, not 60320.301) is not relevant or analogous to proposed section 60320.301 of the SWA regulations. The section of the SWA regulations cited by the commentator is section 60320.301(c), which refers to “monitoring required by this Article.” The monitoring required by the Article (Article 5.3) varies, depending on the specific applicable requirements in Article 5.3.*

*The State Board agrees that the phrase “and assumptions made by” was ambiguous and implied an arbitrary intent. As a result, the State Board proposed revisions under a 15-day comment period, to delete the phrase. The 15-day comment period began November 30, 2017, and ended on December 18, 2017. [See “Revisions Following the 45-day Comment Period”]*

Commentator 8 recommended replacing “may” with “will”, resulting in the text being revised as: “If a SWSAP WRA fails to complete compliance monitoring required by this Article, compliance will be determined by the State Board or Regional Board...”.

**Response:**

*Section 60320.301(d) identifies and informs the SWSAP-WRA of the State Board’s discretion to act - in particular, to determine compliance in the event the SWSAP-WRA fails to monitor.*

**Subsection (e):**

Commentator 19 posited that some effluent limits may be completely unrelated to SWA and, therefore, suggested deleting the text referring to effluent water quality limits.

**Response:**

*The proposed regulations refer to “effluent limits or water quality requirements that pertain to surface water augmentation pursuant to this Article.” Effluent water quality limits that would be “completely unrelated to surface water augmentation” would not pertain to those established pursuant to Article 5.3 of the SWA regulations. The State Board believes the text, as proposed, addresses the concern.*

**Subsection (f):**

Commentator 19 suggested the regulation be modified to address the concern described in GC3 above.

**Response:**

*Please see response to GC3.*

**Section 60320.302:**

Commentator 13 suggested allowing an alternative to RO-based treatment, asserting that “significant work is complete, and more is underway, documenting the water quality benefits of O<sub>3</sub>/BAF when used with supplementary technology such as UF, GAC, and UV.”

**Response:**

*Proposed section 60320.330 establishes an approval process for allowing alternatives, including the use of alternative technologies. Currently, it has not been demonstrated to the State Board that there is sufficient evidence that the treatment train suggested by the commentator can as effectively as RO and AOP control the types of unregulated chemicals that may be present in municipal wastewater.*

**Subsection (c):**

Commentators 7 and 13, referring to paragraph (1), suggested allowing a test surrogate for 1,4-dioxane, because it is a hazardous chemical that is difficult to safely seed into a treatment system.

**Response:**

*Use and storage of hazardous materials on an ongoing basis is common, yet safely used, at water and wastewater treatment facilities. The State Board would expect appropriate safety precautions to also be implemented when using 1,4-dioxane, even though its use would be temporary. That said, proposed section 60320.330 establishes an approval process for allowing alternatives, including an alternative to utilizing 1,4-dioxane during challenge or spiking tests.*

**Subsection (g):**

Commentator 19, referring to paragraph (2), suggested the regulation be modified to address the concern described in GC3 above.

**Response:**

*Please see response to GC3.*

**Subsection (h):**

Commentator 19 suggested that the initial monitoring and reduced monitoring are unnecessary because the advanced-treated water will be delivered to a reservoir with subsequent downstream treatment.

Commentator 19 questioned how compliance with an MCL would be determined and suggested language reflecting that compliance be calculated as described in proposed section 60320.312. Similarly, commentator 11 expressed concern that the subsection implied compliance would be determined on a monthly basis or by a single sample, rather than akin to how compliance with most MCLs is determined. Commentator 10 provided substantially similar concerns.

Commentator 17 asked for clarification regarding apparent contrasting NL monitoring requirements between proposed sections 60320.302(h) and 0320.320.

**Response:**

*Regarding commentator 19's first comment, while it's true that the water in the reservoir being augmented by recycled water will receive subsequent downstream treatment, the downstream treatment (the SWSAP PWS's SWTP) may not treat each contaminant as effectively as the advanced treatment process. In addition, what's being created is a raw source of drinking water that contains a significant percentage of water from a contaminated source. Therefore, a need exists to ensure that the raw source (the reservoir) is not degraded to a degree that it will affect a SWSAP PWS's ability to comply with its requirements related to the federal or state SDWA.*

*Regarding the actions necessary when an MCL (or an NL) is exceeded, along with NL monitoring concerns between proposed sections 60320.302(h) and 0320.320 requirements, the State Board agrees that the language should be revised to assure consistent application. As a result, the State Board proposed revisions under a 15-day comment period, which began November 30, 2017, and ended on December 18, 2017. [See "Revisions Following the 45-day Comment Period"]*

**Section 60320.304:**

*No comments received.*

**Section 60320.306:**

*No comments received.*

**Section 60320.308:**

**Subsection (a):**

Commentators 15 and 20 questioned whether the separate treatment processes required "for each" pathogen was intended to prohibit a treatment process from obtaining log reduction credit for more than one pathogen, or allow a treatment process to obtain log reduction credit for more than one pathogen. One commentator noted the difference between the GRRP regulations and the SWA regulations.

