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**Response to Written Public Comment,
Revised Total Coliform Rule,
Title 22, California Code of Regulations**

Commentators Providing Written Comment

Commentator 1, Steve Bigley, Coachella Valley Water District (CVWD), 12/17/2020 Comment Letter (CL)

CL, Paragraph 1. "CVWD supports the State Water Board's work to incorporate the federal revisions to the total coliform rule into State regulations."

Response. State Water Board staff appreciates the comment.

CL, Paragraph 3. *"Quarterly monitoring at regular intervals provides for an on-going assessment of the raw water quality and alerts a public water system to changes in raw water quality and the resultant need for changes in disinfection treatment or additional corrective actions (Initial Statement of Reasons)."*

Response. The above statement is from the Initial Statement of Reasons for Section 64421 (see page 14, 1st full paragraph, last sentence).

CL, Paragraph 4. *"A raw water sample shall be collected each calendar quarter, with samples collected during the same month (first, second, or third) of each calendar quarter [22 CCR 66421 2(A)]."*

Response. State Water Board staff would like to clarify that the above is a proposed regulation identified by underscored text from section 64421(b)(2)(A).

CL, Paragraph 5. **"**CVWD agrees that quarterly monitoring provides on-going assessment at regular intervals of the raw water quality and alerts a public water system to changes that may require corrective actions."

Response. State Water Board staff appreciates the comment.

"However, CVWD believes the proposed requirement that raw water samples be collected during the same month (first, second, or third) of each calendar quarter is unwarranted and would adversely impact existing water system monitoring programs."

Response. Please see the response for CL, Paragraph 6.

CL, Paragraph 6. "CVWD currently operates 97 active wells serving 3 public water systems within its 1,000 square mile service area. CVWD has developed and implemented monitoring programs that include approximately 4,500 samples collected per quarter. These monitoring programs are designed to efficiently perform monitoring for over 100 regulated and unregulated contaminants from sources and distribution system sites spread out over a large geographic area that include different monitoring

frequencies, different monitoring schedules, and variable well operating schedules. These program schedules are driven by complex chemical analysis performed by one or more commercial laboratories that need to be coordinated with analysis that are performed in CVWD's State certified laboratory. These programs are designed to avoid redundant sampling events while balancing limited in-house laboratory capacity and resources and achieving cost effective commercial laboratory analytical and courier services. This balance is not driven by regular quarterly total coliform raw water monitoring performed at each active well in accordance with CVWD's domestic water supply permits. These raw water samples are currently collected during any month of the quarter when samplers visit these wells as part of other monitoring programs. This existing quarterly raw water monitoring has occurred for decades and has proven to be effective considering there have been no water-borne pathogen outbreaks with the communities CVWD serves and CVWD has never violated the total coliform MCL."

Response. Quarterly bacteriological monitoring is proposed at regular intervals, with samples collected during the same month (first, second, or third) of each calendar quarter, to eliminate the possibility that a public water system would take quarterly samples at the end of one quarter and then immediately again at the beginning of the next quarter. Samples are not temporally distributed as intended when collected in this manner. A public water system's approach of conducting quarterly bacteriological monitoring during any month of the quarter when samplers visit the wells as part of other monitoring programs may result in irregular intervals between sampling events. State Water Board staff believes quarterly monitoring at regular intervals will provide for a better on-going assessment and public health protection throughout the year. It should be noted that quarterly monitoring at regular intervals is not a new concept. This type of monitoring is required in existing regulations, which include monitoring for total trihalomethane and haloacetic acids (five) (see Table 64534.2-C, Footnote 2); beta particle and photon radioactivity (see section 64443); and point-of-use or point-of-entry treatment (see sections 64418.5 and 64420.5).

State Water Board staff estimated the monitoring cost for section 64421(b)(2)(A) using a number of tools to develop an estimated average unit cost of monitoring per sample (bacteriological, total coliform/*E. coli*, presence-absence) across public water system size and number of samples collected. The estimated average unit cost includes the unit cost of labor, sample collection (by public water system), sample delivery (by FedEx, contract laboratory courier, and public water system (self-delivery)), and sample analysis (by in-house laboratory and commercial laboratory), which are described in further detail in the Cost Estimating Methodology. As noted in the Cost Estimating Methodology, the tools are meant to develop unit costs for estimating statewide costs; they are not intended to be unit costs for a particular water system. State Water Board staff believes it has adequately estimated the statewide cost of compliance for the proposed regulation.

Public water systems are required to comply with monitoring requirements established through federal and state regulations. Drinking water regulations

regulate contaminants that have an adverse impact on public health. Monitoring requirements established in regulation are determined by a combination of various factors. These factors include: (1) type of public water system (size of population served and number of service connections), (2) type of source (groundwater, groundwater under the direct influence of surface water, and surface water), (3) vulnerability of source and water system to potential sources of contamination, (4) health effect of a contaminant (chronic or acute), (5) type of treatment provided (none, disinfection and/or filtration, or chemical reduction), and (6) monitoring location (source water, treated water prior to distribution system, or distribution system). The amount of monitoring required generally increases as the size of population served, number and type of sources, number of service connection, vulnerability to contamination, and/or the degree of treatment provided increases, and as a contaminant results in an acute health effect. This increasing trend is reflected in the number of contaminants required to be monitored for by transient-noncommunity, nontransient-noncommunity, and community water systems. State Water Board staff believes monitoring schedules are not driven by complex chemical analyses, but rather by the need to provide public health protection through monitoring of contaminants at prescribed frequencies, which are specific to a given public water system.

Compliance with monitoring requirements will require coordination within the public water system and between the public water system and laboratory (in-house and/or commercial) with respect to sample collection and analysis. These are implementation issues and are beyond the scope of the proposed regulation. No response is required. It should be noted that the proposed regulation (1) does not require a public water system to collect the bacteriological samples separate from samples for other monitoring programs; samples may be collected concurrently at the wells to eliminate redundant sampling events and make best use of staff resources, (2) does not require all the bacteriological samples to be collected in the same month; sample collection may be staggered to address laboratory capacity concerns, and (3) does not require the bacteriological samples to be analyzed solely by an in-house laboratory; commercial laboratories are available, and a list of commercial laboratories may be found on the State Water Board's website (https://www.waterboards.ca.gov/drinking_water/certlic/labs/).

As discussed in the Initial Statement of Reasons (p. 14), there are 2,081 public water systems with a total of 6,427 groundwater (not GWUDI) sources that are disinfected with a primary or residual disinfect on a continuous basis. Based on the July 2015 and May 2017 surveys conducted by the State Water Board, there are 584 public water systems with a total of 1,191 groundwater (not GWUDI) sources that do not monitor on a quarterly or more frequency basis pursuant to section 64654.8(b)(1)(B) or as a condition of an amended water suppler permit and would be required to comply with section 64421(b)(2)(A). As such, there are 1,497 public water systems with 5,236 groundwater (not GWUDI) sources that are currently conducting quarterly or monthly bacteriological monitoring of the groundwater (not GWUDI) sources. Many of these public water systems have been doing so for quite

some time as a provision of their domestic water supply permit. Depending on a public water system's size, bacteriological sampling of the distribution system is conducted on a quarterly, monthly, or weekly basis. The State Water Board has not received reports of laboratory capacity issues for bacteriological monitoring currently conducted for groundwater (not GWUDI) sources and the distribution system. The State Board does not believe the additional quarterly monitoring required under section 64421(a)(2)(A) will be a laboratory capacity issue. It should be noted that for public water systems currently conducting quarterly bacteriological monitoring of groundwater (not GWUDI) sources, section 64421(a)(2)(A) does not change the quarterly monitoring frequency; it only specifies when the samples are to be collected during the quarter.

The comment about the effectiveness of the commentator's existing quarterly raw water monitoring and resulting lack of water-borne pathogen outbreaks and lack of non-compliance with the total coliform MCL is beyond the scope of the proposed regulation. No response is required. It should be noted that the total coliform MCL will be replaced with the *E. coli* MCL upon adoption of the proposed RTCR.