Commentator 16 suggested revising the regulation, through recommended revisions to sections 603320.308(a)(2) and 64668.30(c)(2), to allow pathogen log reduction credit at

the PWS's SWTP that goes beyond traditional SWTPs. In short, the commentator was seeking to have log reduction credits added at the SWTP be used in lieu of the log reduction credits required prior to being discharged into the reservoir.

**Response:**

*Although the indistinctness of the proposed language would allow for either interpretation, of which either would be acceptable, the State Board agrees that regulations would be improved if permissive language was added, making it clear that the less restrictive interpretation (where treatment processes may be credited with log reductions for multiple pathogenic organisms) would be acceptable. As a result, the State Board proposed revisions under a 15-day comment period, which began November 30, 2017, and ended on December 18, 2017. [See "Revisions Following the 45-day Comment Period"]*

*With respect to the comparison between the SWA regulations and the GRRP regulations, the existing GRRP regulations are not part of the proposed regulatory and are beyond the scope of the proposed regulatory action.*

*Regarding commentator 16's suggested revisions, proposed section 60320.308(a)(2) establishes requirements for minimum log reductions for pathogenic microorganisms that apply to the recycled water being discharged into a surface water reservoir that will then be further treated by the SWSAP PWS's surface water treatment plant. The intention is to create a raw source of surface water that would be no less protective of public health than it would be in the absence of the SWSAP's discharge into the reservoir. Reliance on increased organism reduction at the SWTP indicates that the reservoir microbial quality has been allowed to degrade as a result of the SWSAP. A principle of California IPR regulation is that it shall not degrade a source of drinking water. Furthermore, doing so would diminish the role of the reservoir as a meaningful environmental buffer that will attenuate water quality problems resulting from pre-discharge treatment failures.*

While stating that the ISOR indicates that the "baseline" for log reduction requirements is raw sewage, commentator 15 asserts the regulations do not clarify whether the log reduction requirements for the SWSAP treatment process starts at the raw sewage or the start of the advanced treatment process. The commentator suggests revising the regulations to state the baseline for the log reduction requirements should start at the raw sewage.

**Response:**

*The regulation places no restriction on what treatment processes may be credited toward the log reduction requirement, as long as the log reduction for the treatment process has been validated. Had the intent been to restrict log reduction credit only to those treatment processes beginning with the advanced treatment, the regulation would have included such a restriction. All properly validated, operated, and monitored treatment barriers, including primary and secondary treatment (and advanced treatment processes), could receive credit toward the log reduction required, as long as the*

*recycled water delivered to the reservoir has met the required log reductions, consistent with the proposed language.*

Commentator 15 recommended that paragraphs (1) and (2) should clearly indicate “that the log reduction values specified are for the WRA treatment train, and do not include the additional log reduction achieved through dilution or conventional drinking water treatment at a PWS's surface water treatment plant.”

**Response:**

*Sections 60320.308(a)(1) and (2) clearly refer to the treatment train needing to reliably achieve the required pathogen reductions, with those reductions being met in the recycled water delivered to the reservoir. Because dilution and treatment via the PWS's SWTP occurs after delivery of the water, any possible log reductions from those processes could not be credited to achieve the pathogen reductions required in sections 60320.308(a)(1) and (2).*

**Subsection (b):**

Commentator 15 noted that the regulation does not include a definition for “on-going monitoring”, asserting that it could be interpreted as continuous monitoring or an undermined monitoring frequency for the life of the project.

**Response:**

*“On-going” monitoring means continuing monitoring (i.e., monitoring moving forward), consistent with its dictionary meaning and the generally understood meaning by the regulated community, as intended in the proposed text. Therefore, there is no reason to provide a definition for “on-going.”*

**Subsection (c):**

Commentator 19 suggested that the basis for meeting the criteria specifically reference the “ongoing surrogate monitoring identified in the Operations Plan approved pursuant to Section 60320.322.”