CL, Paragraph 7. "The proposal to prescriptively require this quarterly raw water monitoring be performed in the same month of each quarter would completely upset the balance achieved in CVWD's current monitoring programs. Instead of schedules being driven by complex chemical analyses, CVWD would now need to try scheduling these analyses around quarterly raw water monitoring that need to be performed during a specific month. This change would result in many redundant sampling events each quarter. Additional long trips to widely dispersed source locations directly impacts staff resources, adds vehicle operating expenses, and conflicts with CVWD's goal to reduce carbon emissions. This proposal seems particularly unreasonable considering current efforts by water agencies to manage staff resources and maintain drinking water services during a pandemic."

Response. Please see the response for CL, Paragraph 6. The comment concerning the goal to reduce carbon emissions and the pandemic is beyond the scope of the proposed regulation. No response is required.

CL, Paragraph 8. "CVWD recommends that the Section 64421, paragraph 2(A), be revised to read, "A raw water sample shall be collected for each calendar quarter.""

Response. State Water Board staff maintains the position on the need to conduct quarterly monitoring at regular intervals as previously discussed. No change is needed.

Commentator 2, Andrew DeGraca, San Francisco Public Utilities Commission, 12/18/2020 Comment Letter (CL) and Attachment (ATT)

CL, Paragraph 1. "The proposed rule is a culmination of efforts by SWRCB staff and utility stakeholders to revise the existing Article 3 of Chapter 15 under Title 22 of the California Code of Regulations (CCR), with modifications and additions to the corresponding federal RTCR. These efforts are commendable."

Response. State Water Board staff appreciates the comment.

ATT, Section 64400.95. "*§64400.95. [Definition]. Protected Water Source. "Protected water source" means an aquifer that provides physical exclusion of microbial contamination."*

Response. State Water Board staff would like to clarify that section 64400.95 is a proposed regulation identified by underscored text.

"SFPUC Comments: 1. Suggest changing to "Protected **groundwater** source", as the definition is specific to groundwater."

Response. State Water Board staff reviewed the definition in section 64400.95 and found no reference to groundwater. Merriam-Webster defines aquifer as "a water-bearing stratum of permeable rock, sand, or gravel." Again, there is no reference to groundwater. No change is needed.

"SFPUC Comments: 2. Suggest defining the term "microbial contamination," as it is vague and subject to individual's interpretations. A well-defined term in the regulation will avoid confusions and ensure consistent implementation of the regulations."

Response. Section 64400.95 is being adopted for clarity and is consistent with the definition in a 2014 federal RTCR state implementation guidance document. The term "microbial contamination" is in reference to contamination of microbial origin, as opposed to chemical, radiochemical, or physical origin. State Water Board staff reviewed the definition for clarity and did not find a lack of clarity. No change is needed.

ATT, Section 64401.45. "*§64401.45. [Definition]: Seasonal System. "Seasonal system" means a nontransient-noncommunity water system or transient-noncommunity water system that is not operated as a public water system on a year-round basis and starts up and shuts down at the beginning and end of each operating season."*

Response. State Water Board staff would like to clarify that section 64401.45 is a proposed regulation identified by underscored text.

"SFPUC Comments: 1. The above definition is limited in its applicability only to nontransient-noncommunity water system and/or transient-noncommunity water system not operated as a public water system year-round. These two types of systems are

public water systems but not a community water system. There are instances that public water systems have sources of supply not in operation year-round but operated solely during drought periods. The drought-period operations may be longer than 15 days in a year, therefore, these sources cannot be classified as a standby source because they exceed the operations duration limit in §64414(c). As such, will the definition of "Seasonal Systems" be modified to include the public water systems that are used periodically (i.e. drought sources)?"

Response. As discussed in the Initial Statement of Reasons (p. 12), section 64401.45 would be adopted for conformance with federal regulation (40 CFR 141.2). The phrase "noncommunity water system" would be replaced with "nontransient-noncommunity water system or transient-noncommunity water system" to clarify the type of noncommunity water system. The comment about modifying the definition would result in a definition that is not consistent with the federal regulation. As a condition of primacy, the State Water Board must promulgate regulations that are no less stringent than the federal regulations. No change is needed.

The comment concerning community water system operation of sources operated solely during drought periods and reference to section 64414(c) are beyond the scope of the proposed regulation. No response is required.

"SFPUC Comments: 2. If the above definition were not changed, would it be possible to add a similar definition (and thus similar requirements as §64426.9) for sources that only operate during drought periods?"

Response. The requested addition is beyond the scope of the proposed regulation. No response is required.

ATT, Section 64421. "*§64421. General Requirements. (b) …a public water system shall perform special purpose bacteriological monitoring as follows: ~~(1) After construction or repair of wells; (2) After main installation or repair;, (3) After construction, repair, or maintenance of storage facilities; and~~ (1) After any system pressure loss to less than five psi…"*

Response. State Water Board staff would like to clarify that section 64421(b) is worded as shown below.

- Section 64421(b): "In addition to the bacteriological monitoring requirements in Sections 64423, 64424, 64425, and 64426.9, ~~Water suppliers~~a public water system shall perform ~~additional~~special purpose bacteriological monitoring as follows:

  ~~(1) After construction or repair of wells;~~
  ~~(2) After main installation or repair;~~
  ~~(3) After construction, repair, or maintenance of storage facilities; and~~
  ~~(4)~~(1) After any system pressure loss to less than five psi. Samples collected shall represent the water quality in the affected portions of the system~~.~~; and"

"SFPUC Comment: 1. It's not clear why are the above three items (b)(1) through (b)(3) that are special purpose bacteriological monitoring activities in the existing TCR going to be removed?"

Response. As discussed in the Initial Statement of Reasons (p. 13), the three items (i.e., former subsections (b)(1) through (b)(3)) would be deleted because they are redundant with respect to the requirements in Chapter 16, sections 64580, 64582, and 64583, California Code of Regulations.

"SFPUC Comment: 2. Many pipeline repairs are done either at reduced pressure (even below 5 psi) or no pressure. With the proposed elimination of the above three special bacteriological sampling, does it mean all future bacteriological sampling after these pipeline repairs will be treated as "after any system pressure loss to less than five psi", under the new §64421(b)1), and all these bacteriological results will be included in the future monthly evaluation of Significant Rise in Bacteriological Count, as required in §64426(a)?"

Response. It is not clear from the comment if the pipeline repair occurs while the pipeline remains in service during the repair or has been taken out of service for the repair.

The deletion of former sections 64421(b)(1), (2), and (3) is unrelated to section 64421(b)(1) [former section 64421(b)(4)] and has no impact on section 64426(a).

In regard to the question raised, when a system is under pressure, the positive pressure prevents contaminants from entering the distribution system. When a system loses pressure or experiences a significant drop in system pressure, backsiphonage into the distribution system may occur along with bacteriological contamination of the system. This situation poses a potential public health threat. Given the importance of maintaining system pressure to prevent backsiphonage and the fact that it is not clear if the pipeline remains in service during the repair or is taken out of service for the repair, the State Water Board's staff response will include both scenarios.

If the pipeline remains in service for the repair and system pressure loss to less than five psi occurs, bacteriological monitoring would be required under section 64421(b)(1) [former section 64421(b)(4)], with samples collected to represent the water quality in the affected portion of the system. These samples would be included in determining if a possible significant rise in bacterial count occurred under section 64426(a).

If the pipeline is taken out of service for the repair, pipeline disinfection and bacteriological sampling is required prior to returning the pipeline to service under Chapter 16, section 64580. If the operation of returning the pipeline to service causes a system pressure loss to less than five psi, bacteriological monitoring and use of the results in determining a possible significant rise in bacterial count would occur as described in the previous paragraph.

"SFPUC Comments: 3. If a certain portion of a transmission system is occasionally operated at pressures below 5 psi on a day, would this require special purpose bacteriological monitoring?"

Response. The comment is beyond the scope of the proposed regulation. No response is required.

However, due to the complexity and components that make up a public water system's transmission system, as compared to a distribution system, and the potential public health threat due to backsiphonage, State Water Board staff recommends the public water system discuss the matter with the local Division of Drinking Water District Office. A review should be conducted to determine the cause for transmission system pressure losses to less than five psi, possible occurrences of backsiphonage, and any corrective actions needed for public health protection.

ATT, Section 64421. "*§64421. General Requirements. (b) …a public water system shall perform special purpose bacteriological monitoring as follows: (2) For a groundwater (not GWUDI) source that is treated with a primary or residual disinfectant on a continuous basis and is not monitored pursuant to §64654.8(b)(1)(B):"*

Response. State Water Board staff would like to clarify that paragraph (2) is a proposed regulation identified by underscored text.