**Response:**

*The proposed regulatory language in subsection (c) refers to meeting the requirements “based on the on-going monitoring required pursuant to subsection (b).” In turn, subsection (b) refers to on-going monitoring identified in the Operation Plan “using the pathogenic microorganism of concern or a microbial, chemical, or physical surrogate parameter(s) that verifies the performance of each treatment process’s ability to achieve its credited log reduction.” Therefore, not only does the State Board believe the proposed text already addresses the commentator’s desire to have a nexus with the Operations Plan, the proposed text also provides more flexibility in that it’s not limited to only the surrogate monitoring identified in a Operations Plan.*

While referring to subsection (c), commentator 11 asserted that the subsection implies that the Regional Boards will include pathogen level requirements in an NPDES permit.

The commentator further asserted that “pathogen removal credits of 8-7-8 are requirements for DDW and drinking water safety, not for Clean Water Act or for environmental protection. The Water Recycling Agency (WRA) could technically supply less than 8-7-8 to reservoir and the Public Water System (PWS) could still meet the required LRV of 12-10-10 through the drinking water treatment plant.” In general, the commentator sought clarification as to which agency would be the regulating authority.

**Response:**

*The State Board’s mandate was to adopt uniform criteria for SWA that would adequately protect public health. With SWA projects involving discharges into a reservoir used as a source of drinking water by a public water system, the regulations must ensure the reservoir is not degraded as a source of drinking water, and that the ‘creation’ of the raw source of drinking water is no less protective than other raw sources of drinking water. To accomplish that, criteria had to be developed for pathogenic organism control for the discharge to the reservoir, rather than additional pathogenic organism control after the reservoir. Furthermore, allowing reliance on additional treatment by the PWS (beyond that already being provided via existing drinking water standards) would diminish the importance of the reservoir as an environmental buffer – a necessary role for IPR.*

*It should also be noted that the minimum 8-7-8 log reduction does take into consideration the additional treatment by the PWS, to ensure no less than a total log reduction of 12-10-10, as described in detail in the ISOR and deemed to be adequately protective of public health by the Expert Panel. The State Board also recommends that the commentator review other comments and responses, such as those provided under GC3, GC8, and section 60320.308(a).*

**Subsection (d):**

Commentator 19 suggested the regulation be modified to address the concern described in GC3 above.

**Response:**

*Please see response to GC3.*

**Section 60320.312:**

**Subsection (a):**

Regarding paragraph (5), commentator 19 suggested deleting the reference to lead and copper, asserting that lead and copper are typically source water contaminants and are normally monitored at the customer’s tap as a measure of corrosion control.

Commentator 11 also provided comments regarding lead and copper, questioning how lead and copper criteria would apply considering that the water discharged to the reservoir would be blended with other sources of water before final distribution,



suggesting that the “blended water should comply with the final lead and copper criteria since the AWP water source is not consumed directly through the distribution system.”

Commentator 16 suggested that the monitoring requirements “be streamlined and revised to allow the use of monitoring data already collected by the recycled water producer.”

**Response:**

*Regarding commentator 19’s lead and copper recommendations, although lead and copper are monitored at a SWSAP PWS customer’s tap as an indication of whether the drinking water supplied is causing the leaching of lead and copper from a customer’s plumbing, the action levels represent health risk-associated concentrations. As indicated by the commentator, lead and copper are not normally found in typical sources of drinking water. However, wastewater is not a typical source of drinking water and the State Board believes it is prudent to ensure the water placed into a drinking water supply meets the lead and copper action levels.*

*Regarding commentator 11’s lead and copper recommendations, lead and copper action levels are health-based levels. Allowing discharges to the reservoir exceeding the action levels would lead to a degradation of the reservoir as a drinking water source. In addition, while the recycled water discharged to the lake will be blended with water already present in the reservoir, the water in the reservoir may not always subsequently include water from other sources. Therefore, if the recycled water discharged to the reservoir has not been first determined to meet the lead and copper action levels, it’s possible that, eventually, the entire reservoir could consist of water not meeting the lead and copper action levels – or at least be of an unknown quality.*

*Regarding commentator 16’s suggestion, proposed section 60320.312 does not require monitoring redundant to that which may be required by Regional Boards pursuant to Water Code Section 13267(b)(1). If appropriate, the Regional Boards may establish a process to be integrated into the permits they will issue for SWSAPs whereby redundant monitoring will be eliminated or reduced. The establishment of requirements that would regulate the Regional Boards and that process is beyond the scope of the proposed regulatory action.*

**Subsection (e):**

Commentator 19 suggested deleting the entire subsection, asserting that “routine asbestos monitoring is not required” and questioning the value of monitoring for asbestos.