"SFPUC Comments: 1. If a groundwater source is treated with a disinfectant residual intermittently or as needed but not continuously, will it be excluded from the special purpose monitoring under (b)(2)?"

Response. Yes. However, State Water Board staff recommends the public water system review the reason for why the groundwater source is treated with a residual disinfectant intermittently or as needed, and take corrective action where needed.

ATT, Section 64423. "*§64423. Routine Sampling. (a) A public water system shall collect routine bacteriological water samples as follows: (1) The minimum number of samples for community water systems shall be based on the known population served or the total number of service connections, whichever results in the greater number of samples, as shown in Table 64423-A."*

Response. State Water Board staff would like to clarify that sections 64423(a) and (a)(1) are worded as shown below. Please see Table 64423-A for wording and proposed additions and deletions identified by underscored text and strikethroughs, respectively.

- Section 64423)(a): "~~Each water supplier~~A public water system shall collect routine bacteriological water samples as follows:".

- Section 64423(a)(1): "The minimum number of samples for community water systems shall be based on the known population served or the total number of

service connections, whichever results in the greater number of samples, as shown in Table 64423-A~~. A community water system using groundwater which serves 25-1000 persons may request from the State Board a reduction in monitoring frequency. The minimum reduced frequency shall not be less than one sample per quarter.~~;"

"SFPUC Comment: 1. It would be helpful to clarify how a wholesale water system should use Table 64423-A in determining the required minimum number of bacteriological samples, if (a) it has no direct retail population served, or (b) it has some retail populations. In both cases, there are consecutive retail water systems that already have their own bacteriological monitoring plans."

Response. The comment does not concern the changes made to sections 64423(a) and (a)(1) and Table 64423-A, but rather how Table 64423-A is to be used by a wholesale water system. This is an implementation issue. No response is required. It should be noted that as discussed in the Initial Statement of Reasons (p. 16), as of April 1, 2016, public water systems (including wholesalers) have been conducting bacteriological monitoring according to Bacteriological Sample Siting Plans determined by the State Water Board District Offices and Local Primacy Agencies as meeting the state TCR and federal RTCR requirements. These plans include the routine sample locations.

ATT, Section 64423. "*§64423. Routine Sampling. (b) In addition to the minimum sampling requirements, all public water systems using approved surface water which do not practice filtration in compliance with §64650 through §64666, shall collect a minimum of one sample before or at the first service connection each day during which the turbidity level of the ~~water delivered to the system~~ source water exceeds 1 NTU."*

Response. State Water Board staff would like to clarify that the first sentence in section 64423(b) is worded as shown below.

- Section 64423(b): "In addition to the minimum sampling requirements, all ~~water suppliers~~public water systems using approved surface water which do not practice ~~treatment~~filtration in compliance with Sections 64650 through 64666, shall collect a minimum of one sample before or at the first service connection each day during which the turbidity level of the ~~water delivered to the system~~source water exceeds 1 NTU."

"SFPUC Comment: 1. What is the rationale for replacing the "water delivered to the system" with "source water"? Note that normally there are time lapses associated with conveyance, treatment, and storage between the source water and the treated water. A source water turbidity spike does not necessarily have a causal effect linked to the presence/absence of total coliform in the treated water at the system's entry point to the distribution network. As an unfiltered source supplier, SFPUC suggests retaining the existing requirement of collecting coliform sample from the appropriate type of water (source vs. treated) in response to the corresponding turbidity spike above 1 NTU, as it is more meaningful than the proposed change."

Response. Section 64423(b) would be revised for conformance with federal regulation (40 CFR 141.856(c) and 141.857(c)). 40 CFR 141.856(c) specifies that the turbidity level must be measured of the source water. The comment to retain the existing response would result in a regulation that is not consistent with the federal regulation. As a condition of primacy, the State Water Board must promulgate regulations that are no less stringent than the federal regulations. No change is needed.

ATT, Section 64423, Table 64423-A. "*§64423. Table 64423-A. Minimum Number of Routine Total Coliform Samples.*

"SFPUC Comment: 1. The footnote, "For a transient-noncommunity water system, monthly population served shall be based on the average number of persons served per day in a month", is inadequate and needs more clarification."

Response. State Water Board staff would like to clarify that Footnote 1 is a proposed regulation identified by underscored text.

"A system with a high transient population during certain months of a year would have significantly different average numbers of daily persons served per month. How does such a transient-noncommunity system pick the representative month for this calculation? Should an average monthly population number used should be based on the previous 3-year annual report data?" SFPUC suggests revising this footnote to make it clearer."

Response. The transient-noncommunity water system does not pick a representative month for purposes of determining the minimum number of routine total coliform samples to collect. As discussed in the Initial Statement of Reasons (pp. 23-24), the population would be determined based on the average number of persons served per day (aka daily average population) in a month. In other words, the population is determined for each month. This approach takes into consideration the transient population variation that may occur due to special events in a month or seasonal activities throughout the year. This approach provides public health protection by ensuring that an adequate number of samples are collected and are representative of the population served in a given month.

It is not clear why the "previous 3-year annual report data" should be used given there is no explanation for the proposal. Historically, the minimum number of routine total coliform samples to collect is based on the most current information that a public water system has on the monthly population served or the number of service connections. The numbers typically increase over time and may be a result of a public water system expanding its service area or due to development within the service area. State Water Board staff believes the numbers should be based on the most recent information and does not see the need to use older information. No change is needed.

State Water Board staff reviewed Footnote 1 for clarity and did not find a lack of clarity. No change is needed.

ATT, Section 64423.1. *"§64423.1. Sample Analysis and Reporting of Results. (a) …If directed by the State Board … the analytical results shall be reported in terms of coliform density of total coliforms and E. coli in the sample, whichever is appropriate."*

Response. State Water Board staff would like to clarify that section 64423.1(a) is worded as shown below.

- Section 64423.1(a): "~~The water supplier~~A public water system shall designate (label) each sample as routine, repeat, replacement, or "other" pursuant to Section 64421(b), and have each sample analyzed for total coliforms. The ~~supplier~~system also shall require the laboratory to analyze the same sample for ~~fecal coliforms or~~ Escherichia coli (*E. coli*) ~~whenever~~ the presence of total coliforms is indicated. As a minimum, the analytical results shall be reported in terms of the presence or absence of total ~~or fecal~~ coliforms~~, or~~ and *E. coli*, in the sample, whichever is appropriate. If directed by the State Board, based on an identified sanitary defect, exceedance of a Level 1 or Level 2 coliform treatment technique trigger, history of total coliform positive samples within the past 12 consecutive months, or determination of a possible significant rise in bacterial count in accordance with Section 64426, the analytical results shall be reported in terms of coliform density of total coliforms and *E. coli*, in the sample, whichever is appropriate."

"SFPUC Comment: 1. Routine TCR compliance presence/absence analysis does not include density measurements. SFPUC requests clarification in the proposed rule language that a request by the State Board for coliform density be only for non-routine coliform samples."

Response. State Water Board staff would like to clarify that the federal RTCR also requires public water systems to determine the presence or absence of total coliforms and *E. coli*; a determination of density is not required (40 CFR 141.852(a)(2)).

As discussed in the Initial Statement of Reasons (p. 24), public water systems would be required to report results in terms of coliform density if directed by the State Water Board, based on an identified sanitary defect, exceedance of a Level 1 or Level 2 coliform treatment technique trigger, history of total coliform-positive samples within the past 12 consecutive months, or determination of a possible significant rise in bacterial count. These situations warrant coliform density determination of total coliform and *E. coli* to help investigate coliform occurrence, identify the magnitude of a possible or actual contaminating event, and further evaluate the integrity of the distribution system. State Water Board staff maintains the position on the need to report results in terms of coliform density if directed by the State Water Board. No change is needed.

In regard to the comment requesting clarification of section 64423.1(a) by limiting the coliform density determination to non-routine samples, the first sentence in section 64423.1(a) is existing language that is being amended with a non-substantive change (i.e., change "The water supplier" to read "A public water system"). State Water Board staff does not propose a change to the labeling of samples collected. The comment is beyond the scope of the proposed regulation. No response is required.

ATT, Section 64424, Table 64424-B. "*§64424. Table 64424-B. Dual Purpose Sampling Locations. Type of Water System: Public water system using only a single groundwater (not GWUDI) well, serving 1,000 or fewer person, and…"*

Response. State Water Board staff would like to clarify that the entry in Table 64424-B, column one is worded as shown below.

- Table 64424-B, Column 1 Entry: "Public water system using only a single groundwater (not GWUDI) well, serving 1,000 or fewer persons, and required to conduct triggered source water monitoring under 40 CFR 141.402(a), which is incorporated by reference under Section 64430."

"SFPUC Comment: 1. Why is the dual-purpose sampling limited to water systems with only one well and serving 1,000 or fewer persons. What about if a groundwater system has more than one well and serves no retail customers? It's not clear why a system with more than one well is excluded."

Response. Table 64424-B would be added for conformance with federal regulation (40 CFR 141.853(a)(5)(ii)). 40 CFR 141.853(a)(5)(ii) specifies that the provision is for groundwater systems serving 1,000 or fewer people and with a single well. As a condition of primacy, the State Water Board must promulgate regulations that are no less stringent than the federal regulations.

For public water systems with more than one well, the comment is beyond the scope of the proposed regulation. No response is required.

ATT, Section 64424. "*§64424. Repeat Sampling (c) If one or more samples in the repeat sample set is total coliform-positive, a public water system shall collect and have analyzed an additional set of repeat samples as specified in subsections (a) and (b). The system shall repeat this process until either no total coliforms are detected in one complete repeat sample set or the system determines that the coliform treatment technique trigger specified in §64426.7 has been extended as a result of a repeat sample being total coliform-positive and notifies the State Board by the end of the day on which this is determined*."

Response. State Water Board staff would like to clarify that section 64424(c) is worded as shown below.

- Section 64424(c): "If one or more samples in the repeat sample set is total coliform-positive, ~~the water supplier~~a public water system shall collect and have analyzed an additional set of repeat samples as specified in subsections (a) and (b). The ~~supplier~~system shall repeat this process until either no total coliforms are detected in one complete repeat sample set or the ~~supplier~~system determines that ~~the MCL for total coliforms specified in Section 64426.1~~a coliform treatment technique trigger specified in Section 64426.7 has been exceeded as a result of a repeat sample being total coliform-positive and notifies the State Board by the end of the day on which this is determined."

"SFPUC Comments: 2. Wouldn't this requirement of continuing re-sampling at the original site contradicts §64425(a)(1), which forgoes the re-sampling if the invalidated sample is also from the routine site and when all other repeat samples from upstream, downstream, and/or alternative sites are total coliform negative? SFPUC suggests inserting "Except if the total coliform positive sample is invalidated per §64425(a)(1)," at the beginning of the second sentence of subsection (c) above to provide clarification and avoid confusion."

Response. The commentator's understanding of section 64425(a)(1) is incorrect. Section 64425(a)(1) is worded as shown below. The section specifies criteria for invalidation of a total-coliform positive sample; it does not specify criteria to forgo collection of a repeat sample. There is no contradiction between section 64424(c), 1st sentence and section 64425(a)(1). No change to section 64424(c) is needed.

- Section 64425: "(a) A water supplier may request the State Board to invalidate a sample for which a total coliform-positive result has been reported if the supplier demonstrates: (1) All repeat sample(s) collected at the same tap as the original total coliform-positive sample also are total coliform- positive and all repeat samples collected within five service connections of the original tap are not total coliform-positive; or"

"SFPUC Comments: 1. Clarification is needed to confirm if the notification is required by the end of the business day (i.e., 5 pm) or calendar day (i.e., 11:59 pm) on which determination of exceedance is made."

Response. The notification is required by the end of the calendar day on which the public water system determines that a coliform treatment technique trigger specified in section 64426.7 has been exceeded.

ATT, Sections 64425. "*§64425. Sample Invalidation. (a) A water supplier may request the State Board to invalidate a sample for which a total coliform-positive result has been reported if the supplier demonstrates: (1) All repeat samples collected at the same tap as the original total coliform-positive sample also are total coliform- positive and all repeat samples collected within five service connections of the original tap are not total coliform-positive; or…"*

Response. State Water Board staff would like to clarify that sections 64425(a) and (a)(1) are worded as shown below.

- Section 64425(a): "A ~~water supplier~~public water system may request the State Board to invalidate a routine or repeat sample for which a total coliform-positive result has been reported if the ~~supplier~~system demonstrates:"
- Section 64425(a)(1): "*No change to text.*"

"SFPUC Comment: 1. SFPUC suggests revising the original language by removing the phrase "within five service connections of the original tap" since the new requirements for repeat sampling location shown in Table 64424-A and Table 64424-B allow alternative locations to the five service connections."

Response. The comment refers to section 64425(a)(1) for which there is no change to text. The section is not part of the proposed regulation. No response is required.

"SFPUC Comment: 2. SFPUC also suggests adding a sentence to clarify that the repeat sample(s), through invalidated according to this subsection, will be considered meeting the repeat sampling requirement of collecting three samples for one repeat set, as three repeat had already been collected."

Response. The comment suggests a change that would be in conflict with the proposed regulation under section 64425(c). Section 64425(c) would be added for conformance with federal regulation (40 CFR 141.853(c)). As a condition of primacy, the State Water Board must promulgate regulations that are no less stringent than the federal regulations. No change is needed.

ATT, Section 64425. "*§64425. Sample Invalidation. (c) A total coliform-positive sample invalidated under this section does not count toward meeting the minimum routine and repeat sample monitoring requirements of §64423 and §64424, respectively."*

Response. State Water Board staff would like to clarify that section 64425(c) is worded as shown below.

- Section 64425(c): "A total coliform-positive sample invalidated under this section does not count toward meeting the minimum routine and repeat sample monitoring requirements of Sections 64425 and 64424, respectively."

"SFPUC Comment: "1. Should this new requirement only be applicable to the invalidation due to laboratory issues in (a)(2)]?"

Response. It is not clear why section 64425(c) should apply only to the invalidation under section 64425(a)(2) given there is no explanation for the proposal. Section 64425(c) would be added for conformance with federal regulation (40 CFR 141.853(c)). 40 CFR 141.853(c) specifies a number of conditions, any of which may be used, where the State Water Board may invalidate a total coliform-positive samples. These conditions are specified in sections 64425(a)(1) and (2). As a condition of primacy, the State Water Board must promulgate regulations that are no less stringent than the federal regulations. For purposes of section 64425(c), State Water Board staff reviewed sections 64425(a)(1) and (2) and does not see the need to restrict invalidation solely to section 64425(a)(2). No change is needed.

"SFPUC notes that if all positive total coliform samples are at the same routine tap only, then these samples would be invalided by the SWRCB per condition (a)(1) above."

Response. The comment refers to section 64425(a)(1) for which there is no change to text. The section is not part of the proposed regulation. No response is required.

"Although the results were invalidated, the required number of repeat samples were met."

Response. These is insufficient information in SFPUC Comment: 1. to determine if the requirement number of repeat samples were or were not met.

"Therefore, if this requirement (c) also applies to (a)(1), then the total count of minimum repeat samples (i.e., 3 samples) for each positive total coliform sample would not be met."

Response. The comment concerning sections 64425(a)(1) and (c) appears to be based on the commentator's earlier misunderstanding of section 64425(a)(1), which is not part of the proposed regulation. To help the commentator understand section 64425(c), State Water Board staff is providing the following explanation: (1) section 64425(a)(1) specifies criteria for invalidation of a total-coliform positive sample; it does not specify criteria to forgo collection of a repeat sample, (2) section 64425(c) specifies that invalidated samples do not count towards meeting the minimum routine and repeat sample monitoring requirement of sections 64423 and 64424, respectively, (3) an invalidated routine sample does not count towards meeting the minimum routine sampling monitoring requirement, (4) an invalidated repeat sample does not count towards meeting the minimum repeat sampling monitoring requirement, and (5) the invalidation of a routine sample (a) is unrelated to the requirement to collect a repeat sample set of at least three repeat samples for each total coliform-positive sample and (b) if the three repeat samples in the repeat sample set were collected, does not mean the requirement to collect the minimum number of repeat samples was not met.