**Response:**

*By way of section 60320.312(a)(1), quarterly monitoring for asbestos is required since asbestos is a contaminant found in Table 64431-A, making it unclear why the commentator suggests asbestos monitoring is not required. As with lead and copper, asbestos may not normally be found in typical raw sources of drinking water. However,*

*wastewater is not a typical raw source of drinking water and the State Board believes it's prudent to ensure the water placed into a drinking water supply meets all drinking water MCLs, including the asbestos MCL.*

**Section 60320.320:**

*No comments received.*

**Section 60320.322:**

**Subsection (b):**

Commentator 19 requested that the regulations specifically allow for operators that are certified as *either* water treatment operators or wastewater operators, suggesting that doing so would provide for a greater pool of qualified operators and create highly effective operations teams. Commentator 19 also requested that the regulations recognize that operators that have obtained an advanced water treatment certification from a certification program, acceptable to the State Board, be presumed to have obtained adequate training under Section 60320.322. Commentator 10 provided substantially similar comments.

Commentator 16 suggested that the training requirements clarify whether the training refers to existing training programs and certifications or a new certification program. The commentator also sought clarification as to where in the wastewater treatment process the training requirements would apply.

Commentator 3 provided substantially similar comments, and encouraged the State Board to continue to collaborate with AWWA and others to develop an advanced water treatment operator certification program that would satisfy proposed and future requirements.

**Response:**

*Regarding the recommendation to allow operators to be either water treatment operators or wastewater operators, the proposed regulations do not prohibit water treatment operators from operating wastewater treatment plants, and existing section 3607.1 of Title 23 addresses the certification requirements for operating wastewater treatment plants. Although section 3607.1 is not part of the proposed regulatory action, the commentator should note that section 3670.1(b) allows certified water treatment plant operators to operate wastewater treatment plants.*

*Regarding the recommendation that the proposed regulations “recognize that operators that have obtained an advanced water treatment certification from a certification program acceptable to the State Board will be presumed to have obtained adequate training under Section 60320.322,” there currently is no advanced water treatment certification process to be recognized, making it inappropriate to reference in the regulations. That said, the State Board is aware of the intention to develop an*

*advanced water treatment certification process and, if necessary, the State Board will address the issue in a future regulatory action.*

*Regarding commentator 16's comment, section 60320.322(b) refers to the need for the SWSAP WRA personnel to have received, at a minimum, the training noted in paragraphs (1) through (3). Therefore, the requirement would apply to the operators of the wastewater treatment plants that would be supplementing the surface water reservoirs, including the advanced treatment processes. Currently, certified wastewater treatment plant operators are not required to have such training, although they may have; and some certified drinking water operators who may be operators at a wastewater treatment plant may have such training, although they may not have received the training cited in the proposed regulations. A SWSAP WRA would be responsible for demonstrating that the operators have the supplemental training.*

While supporting the efforts and progress made by several agencies toward future potable reuse operator training and certification, commentator 15 asserted that the ISOR indicates that only wastewater treatment plant operators can be certified to operate a SWSAP-WRA advanced treatment facility. The commentator encouraged the State Board to establish an advanced operator treatment certification program that would allow operators with either water or wastewater background to operate an advanced treatment facility. Commentator 14 provided a substantially similar comment. The comment is similar in nature to the comment provided by commentator 19 on this topic.

**Response:**

*The Initial Statement of Reasons (ISOR) does not state nor indicate that, "only wastewater treatment plant operators can be certified to operate a WRA advanced treatment facility." Further, existing section 3670.1 of Title 23 addresses the certification requirements for operating wastewater treatment plants and already allows water treatment operators to operate wastewater treatment facilities. As noted in the ISOR, the type of knowledge gained by the training required pursuant to subsection (b) is "generally" not applicable to the operation of an advanced wastewater treatment facility utilizing treatment processes required by the proposed regulation, and wastewater treatment plant operators "may" have relatively limited knowledge with respect to the public health issues associated with consumption of drinking water supplied by sources augmented with recycled water. This could be true even if the operator of a wastewater treatment plant was a certified water treatment operator.*

*Although a framework for potable reuse operator training and certification may have been developed, there currently is no advanced water treatment certification process to be recognized and required in the proposed regulation, making it inappropriate to reference in the regulations. That said, the State Board is aware of the intention to develop an advanced water treatment certification process and, if necessary, the State Board will address the issue in a subsequent regulatory action. Also see the response to commentator 19 on this topic.*

**Section 60320.326:**

**Subsection (b):**

Commentator 15 suggested the addition of *E. coli* to the monitoring regime and that increased weekly monitoring of all contaminants may be initially necessary.