ATT Section 64426(a). "*§64426(a). Significant Rise in Bacterial Count. (a) …..Special purpose sample such as those listed in Section 64421(b) and special purpose samples collected by a public water system during special investigations shall also be included to determine a possible significant rise in bacterial count*."

Response. State Water Board staff would like to clarify that the above is a proposed regulation identified by underscored text and is the last sentence from section 64426(a).

"SFPUC Comment: 1. It is unclear why special purpose samples are required to be included in the determination of possible significant rise in bacterial count, but is not included for MCL and Coliform Treatment Trigger Level exceedance evaluation."

Response. As discussed in the Initial Statement of Reasons (p. 30), the special purpose samples are included in the determination of a possible significant rise in bacterial count because the additional special purpose bacteriological samples provide more information about the distribution system as a whole and help to evaluate if there is a serious problem in an area of the distribution system that may pose a significant health risk to consumers.

Special purpose samples are not included in determining *E. coli* MCL exceedances in sections 64426.1(b)(1) through (4) because the *E. coli* MCL is based on the monitoring and test results of routine and repeat samples. The *E. coli* MCL is being adopted for conformance with federal regulations (40 CFR 141.63(c)(1) through (4) and 141.860(a)(1) through (4)). As a condition of primacy, the State Water Board must promulgate regulations that are no less stringent than the federal regulations.

Special purpose samples are not included in determining coliform treatment trigger exceedances in section 64426.7(b) because federal regulation (40 CFR 141.853(b)) specify that special purpose samples must not be used to determine whether the coliform treatment technique trigger has been exceeded. Section 64426.7(b) is being adopted for conformance with federal requirement. As a condition of primacy, the State Water Board must promulgate regulations that are no less stringent than the federal regulations.

"SFPUC suggests consistent approach in handling special purpose samples in all three determination and exclude the special operational samples (e.g. after a new main installation, construction, and repair of storage facilities, etc.) from significant raise determination."

Response. Special purpose samples are included in a possible significant rise in bacterial count determination and not included in *E. coli* MCL and coliform treatment technique trigger exceedances for the reasons previously discussed. State Water Board staff maintains the position on the need to include special purpose samples in the determination of a possible significant rise in bacterial count. For sections 64426.1(b)(1) through (4) and 64426.7(b), the proposed regulations are no less stringent than the federal regulations. No change is needed.

Special purpose bacteriological monitoring samples that are used to determine a possible significant rise in bacterial count under section 64426(a) are those specified in sections 64421(b) [(1) after any system pressure loss to less than five psi and (2) groundwater (not GWUDI) source that is treated with a primary or residual disinfectant on a continuous basis and not monitored pursuant to Section 64654.8(b)(1)(B)] and 64426(a) [samples collected by a public water system during special investigations]. State Water Board staff reviewed sections 64421(b) and 64426(a) and determined that no other type of sample needs to be to be identified in regulation as a special purpose sample at this time. No change to sections 64421(b) and 64426(a) is needed.

ATT, Section 64426(c). "*§64426(c). Significant Rise in Bacterial Count. (c)(2) Within 24 hours on which the system is notified of the test result(s), conduct an investigation and submit to the State Board information on the current status of physical works and operating procedures which may have caused the elevated bacteriological findings, or any information on community illness suspected of being waterborne...*"

Response. State Water Board staff would like to clarify that section 64426(c)(2) is worded as shown below.

- Section 64426(c)(2): "Within 24 hours on which the system is notified of the test result(s), conduct an investigation and ~~S~~submit to the State Board information on the current status of physical works and operating procedures which may have caused the elevated bacteriological findings, or any information on community illness suspected of being waterborne. This shall include, but not be limited to:"

"SFPUC Comment: 1. Suggest modifying the text to "within two business days" instead of "within 24 hours". This is crucial for the system to comply with this requirement if the results were received by the end of the business day on a Friday or a long 3-day weekend; otherwise, the system may have limited available staff resources and time to conduct a meaningful investigation."

Response. Section 64426(c)(2) is being revised for conformance with state law (HSC 116450(b)) by including a 24-hour timeframe to conduct an initial investigation and submit information to the State Water Board. The timeframe is specified in state law. The State Water Board is not able to specify a timeframe that is less stringent than allowed by state law. No change is needed.

Commentator 3, Jody Frymire, IDEXX, 12/3/2020 Comment Letter (CL)

Jody Frymire, IDEXX did not have any comment opposing our regulations or recommending changes to our proposed regulation.

CL, Paragraph 1. "IDEXX commends the Board on the proposed revisions, specifically the removal of the use of fecal coliforms as a fecal contamination indicator and proposing to use *Escherichia coli (E. coli)* as included within Sample Analysis and Reporting of Results (§ 64423.1), Significant Rise in Bacterial Count (§ 64426), and other regulation sections."

Response. State Water Board staff appreciates the comment.

CL, Comment 1. "We support the revision of using *E. coli* as the fecal contamination indicator, since *E. coli* are better indicators than fecal coliform."

Response. State Water Board staff appreciates the comment.

Commentator 4, Isabella Johannes, Pacific Gas and Electric Company, 12/18/2020 Comment Letter (CL)

CL, page 1, paragraph 2, lines 6 – 10. Commentator states "We are concerned with some of the requirements of the Seasonal System Start-Up Procedure section (§64426.9) of the proposed RTCR. We believe that these requirements, especially the default requirement to disinfect all seasonal systems at start-up, may result in negative unintended consequences for non-chlorinated, non-pressurized systems."

Response. Non-pressurized systems are a public health concern. Dewatering and depressurizing a distribution system at the end of a seasonal operating period can introduce contaminants into distribution lines through infiltration and backsiphonage. The purpose of the procedures is to ensure that steps are taken before the beginning of the next seasonal operating period to mitigate the risk associated with dewatering and depressurizing the water system.

CL, page 2, table, section 64426.9(a)(2). Commentator provided comments in four bullets: (1) "There is no benefit to disinfecting a system where total coliform is absent. Disinfecting prior to receiving the results of a pre-disinfection sample constitutes responding to a presence of total coliform that likely does not exist." (2) "Results in unnecessary introduction of disinfectants; many chlorine disinfectants are acidic and can degrade distribution system infrastructure" (3) "Results in the need to dispose of chlorinated flush water" and (4) "Imposes the requirement to engage a certified operator upon treated Transient Noncommunity seasonal systems where there had been previously no such requirements.

Bullets (1)-(3) are addressed as one comment and proposed modification to the regulation to remove the requirement for system disinfection from section 64426.9(a)(2) and add a new subsection that provides for disinfection only in cases where total coliform is detected in initial samples required by section 64426.9(a)(3). Bullet (4) is addressed with comment for section 64426.9(a)(5).

Response. Disinfection of the distribution system before the beginning of the seasonal operating period is a preventative measure to ensure that the distribution system is free from any bacterial contamination that may have been introduced while the system was depressurized. The addition of chlorine disinfectants into distribution system infrastructure is a well-established sanitary practice as a method for disinfecting facilities that have been or may have been exposed to contamination, as well as for maintaining a chlorine residual in the water supplied. Proper materials resistant to degradation from chlorine disinfectants are widely available as are best practices for dechlorinating flush water for disposal.

Commentator proposed modifications to the regulation that seasonal water systems only need to disinfect after finding a total coliform positive sample. State Water Board staff disagrees with this change as bacterial growth may occur in discrete locations in a distribution system and bacterial quality may not be uniformly distributed throughout the system at the time and location a total coliform sample is

collected during a seasonal system start-up procedure. State Water Board staff proposes that disinfection is included in all start-up procedures as dewatering and depressurizing a distribution system is a public health concern.

The proposed regulations do allow for exemptions to some or all of the start-up procedure requirements in section 64426.9(c) if the distribution system remains pressurized in the period the water system is not operating, as well as allowing for seasonal water systems to submit an alternative to a start-up procedure requirement provided that the alternative provides the same level of public health protection. These two options in the proposed regulations would provide seasonal water systems flexibility to develop start-up procedures specific to their conditions, with State Water Board approval, that address the public health concerns noted.