**Response:**

*The State Board and the Expert Panel, through its finding, determined that monthly monitoring for no less than 24 months would be sufficient to establish a baseline. In addition, existing data may be available to supplement the required monitoring and the regulation states the monitoring is to be conducted for “no less” than 24 months (i.e., further monitoring is not precluded to be performed by the regulations to establish the baseline).*

*Regarding the request to include *E. coli*, the State Board agrees with commentator 15’s suggestion. As a result, the State Board proposed revisions under a 15-day comment period, which began November 30, 2017, and ended on December 18, 2017. [See “Revisions Following the 45-day Comment Period”]*

**Subsection (d):**

Because a SWSAP-PWS may be directly impacted by reduced monitoring of its source water reservoir (e.g., potentially supporting the SWSAP-PWS’s needs to conduct its watershed sanitary survey, etc.), commentator 15 suggested a revision to the regulations that would require a SWSAP-WRA to consult with affected SWSAP-PWSs prior to applying reduced monitoring.

**Response:**

*The State Board agrees that it would be beneficial to require the SWSAP-WRA, prior to applying reduced monitoring, to consult with each affected SWSAP-PWS. As a result, the State Board proposed revisions under a 15-day comment period to include consultation with each SWSAP PWS. The 15-day comment period began November 30, 2017, and ended on December 18, 2017. [See “Revisions Following the 45-day Comment Period”]*

**Subsection (e):**

Commentator 19 suggested the inclusion of a basis or justification for the additional monitoring.

**Response:**

*The State Board agrees that the regulation would be enhanced by including a basis for the additional monitoring, which may otherwise imply an arbitrary intent. As a result, the State Board proposed revisions under a 15-day comment period, which began November 30, 2017, and ended on December 18, 2017. [See “Revisions Following the 45-day Comment Period”]*

**Section 60320.328:**

**Subsection (a):**

Commentator 19 suggested allowing a Grade 4 or Grade 5 State Board certified operator water or wastewater operator to prepare the annual report. Commentator 16 suggested allowing two engineers, with combined experience, to be allowed to prepare the report. Commentator 16 also recommended the similar flexibility be allowed for other aspects of the regulation where such an engineer is required (e.g., challenge tests).

**Response:**

*The State Board believes the information required to be included in the annual report is sufficiently technical in nature and sufficiently related to the engineering aspects of a SWA project that it is warranted to be prepared by a California-licensed engineer with suitable experience, rather than a certified operator. However, the State Board agrees that multiple licensed engineers, with combined experience, would be acceptable for the preparation of the report only. As a result, the State Board proposed revisions under a 15-day comment period, which began November 30, 2017, and ended on December 18, 2017. [See “Revisions Following the 45-day Comment Period”]*

**Section 60320.330:**

Commentator 10 expressed support for the proposed section, noting the flexibility to allow for future innovations.

**Response:**

*Thank you.*

**Article 9, Chapter 17, Division 4, Title 22**

**Section 64668.05:**

*No comments received.*

**Section 64668.10:**

**Subsection (d):**

Commentator 19 suggested that the subsection be deleted, asserting that it is redundant because the SWSAP WRA already has specific reporting requirements, unnecessary, may lead to broad reporting on minor issues. Commentator further claims the ISOR fails to provide any justification for the requirement.

**Response:**

*The State Board has the authority for and responsibility of overseeing California’s PWS to ensure protection of public health. Given the close working relationship a*

*SWSAP WRA and SWSAP PWS must have, the SWSAP PWS may have knowledge of a SWSAP WRA failure to meet a regulatory or permit requirement that may not be readily available and known to the State Board. Therefore, as noted in the ISOR, the purpose of the requirement is to further enhance the State Board's oversight of a SWSAP.*

**Section 64668.20:**

*No comments received.*

**Section 64668.30:**

**Subsection (a):**

While asserting that subsection (a) excludes offline or out of service reservoirs and that the commentator owns several reservoirs that would otherwise be excellent candidates, commentator 16 suggested revising the language to include reservoirs that are not necessarily operated in the five years prior to the start of a SWSAP.

**Response:**

*Section 64668.30(a) of the proposed regulation does not require a reservoir to have been in use for five consecutive years. First, the regulations allow for reservoirs with as little as two years to be utilized, with State Board approval. Second, the regulation does not require that the prior use of the reservoir be consecutive.*

**Subsection (b):**

Commentator 19 suggested that paragraph (2)(A) implies that a treatment facility would have to operate for a period of time before being allowed to apply for an alternative minimum theoretical retention time. Therefore, commentator 19 recommended modifying the text to allow for the alternative compliance as part of the permit application; specifically, allowance for a phased approach for reducing retention times. Commentator 10 provided substantially similar recommendations.

Commentator 18 recommended that paragraph (2)(A) allow for theoretical retention time of less than 60 days, with State Board approval. Commentators 3, 7, and 13 made a similar recommendation.