CL, page 2, table, section 64426.9(a)(5). Commentator stated that this section requires the seasonal water system "to engage a certified operator for seasonal untreated Transient Noncommunity systems that had been previously required to do so, and where no such requirement would exist if the systems were operated year-round." Commentator proposed modification to the regulation such that this only applies to systems and/or components of startup procedures for which a certified operator is otherwise required.

Response. The proposed regulation includes the requirement for a certified operator to perform or supervise the steps of the start-up procedure in section 64426.9(a)(1)-(4), including the flushing and addition of a chemical disinfectant. Existing regulations in 22 CCR section 63770(b)(3) require water systems to utilize certified distribution operators to make decisions on overseeing flushing of water mains. The addition of a chlorine disinfectant into a distribution system requires knowledge of calculating dosage rates and operating chemical feed pumps to avoid overdosing or underdosing to achieve adequate disinfection. 22 CCR section 63770(d)(1) requires water systems to utilize either certified distribution or treatment operators to make decisions addressing the determination and control of proper chemical dosage rate for wellhead disinfection and distribution residual maintenance. The proposed regulation applies the requirement for utilizing a certified operator for these specific activities in the start-up procedure and is consistent when a certified operator is otherwise required if the system would be operated on a year-round basis.

Additionally, section 64426.9(d) allows a seasonal water system to submit an alternative to this start-up procedure requirement, with State Water Board approval, provided that the alternative provides the same level of public health protection. State Water Board staff does not propose to make any modifications to the proposed regulation.

CL, table, section 64426.9(d)(2). Commentator stated "the requirement for written approval of an alternative start-up procedure may be construed as an annual requirement which would place an unnecessary burden on seasonal systems" and

seeks clarification that the initial approval of an alternative start-up procedure remains effective so long as it is implemented.

Response. The proposed regulation and the federal Revised Total Coliform Rule do not require an annual resubmittal of a previously approved start-up procedure or alternative procedure. The proposed regulation and the federal Revised Total Coliform Rule require the annual submittal of a certification that the seasonal water system followed a state-approved start-up procedure in section 64426.9(b)(2). State Water Board staff finds that this requirement duplicates the commentator's suggested modification to state the proposed alternative start-up method remains effective as long as the approved alternative procedure is implemented. No changes to the proposed regulation are necessary.

Commentator 5, Mic Stewart, The Metropolitan Water District of Southern California (Metropolitan), 12/17/2020 Comment Letter (CL)

CL, Paragraph 1: "Metropolitan supports the State Board's efforts to align its existing Total Coliform Rule (TCR) with the federal RTCR through this proposed rulemaking."

Response. State Water Board staff would like to clarify that sections 64426(a) and 64426.1(a) are worded as shown below.

CL, Comments: "*1). Section 64426(a) states that special purpose sample such as those listed in Section 64421(b) and special purpose samples collected by a public water system during special investigations shall be included to determine a possible significant rise in bacterial count."*

Response. State Water Board staff would like to clarify that sections 64426(a) and 64426.1(a) are worded as shown below.

- Section 64426(a): "A public water system shall determine whether a possible significant rise in bacterial count has occurred for each month in which it is required to monitor for total coliforms. Results of all samples collected in a calendar month pursuant to Sections 64423, 64424, and 64425 that are not invalidated by the State Board or the laboratory shall be included in determining a possible significant rise in bacterial count. Special purpose samples such as those listed in Section 64421(b) and special purpose samples collected by a public water system during special investigations shall also be included to determine a possible significant rise in bacterial count."

- Section 64426.1(a): "A public water system shall determine compliance with the *E. coli* MCL for each month in which it is required to monitor for total coliforms. Results of all samples collected in a calendar month pursuant to Sections 64423, 64424, and 64425 that are not invalidated by the State Board or the laboratory shall be included in determining compliance with the ~~total coliform~~*E. coli* MCL. Special purpose samples such as those listed in Section 64421(b) and special purpose samples collected by ~~the water supplier~~a public water system during special investigations shall not be used to determine compliance with the ~~total coliform~~*E. coli* MCL."

"As currently written, the proposed regulation lists a sample taken during the loss in system pressure as a special purpose sample. However, it is not clear what other types of samples would be designated as "special purpose" for determining a significant rise in bacterial count. Special samples used to evaluate method modifications, new methods, or assess the effectiveness of sample line disinfection should not be included in determining a possible significant rise. It is also not clear what would constitute a significant rise for special investigation samples. Metropolitan recommends the State Board provide clarification on this provision."

Response. Special purpose bacteriological monitoring samples are those specified in sections 64421(b) [(1) after any system pressure loss to less than five psi and (2) groundwater (not GWUDI) source that is treated with a primary or residual disinfectant on a continuous basis and not monitoring pursuant to section 64654.8(b)(1)(B)] and 64426(a) [samples collected by a public water system during special investigations]. State Water Board staff reviewed sections 64421(b) and 64426(a) and determined that no other type of sample needs to be identified in regulation as a special purpose sample at this time. No change is needed to sections 64421(b) and 64426(a).

The criteria for a possible significant rise in bacterial count are specified in sections 64426(b)(1) through (3). State Water Board staff reviewed these sections for clarity and did not find a lack of clarity. No change is needed.

CL, Comments: "*2). Section 64426(b)(1) & (2) define a possible significant rise in bacterial count as two total-coliform positive repeat samples or one E. coli positive sample."*

Response. State Water Board staff would like to clarify that sections 64426(b)(1) and (2) are worded as shown below. A review of Metropolitan's remaining comments show no comment specific to section 64426(b)(2). No response is required for section 64426(b)(2).

- Section 64426(b)(1): "A public water system collecting at least 40 samples per month has a total coliform-positive routine sample followed by two total coliform-positive repeat samples in the repeat sample set."

- Section 64426(b)(2): "A public water system has a sample which is positive for ~~fecal coliform or E. coli~~*E. coli*."

"Sampling locations are determined by the size and configuration of a public water system. Some public water systems cannot collect repeat samples at locations upstream and downstream of routine sampling sites due to their system configuration. In addition, large systems like Metropolitan may serve water from multiple plants and different water sources to some routine sampling locations. An approved alternative sampling plan allows for repeat samples to be collected at the original routine location. Repeat samples at the same location are more likely to be positive in the event of a localized issue compared to a more widespread contamination problem. Therefore, the context of two coliform-positive repeat samples from the same location is quite different from positive repeat samples from upstream and/or downstream locations."

Response. Section 64422(a) requires sample sites chosen for the Bacteriological Sample Siting Plan to be representative of water throughout the distribution system including each pressure zone, and areas supplied by each water source and distribution reservoir. Section 64424(b) allows public water systems to submit a request to State Water Board staff to use alternative sampling locations in lieu of the requirement to collect at least one repeat sample upstream or downstream of the

original sampling site. Table 64424-A specifies the sampling requirement for alternative sampling locations; the table does not specify requirements for an alternative sampling plan and does not specifically state that repeat samples may be collected at the routine sample site. State Water Board staff refers Metropolitan to Table 64424-A for the regulatory language regarding sampling requirements for alternative sampling locations.

State Water Board staff cannot comment on repeat sample test results as future occurrences are unknown and cannot be predicted. It should be noted that the likelihood of repeat samples collected at the same location as being a localized issue compared to a more widespread contamination problem could depend on the water system size and configuration. What could be a localized issue for a large public water system may be a widespread contamination problem for a small public water system (e.g., at gas stations or grocery stores).

"Consequently, the criteria for determining a possible significant rise should be based on the sampling location for repeat samples."

Response. The comment refers to the possible significant rise in bacterial count criteria in section 64426(b)(1) for a public water system collecting at least 40 samples per month that has a total coliform-positive sample is followed by two-positive repeat samples in the repeat sample set. Section 64426(b)(1) is an existing section that is being revised with a non-substantive change (i.e., change "system" to read "public water system). The federal RTCR does not propose a change to section 64426(b)(1), which is a state-only requirement. The State Water Board does not propose a change to the possible significant rise in bacterial count criteria in section 64426(b)(1). The comment is beyond the scope of the proposed regulation. No response is required.

"Metropolitan recommends that the State Board clarify that the proposed regulations allow for flexibility based on system-specific configurations and conditions."