Regarding paragraph (2)(D), commentator 17 opined that the requirement for additional log reduction requirement for theoretical retention times less than 120 days would be better suited to be located within paragraph (2) itself, leading into subparagraphs (A) through (F).

**Response:**

*Given the complexity, coordination, and potential impacts related to a SWSAP, the State Board believes it is vital that a project demonstrate and verify the ability to meet the proposed requirements in a manner that is protective of public health, prior to*

*reducing its theoretical retention time. It should be noted that section 64668.30(b)(2)(A) of the proposed regulations provides for application at any time for a reduced on-going alternative minimum theoretical retention time of less than 180 days once the SWSAP can demonstrate that the operation has met specific conditions and requirements. The regulatory text does not preclude such a process from being included as part of a permit application. Furthermore, because some project proponents may not wish to use a phased approach, the suggested revision requiring a phased approach would not be appropriate.*

*Regarding the suggestion to allow for a theoretical retention time of less than 60 day, as noted in the ISOR, the Expert Panel considered a project having less than two months theoretical retention time to be a form of DPR, and the State Board agreed with the Expert Panel. The purpose of the proposed regulations is to establish criteria, which adequately protect public health, for IRP through SWA. As a result, the establishment of criteria that would adequately protect public for theoretical retention times less than two months (i.e., 60 days) is beyond the scope of this regulatory action. However, please note that it's currently anticipated that the State Board will be establishing criteria for DPR in the future, consistent with the passage of 2017's Assembly Bill 574 (Chapter 528), which revised the Water Code's statutory requirements pertaining to potable reuse.*

*Regarding commentator 17's suggestion to relocate text, while the State Board does not find the suggestion to be inappropriate, the State Board believes the text is just as well suited in its proposed location, since the topic of subparagraph (D) is associated with log reduction requirements.*

**Subsection (c):**

Commentators 10, 11, and 19 suggested the phrase "whenever requested", without a basis, could be arbitrarily required by the State Board.

Regarding paragraph (2), commentator 18 recommended allowing "for more than 10% advanced treatment process effluent that does not meet the 60 day theoretical retention time requirement," under certain circumstances and with State Board approval.

While referencing section 64669.30(c), commentator 17 recommended, "removing paragraph (c)(2)(A). It is not clear if this paragraph is requiring a fourth barrier beyond the three identified in 60320.308(a)(2) or if it is intended only to define what is meant by a separate barrier. If it is the latter, the language would be better to include in Section 308, or removed entirely. Paragraph (c)(2)(B) makes clear that the extra barrier must comply with requirements of 308(a)(2), which includes the third barrier reference."

**Response:**

*The State Board agrees that the regulation would be enhanced by including a basis for the requirement, which may otherwise imply an arbitrary intent. As a result, the State Board proposed revisions under a 15-day comment period, which began*

November 30, 2017, and ended on December 18, 2017. **[See “Revisions Following the 45-day Comment Period”]**

*Regarding commentator 18’s recommendation, a theoretical retention time less than 60 days, or the addition of recycled municipal wastewater such that the criterion in subsection (c)(2) is not met, would not be considered a form of IPR through SWA. Substituting a demonstration of treatment effectiveness for the minimum environmental barrier is a concept that would be addressed by DPR regulations. Those conditions are expected to be addressed by the State Board in future regulations for various forms of DPR. Therefore, the establishment of criteria that would adequately protect public for the conditions suggested by the commentator would be beyond the scope of this regulatory action.*

*Regarding commentator 17’s recommendation, first, the State Board assumes the commentator is referring to 64668.30, not 64669.30. 60320.308(a)(2) specifically refers to 64668.30(c)(2), and 64668.30(c)(2) specifically refers to 60320.308(a)(2), providing a nexus between the two subparagraphs. Therefore, State Board believes it is clear that the additional overall log reduction required in 60320.308(a)(2) [in contrast to 60320.308(a)(1) and its reference to 64668.30(c)(1)] for the treatment train is a result of the additional log reduction required in 64668.30(c)(2) – consistent with the explanation found in the ISOR. Had the requirement intended to result in an overall treatment train log reduction through a fourth treatment process, 60320.308(a)(2) would have referred to the need to for at least four processes.*

Regarding paragraph (2)(A) and its reference to an “independent” treatment process, commentator 15 asked for clarification as to the extent to which the process must be independent. Commentators 7, 11, and 14 provided a substantially similar comment.

**Response:**

*After further consideration, the State Board concluded that the phrase in question implies a degree of qualification beyond that which already applies to the additional treatment via the requirements in section 60320.308. As a result, the State Board proposed revisions under a 15-day comment period, to delete the phrase, which began November 30, 2017, and ended on December 18, 2017. **[See “Revisions Following the 45-day Comment Period”]***

Commentator 13 suggested allowing “for more than 10 percent of new water, by volume, to be recently purified, based upon demonstration that sufficient treatment has been provided to account for chemical and microbiological pollutants.”