Response. State Water Board staff believes that the regulation clearly defines acceptable repeat sampling locations, does include language covering those cases where there is no upstream or downstream service connection, and provides for the use of alternative sampling locations. It is not possible to incorporate more flexibility for system-specific configurations and conditions because section 64424(b) is being revised and Tables 64424-A, B, and C are being added for conformance with federal regulation (40 CFR 141.853(a)(5), (5)(i), and (5)(ii)(A), (B), and (C)). As a condition of primacy, the State Water Board must promulgate regulations that are no less stringent than the federal regulations.

CL, Comments: "*3). Section 64426(c)(1) & (2) describe required actions in the event of a significant rise, including "…conduct an investigation and submit to the State Board information on the current status of physical works and operating procedures…"*

Response. State Water Board staff would like to clarify that sections 64426(c)(1) and (2) describe required actions in the event of a **possible** significant rise in bacterial count. Sections 64426(1) and (2) are worded as shown below.

- Section 64426(c): "When the coliform ~~levels~~criteria specified in subsection (~~a~~b) are reached or exceeded, the public water ~~supplier~~system shall:

  (1) Contact the State Board by the end of the day on which the system is notified of the test result(s) ~~or the system determines that it has exceeded the MCL, unless the notification or determination occurs after the State Board office is closed, in which case the supplier shall notify the State Board within 24 hours~~; and

  (2) Within 24 hours on which the system is notified of the test result(s), conduct an investigation and ~~S~~submit to the State Board information on the current status of physical works and operating procedures which may have caused the elevated bacteriological findings, or any information on community illness suspected of being waterborne. This shall include, but not be limited to:

  (A) through (D) *No change to text.*
  (E) ~~Physical e~~Evidence indicating bacteriological contamination of facilities;
  (F) through (H) *No change to text."*

"The proposed regulation lists several actions required in a response to a significant rise in bacterial count. The extent of the investigation needed and subsequent information to be submitted after a potential significant rise is unclear in the proposed regulation."

Response. State Water Board staff would like to clarify that the investigation needed and subsequent information to be submitted are required in the event of a **possible** significant rise in bacterial count.

The comment concerns the investigation and information to be submitted to the State Water Board by a public water system under section 64426(c)(2). The public water system would need to conduct the investigation in a manner that will: (1) enable it to comply with the information submittal requirement under section 64426(c)(2) and (2) enable the State Water Board to determine if a significant rise in bacterial count occurred. The investigation is an implementation issue. No response is required.

In regard to clarity of the information to be submitted, no change was proposed other than the revision in section 64426(c)(2)(E) to allow public water systems to consider in their investigation all types of evidence indicating bacteriological contamination of facilities. State Water Board staff reviewed section 64426(c)(2)(E) for clarity and did not find a lack of clarity. No change is needed.

"It is also unclear whether there is a difference between "an investigation" and a Level 1 Assessment and report. Metropolitan requests that the State Board clarify this provision

and provide templates that public water systems can use for their reporting requirements."

Response. The investigation (and report) required under section 64426 is a state-only requirement and is required when a coliform criteria in section 64426(b) is reached or exceeded. The Level 1 Assessment and report required under section 64426.8 is a federal RTCR requirement and is required when a coliform treatment technique trigger in section 64426.7(b) is exceeded.

A purpose of section 64426(c)(2) is to specify what information to submit to the State Water Board. How the information is reported is an implementation issue. No response is required.

CL, Comments: "*4). Section 64426(d) states "As soon as possible within 24 hours of receiving notification from the State Board determining there is a significant rise…the public water system shall implement the emergency notification plan"."*

Response. State Water Board staff would like to clarify that section 64426(d) is worded as shown below.

- Section 64426(d): "As soon as possible within 24 hours of receiving notification from the State Board ~~of a~~determining there is a significant rise in bacterial count, based on the information submitted under subsection (c)(2), the public water ~~supplier~~system shall implement the emergency notification plan required by Sections 116460, Health and Safety Code."

"For systems collecting more than 40 samples per month (e.g., Metropolitan collects over 500 samples per month), obtaining two total coliform-positive repeat samples is a distinct possibility; but it does not necessarily indicate a system-wide problem nor constitute a possible significant rise."

Response. State Water Board staff would like to clarify that section 64426(b)(1) is worded as shown below.

- Section 64426(b)(1): "A public water system collecting at least 40 samples per month has a total coliform-positive routine sample followed by two total coliform-positive repeat samples in the repeat sample set."

If the criteria in section 64426(b)(1) is met, that is an indication of a possible significant rise in bacterial count.

"It is unclear if the regulation and its interpretation contain enough flexibility to allow a utility to thoroughly investigate such an isolated occurrence without automatically triggering public notification. Public notification without a thorough investigation and root cause analysis may not provide a clear picture to the public of the safety of their water."

Response. The comment relates to the investigation and information to be submitted by a public water system to the State Water Board under section 64426(c)(2). Please see the Response for CL, Comments, 3), Section 64426(c)(1) and (2). Also, section 64426(c)(2) contains existing language (i.e., "This shall include, but not be limited to:") regarding the information to submit to the State Water Board. State Water Board staff believes this existing language provides a public water system with the flexibility to conduct an investigation and submit information where the scope is not limited to what is specified in section 64426(c)(2). No change is needed.

It should be noted that the occurrence of a possible significant rise in bacterial count does not automatically trigger public notification. If a possible significant rise in bacterial count occurs, section 64426(c)(2) requires a public water system to conduct an investigation and submit information to the State Water Board. If the State Water Board determines a significant rise in bacterial count has occurred, based on the submitted information, section 64426(c)(3) requires a public water system to implement its Emergency Notification Plan. State Water Board staff believes these procedures are sufficient to ensure that public notification is not automatically triggered as a result of a possible significant rise in bacterial count. No change is needed.

State Water Board staff agrees that a thorough investigation and root cause analysis is necessary to provide a clear picture to the public of the safety of their water and to ensure that corrective actions are taken. A root cause analysis would be documented in section 64426(e), which requires a public water system to submit a report on the investigation, sanitary defects detected (and if applicable, may note no sanitary defects were detected), corrective actions completed, and a proposed timetable for any corrective actions not already completed.

State Water Board staff reviewed sections 64426(c), (d), and (e) for clarity and did not find a lack of clarity. No change is needed.

"Metropolitan recommends clarifying the notification requirements related to significant rise."

Response. Existing regulatory language in section 64426(d) requires a public water system to implement its Emergency Notification Plan required by Section 116460, Health and Safety Code when the State Water Board determines a significant rise in bacterial count has occurred. The Emergency Notification Plan is developed by the public water system to protect public health and is tailored by the public water system on how best to communicate information to the customers when there is an immediate danger to health. State Water Board staff reviewed section 64426(d) for clarity and did not find a lack of clarity. No change is needed.

CL, Comments: "*5). Section 64426(e) requires a system to notify the State Board within five business days when scheduled corrective actions are completed."*

Response. State Water Board staff would like to clarify that section 64426(e), last sentence is worded as shown below.

- Section 64426(e), last sentence: "The system shall notify the State Board within five business days when each scheduled corrective action is completed."

"The format and mode of submitting this notification is not clear. While Metropolitan agrees that documenting the investigation and subsequent corrective action is essential, the process should not be burdensome on small water systems struggling with limited resources. Metropolitan recommends that the State Board clarify this notification requirement as a concise and straightforward process while thoroughly documenting the corrective actions taken."

Response. The purpose of section 64426(e) is to specify what information to submit to the State Water Board. How the information is reported is an implementation issue. No response is required. It should be noted that Level 1 assessment templates may be found on the State Water Board's web page (https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/rtcr.html). The templates contain a format for documenting corrective actions completed that public water systems want to consider using.

The notification requirement is identical to and no more burdensome to small public water systems than the notification requirement in section 64426.8(c) when a Level 1 Assessment or Level 2 Assessment is conducted. The section 64426.8(c) notification has been in effect since April 1, 2016.

State Water Board staff reviewed section 64426(e) for clarity and did not find a lack of clarity. No change is needed.

Commentator 6, Dawn White, Golden State Water Company, 12/18/2020 Comment Letter (CL)

Dawn White, Golden State Water Company did not have any comment opposing our regulations or recommending changes to our proposed regulation.