**Response:**

*As noted in the ISOR, proposed section 64668.30(c) establishes criteria addressing the need for a rigorously quantified mixing of the recycled water delivered to the reservoir for any 24-hour period. Mixing sufficient to limit a 24-hour batch of potentially*



*inadequately treated reclaimed water to 10 percent of water withdrawn from the reservoir, means that contaminant concentrations would be reduced by a factor of ten, which is considered to be a minimum effective reservoir benefit. In combination with the minimum theoretical retention time requirements in subsection (b), the criteria provide a means of distinguishing an IPR project from a DPR project. The State Board's mandate was to adopt criteria that would adequately protect public health for SWA, a form of IPR. However, please note that it's currently anticipated that the State Board will be establishing criteria for DPR in the future, consistent with the passage of 2017's Assembly Bill 574 (Chapter 528), which revised the Water Code's statutory requirements pertaining to potable reuse. DPR criteria will address the allowance of lesser dilutions.*

**Subsection (g):**

Commentator 19 asserted it is unclear what form the plan would take and suggested it would be more appropriate to require these elements to be addressed and included in the update to the water treatment operations plan.

**Response:**

*The State Board agrees that modifications to the treatment plant resulting from engaging in SWA should be included in the PWS's surface water treatment plant operations plan. However, the need to do so is already addressed by way of existing section 64661, which requires operation of a treatment plant in accordance with an operations plan that has been approved by the State Board, and to revise the operations plan accordingly when modifications to a treatment plant occur.*

*It should be noted that the proposed requirement in subsection (g) is a plan for assessing and addressing potential impacts that may result from the introduction of advanced treated water into the treatment plant and the PWS's distribution system, and that the plan is required prior to augmentation. The changes to operation of the treatment plant that ultimately occur as a result of the implementation of the plan required in proposed subsection (g) will subsequently be included in the treatment plant's operations plan, as mentioned above.*

**REVISIONS FOLLOWING THE 45-DAY COMMENT PERIOD**

As a result of comments received during the 45-day comment period, the State Board revised the proposed SWA regulations for the reasons described in the preceding responses to comments. Revisions were made to the following sections: 60320.301(d); 60320.302(h); 60320.308(a); 60320.326(b), (d), & (e); 60320.328(a), and; 64668.30(c).

Additionally, as noted in the preceding responses to comments, following the 45-day comment period, the State Board noticed that the reference in section 60301.853, intended to be the “Regional Water Quality Control Board,” was missing the word “Control.” Therefore, the correction was included in the proposed regulations provided during the 15-day comment period.

On November 30, 2017, the revisions to the revised regulations were made available to the public for an additional “15-day comment period,” with public comments accepted until 12:00 p.m. (noon) on December 18, 2017.

**SUMMARY AND RESPONSE TO COMMENTS**  
**15-DAY COMMENT PERIOD**

The table below presents a record of those having provided written comments on the proposed revisions to the SWA regulations during the 15-day comment period. Unless otherwise noted, the number associated with a specific commentator(s) in the comment summaries and responses sections that follow correspond to the numbers assigned to the commentator(s) in the tables below.

**Commentators Providing Written Comment**

<b>No.</b>	<b>Name</b>	<b>Affiliation</b>
<b>1</b>	Root, Patsy & Frymire, Jody	IDEXX
<b>2</b>	Stewart, Mic	Metropolitan Water District of Southern California
<b>3</b>	Sutley, Nancy	Los Angeles Department of Water and Power

**Comments and Responses**

Commentator 1 suggested that sections 60320.380 (presumably intending to refer to 60320.308), 60320.326, and 64668.30, be revised to include reference to *Legionella pneumophila*.

**Response:**

*No response is necessary because the comments were not directed specifically at the revisions made and provided during the 15-day comment period. However, the commentator should note that the concerns regarding Legionella pneumophila would be addressed as a result of the treatment necessary to meet the proposed requirements for enteric virus, Giardia cyst, and Cryptosporidium oocyst reductions.*

Commentator 2 expressed appreciation for the State Board having revised the regulations based on the comments the commentator provided during the 45-day comment period. The commentator also reiterated the comments provided by the commentator during the 45-day comment period.

**Response:**

*No response is necessary because the comments were not directed specifically at the revisions made and provided during the 15-day comment period. For responses to comments submitted during the 45-day comment period, please see the responses provided in the preceding section titled, "Summary and Response to Oral and Written Public Comments – 45-day Comment Period."*

Commentator 3 expressed support for the revisions and appreciation for the opportunity to comment on the revised regulations and for the State Board having revised the regulations based on the comments the commentator provided during the 45-day comment period.

**Response:**

*The support and appreciation is noted. Thank you.*

### **POST COMMENT PERIOD REVISIONS**

Following the comment periods, the State Board recognized a typographical error in the proposed regulations. Specifically, the first section in Article 5.3 was identified as section number "64320.300," rather than section "60320.300," as intended and indicated elsewhere in the regulation package (e.g., ISOR). Therefore, the State Board revised the section number in the final regulation text. The revision is non-substantive and has no regulatory effect.

## **STATE BOARD ADOPTION HEARING**

On March 6, 2018, after the close of the comment periods, the State Board held an adoption hearing, where the five State Water Resources Control Board Members<sup>3</sup> considered a resolution to adopt the proposed regulations for Surface Water Augmentation using Recycled Water. Information provided in advance of the hearing included a draft document summarizing the comments received and proposed responses. At the hearing, a brief presentation was provided to the public, as well as an opportunity for the public to present oral statements. Three members of the public presented oral statements; each supporting the adoption of the proposed regulations. Following the presentation and oral statements, the State Water Resources Control Board Members passed Resolution No. 2018-0014, thereby adopting the proposed regulations for Surface Water Augmentation using Recycled Water. Transcripts of the proceedings as well as other pertinent documents have been placed the rulemaking file.

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<sup>3</sup> Members: Chair Felicia Marcus (Chair), Steven Moore (Vice Chair), E. Joaquin Esquivel, Dorene D'Adamo; and Tam M. Doduc.

## **STATEMENTS OF DETERMINATION**

### **Mandate Determination – Local Agencies and School Districts**

The State Board has determined that the proposed regulations would not impose a mandate on local agencies or school districts that requires state reimbursement. The State Board implemented a statutory mandate in Water Code section 13562, the regulations do not require any entity to engage in a SWA project, and the regulations do not impose unique requirements on local governments. No state reimbursement is required.

### **Alternatives Considered**

The State Board has determined that no alternative considered by the State Board would be more effective in carrying out the purpose for which the regulation is proposed, would be as effective as and less burdensome to affected private persons than the adopted regulation, or would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provision of law.

Additionally, no alternatives were proposed to the State Board that would lessen any adverse economic impact on small businesses.

The State Board implemented a statutory mandate in Water Code section 13562 and the regulations do not require any entity, including private persons or small businesses, to engage in a SWA project.

## **ADDITIONAL STATEMENTS**

### **Public Notice Mailing**

The State Board has complied with the provision of Government Code sections 11346.4(a)(1) through (4) regarding the mailing of notice of proposed action at least 45 days prior to public hearing or close of the public comment period. The date upon which the notice was mailed was on or before July 21, 2017, and the date the notice was emailed was on or before July 21, 2017.

Similarly, the State Board has complied with the provision of Government Code sections 11346.8(a) through (e), as well as section 44 of Title 1 of the California Code of Regulations, regarding the mailing of notice of proposed action at least 15 days prior to the close of the public comment period. The date upon which the notice was mailed was on or before November 30, 2017, and the date the notice was emailed was on or before November 30, 2017.

### **Public Hearing Statement**

In anticipation of a request for a public hearing, the State Board held a public hearing in Sacramento on September 7, 2017. The location, time, and date of the hearings were provided in the public notice for SBDDW-16-02.

### **California Environmental Quality Act**

The State Board has determined that adoption of the proposed SWA regulations represents action taken by a regulatory agency pursuant to its general and specific statutory authority for the maintenance and protection of the environment, and that adoption of the proposed SWA regulations satisfies the requirements of Title 14 of the California Code of Regulations (CCR), section 15308, and is a Class 8 categorical exempt project. The State Board finds that there are no facts on the record to indicate or suggest that the proposed SWA regulations fall within any of the enumerated exceptions for the appropriate use of a categorical exemption as set forth in Title 14 CCR, section 15300.2. The State Board finds, therefore, that pursuant to Title 14 CCR, section 15300, adoption of the proposed SWA regulations is categorically exempt from CEQA requirements for the preparation of environmental documents.

### **Incorporation by Reference**

As indicated in section 60320.302(a)(1), the State Board is incorporating by reference ASTM International's method D4194-03 (2014). The incorporation by reference is necessary because, due to its nature and volume, it would awkward and impractical to publish the ASTM method in the California Code of Regulations. The document was made available to the public for review by way of 1) providing an internet link, in the Initial Statement of Reasons, to ASTM International's Web site, where the document is available to the public and 2) including the document in rulemaking file, which was available for public review.