CL, Paragraph 1. "I would like to express my support for the adoption of the proposed Revised Total Coliform Rule (RTCR). Water suppliers have been complying with separate state and federal rules and are looking forward to the clarity of following one standard. I agree that California's proposed rule builds on the federal rule and provides additional public health protection."

Response. The State Water Board appreciates the comment.

CL, Paragraph 5. "The RTCR as proposed addresses the issues I presented in 2017 while still providing the additional public health provision desired in the significant rise requirements."

Response. The State Water Board appreciates the comment.

CL, Paragraph 6. "Use of enumeration (density testing) in Section 64423.1 is to be used in specific circumstances as a means to gain more information about coliform occurrences in a distribution system and should not be used as a specific trigger for action. Any data from density testing should be used together with other data and information collected, and decisions or actions taken should be based on the total information available."

Response. In regard to the comment "and should not be used as a specific trigger for action", State Water Board staff would like to clarify that the federal RTCR and proposed regulation require results of all routine and repeat samples, regardless of test method (presence-absence vs. coliform density) and provided results are not invalidated, be used to determine compliance with the *E. coli* maximum contaminant level (MCL) (see section 64426.1) and exceedance of a coliform treatment technique trigger (see section 64426.7). Exceeding the *E. coli* MCL or a coliform treatment technique trigger would require action to be taken by a public water system. The samples for compliance and exceedance determination and any necessary additional actions are adopted for conformance with the federal RTCR, as discussed in the Initial Statement of Reasons (p. 24). State Water Board staff is providing this clarification for the benefit of readers who may not be familiar with all the requirements of the federal RTCR and proposed regulation.

CL, Paragraph 7. "I look forward to the long awaited adoption and implementation of California's Revised Total Coliform Rule."

Response. The State Water Board appreciates the comment.

Commentator 7, Bhavani Yerrapotu, Santa Clara Valley Water District (SCVWD), 12/18/2020 Comment Letter (CL)

CL, Paragraph 3, Item 1. "Section 64421 (2)(A) includes a new provision for monitoring a groundwater source that is treated with a primary or residual disinfectant on a continuous basis and is not monitored pursuant to Section 64654.8 (b)(1)(B)."

> **Response.** State Water Board staff would like to clarify that the comment is in reference to section 64421(b)(2)(A).

"This new provision requires that a raw water sample be collected each calendar quarter, with samples collected during the same month (first, second, or third) of each calendar quarter. Valley Water considers the requirement to collect in the same month to be too prescriptive and can result in laboratory capacity issues, schedule bottlenecks, and limit the ability of the utility to allocate resources to other compliance sampling program efficiently."

> **Response.** Please see the response to Steve Bigley, Coachella Valley Water District concerning section 64421(b)(2)(A). A review of Drinking Water Watch (1/19/2021; https://sdwis.waterboards.ca.gov/PDWW/) shows that SCVWD has three groundwater sources.

CL, Paragraph 3, Item 2. "Other than increasing monitoring to a monthly basis per Section 64421 (2)(B), are there provisions to address when a raw groundwater (not Groundwater Under Direct Influence of Surface Water) sample is coliform positive, and the source is already served? Please clarify what is needed for reporting and follow-up sampling in such a situation."

> **Response.** State Water Board staff would like to clarify that the discussion is in reference to section 64421(b)(2)(B). There are no provisions in the proposed regulation other than what is specified in sections 64421(b)(2)(B). Reporting of bacteriological test results is specified under section 64423.1. Follow-up sampling is specified under section 64421(b)(2)(B).

CL, Paragraph 3, Item 3. "Section 64423 regarding "Routine Sampling," requires clarification on how the Minimum Number of Routine Total Coliform Samples is determined for wholesalers. Valley Water does not have any direct customers (0 population served) and our retailers conduct the required routine Total Coliform monitoring based on their respective served populations per Table 64423-A. Valley Water also uses approved surface water sources and utilizes conventional surface water treatment with proper disinfection under the Surface Water Treatment Rule."

> **Response.** Please see the response to Andrew DeGraca, San Francisco Public Utilities Commission concerning section 64423 on the use of Table 64423-A.

CL, Paragraph 3, Item 4. "In Section 64424 (b), please clarify sampling locations for a wholesaler conducting monitoring at turnouts located on transmission mains, where the

wholesaler does not have any service connections, and hence meeting the requirement of collecting repeat samples within five service connections upstream or downstream of the original site is not feasible"

Response. Section 64424(b) allows the use of alternative sampling locations in Table 64424-A instead of the repeat sample locations that are within five connections upstream and downstream of the original sampling location that tested total coliform-positive. Public water systems may propose to use alternative sampling locations provided the sampling requirement in the table is met. It should be noted that, as discussed in the Initial Statement of Reasons (p. 16), as of April 1, 2016, public water systems (including wholesalers) have been conducting bacteriological monitoring according to Bacteriological Sample Siting Plans determined by the State Water Board District Offices and Local Primacy Agencies as meeting the state TCR and federal RTCR requirements. These plans include the repeat sample locations and, if proposed, the alternative sampling locations.

CL, Paragraph 3, Item 5. "In Sections 64426 and 64426.1 (c), the State Water Board should consider changing the required "end of day" notification, to "within 24 hours." The current timeline puts undue strain on water utilities, and may be infeasible, if the detection occurs near the end of the day."

Response. State Water Board staff would like to clarify that the comment is in reference to the regulatory language in section 64426(c)(1) and 64426.1(c), which are shown below.

- Section 64426(c)(1): "Contact the State Board by the end of the day on which the system is notified of the test result(s) ~~or the system determines that it has exceeded the MCL, unless the notification or determination occurs after the State Board office is closed, in which case the supplier shall notify the State Board within 24 hours~~; and"

- Section 64426.1(c): "If a public water system is not in compliance with ~~paragraphs~~subsections (b)(1) through (4), during any month in which it supplies water to the public, the ~~water supplier~~system shall notify the State Board by the end of the ~~business~~ day on which this is determined ~~unless the determination occurs after the State Board office is closed, in which case the supplier shall notify the State Board within 24 hours of the determination~~. The ~~water supplier~~system shall also notify the ~~consumers served by the water system. A Tier 2 Public Notice shall be given for violations of paragraphs (b)(1) or (2), pursuant to section 64463.4. A Tier 1 Public Notice shall be given for violations of paragraphs (b)(3) or (4), pursuant to section 64463.1~~public pursuant to Sections 64463, 64463.1, and 64465."

For section 64426(c)(1), the comment refers to a phrase that is existing language. State Water Board staff is not proposing to amend the phrase in the proposed regulation. No response is required.

For section 64426.1(c), the comment refers to the proposed revision to notify the State Water Board by the "end of the day" instead of the "end of the ~~business~~ day." Section 64426.1(c) would be revised for conformance with federal regulation (40 CFR 141.861.1(a)(i)(1)), except that the 24-hour extension to notify the State Water Board after offices are closed would no longer be retained. Public water systems are able to make after-hours contact with the State Water Board District offices and Local Primacy Agencies according to an Emergency Notification Plan, which is required of all systems under Health and Safety Code section 116460. Also, 40 CFR 141.861(a)(i)(1) states that a public water system must notify the State Water Board by the "end of the day." As a condition of primacy, the State Water Board must promulgate regulations that are no less stringent than the federal regulations. No change is needed.

CL, Paragraph 3, Item 6. "In Section 64426 (a), Valley Water recommends the State Board remove the consideration of "Special Investigation Samples" from the determination of possible significant rise in bacterial count. Including such samples could potentially discourage investigations on the potential source of contamination for fear of triggering this provision."

Response. As discussed in the Initial Statement of Reasons (p. 30), the additional special purpose samples (including those collected during special investigations) provide more information about the distribution system as a whole and help to evaluate if there is a serious problem in an area of the distribution system that may pose a significant health risk to consumers. State Water Board staff maintains the position on the need to include special purpose samples in the determination of a possible significant rise in bacterial count. No change is needed.

A public water system's reluctance in response to a regulatory requirement is beyond the scope of the proposed regulation. No response is required. However, it has been the State Water Board's staff experience that public water systems are aware of their role as responsible stewards in providing safe drinking water to their customers and the need to take the necessary steps to investigate potential sources of contamination to ensure public health protection. State Water Board staff believes such public water systems will not be potentially discouraged to conduct investigations as a result of including the samples collected during special investigations for section 64426(a).