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IN THE COURT OF APPEAL OF THE STATE OF CALIFORNIA

THIRD APPELLATE DISTRICT

(Sacramento)

CALIFORNIA MANUFACTURERS & TECHNOLOGY ASSOCIATION, Plaintiff and Appellant, v. OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT et al., Defendants and Respondents.	C093351 (Super. Ct. No. 34-2015-80002120-CU-WM-GDS)

APPEAL from a judgment of the Superior Court of Sacramento County, Laurie M. Earl, Judge. Affirmed.

Downey Brand, Jay-Allen Eisen, Annie S. Amaral, and Alexandra K. LaFountain for Plaintiff and Appellant.

Beveridge & Diamond and Kaitlyn D. Shannon for American Chemistry Council as Amicus Curiae on behalf of Plaintiff and Appellant

Rob Bonta, Attorney General, Edward H. Ochoa, Senior Assistant Attorney General, Laura J. Zuckerman, and Elizabeth Song, Deputy Attorneys General, for Defendants and Respondents.

"Every resident of California has the right to pure and safe drinking water." (Health & Saf. Code, § 116270, subd. (a).)[1] To protect the quality of drinking water in California, under the California Safe Drinking Water Act (§ 116270 et seq.), defendant Office of Environmental Health Hazard Assessment (OEHHA) is charged with conducting a risk assessment for contaminants in drinking water. This process includes setting a "public health goal" (PHG) for such contaminants, an aspirational "estimate of the level of the contaminant in drinking water that is not anticipated to cause or contribute to adverse health effects, or that does not pose any significant risk to health." (§ 116365, subd. (c)(1).) After OEHHA sets its PHG, the State Water Resources Control Board sets a maximum contamination level for that contaminant to be included in the primary drinking water standard.

At issue here is the 2015 PHG OEHHA set for the contaminant perchlorate, a chemical found in rocket fuel. After OEHHA set the PHG for perchlorate at 1 part per billion (ppb), plaintiff California Manufacturers & Technology Association (CMTA) filed a petition for a writ of mandate ordering OEHHA to withdraw the PHG. The trial court denied the petition.

On appeal, CMTA raises two primary contentions. It asserts (1) OEHHA violated the statutory mandate in arriving at the PHG. Specifically, for an "acutely toxic substance" such as perchlorate, the statute requires the PHG "shall be set at the level at which no known or anticipated adverse effects on health occur, with an adequate margin of safety." (§ 116365, subd. (c)(1)(A).) CMTA asserts OEHHA violated this requirement by setting the PHG at a level where a *nonadverse* effect on health occurs. CMTA also asserts (2) the PHG is void based on the common law conflict of interest doctrine because its author, Dr. Craig Steinmaus, had a conflict of interest. Steinmaus

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[1] Undesignated statutory references are to the Health and Safety Code.

had previously published three studies on perchlorate, and, according to CMTA, in determining the PHG, he would at the least be tempted to arrive at a result that would protect and burnish his professional reputation.

We conclude OEHHA complied with the statutory requirements under section 116365, subdivision (c)(1)(A). We further conclude the common law conflict of interest doctrine does not apply here. We affirm.

BACKGROUND

The California Safe Drinking Water Act

The Legislature enacted the California Safe Drinking Water Act, among other things, "to ensure that the water delivered by public water systems of this state shall at all times be pure, wholesome, and potable." (§ 116270, subd. (e).) "To effectuate this purpose, the [California Safe Drinking Water] Act articulates a state policy to 'reduce to the lowest level feasible all concentrations of toxic chemicals that, when present in drinking water, may cause cancer, birth defects, and other chronic diseases.' " (*California Manufacturers & Technology Assn. v. State Water Resources Control Bd.* (2021) 64 Cal.App.5th 266, 272 (*California Manufacturers*), quoting § 116270, subd. (d).) "The [California Safe Drinking Water] Act also expresses an intent to establish a safe drinking water program 'that is more protective of public health than the minimum federal requirements.' " (*California Manufacturers*, at p. 272, quoting § 116270, subd. (f).)

The California Safe Drinking Water Act provides for a two-step process for setting drinking water contaminant standards. First, OEHHA must "prepare and publish an assessment of the risks to public health posed by each contaminant for which the state board proposes a primary drinking water standard." (§ 116365, subd. (c)(1).) This risk assessment must include a PHG, which is "an estimate of the level of the contaminant in drinking water that is not anticipated to cause or contribute to adverse health effects, or that does not pose any significant risk to health." (*Ibid.*) Furthermore, a specific standard

applies if the subject contaminant is an "acutely toxic substance." (§ 116365, subd. (c)(1)(A).) "If the contaminant is an acutely toxic substance, the public health goal shall be set at the level at which no known or anticipated adverse effects on health occur, with an adequate margin of safety." (*Ibid.*)

To the extent information is available, the PHG shall take into account, among other things, "[a]dverse 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, [and] pregnant women"; the "relationship between exposure to the contaminant and increased body burden and the degree to which increased body burden levels alter physiological function or structure in a manner that may significantly increase the risk of illness"; and the "additive effect of exposure to the contaminant in media other than drinking water, including, but not limited to, exposures to the contaminant in food, and in ambient and indoor air, and the degree to which these exposures may contribute to the overall body burden of the contaminant." (§ 116365, subd. (c)(1)(C)(ii)-(iv).)

PHG's "are aspirational rather than mandatory or enforceable." (*California Manufacturers, supra*, 64 Cal.App.5th at pp. 272-273.) OEHHA is required to review each PHG "at least once every five years unless the office determines . . . that there has not been a detection of the corresponding contaminant in the preceding five years." (§ 116365, subd. (e)(1).)

As for the second step in the process, after OEHHA sets the PHG for a contaminant and completes its risk assessment, the State Water Resources Control Board sets a maximum contaminant level (MCL) for that contaminant. The MCL must be set " 'at a level that is as close as feasible to the corresponding [PHG][,] placing primary emphasis on the protection of public health, and that, to the extent technologically and economically feasible' avoids any significant risk to public health." (*California Manufacturers, supra*, 64 Cal.App.5th at pp. 280-281, quoting § 116365, subd. (a).) "Unlike MCL[']s, which are the product of several statutorily enumerated considerations

. . . , [PHG's] are based exclusively on public health considerations." (*California Manufacturers*, at p. 272, citing § 116365, subd. (c)(1).)

Perchlorate

Perchlorate is a chemical compound used in rocket fuel, slurry explosives, road flares, and air bag inflation systems. Perchlorate can occur in nature and, through rainfall, circulate at low levels throughout the environment. Perchlorate is also released into the environment by human activity. For example, perchlorate can leach into soil and aquifers through the disposal of rocket fuel. Perchlorate can remain in the ground and in surface waters for decades. Since 1997, agencies have reported the presence of perchlorate "in thousands of drinking water sources and wells throughout" California.

When ingested, perchlorate can have the effect in humans of inhibiting the uptake of iodide in the thyroid gland. This is known as iodide uptake inhibition (IUI). Iodine is a component of two hormones produced by the thyroid. Transfer of iodide into the thyroid gland is "an essential step in the synthesis of" these hormones. Thyroid hormones are necessary to a variety of basic human physiological functions, including "regulat[ing] the body's metabolism and physical growth." Inhibition of iodide transfer into the thyroid can result in iodide deficiency and, consequently, reduction in the synthesis of the hormones, a condition known as hypothyroidism. According to the National Academy of Sciences, hypothyroidism is the first adverse effect on the "continuum of possible health effects of perchlorate exposure."[2] If thyroid hormone production falls substantially in a healthy adult, adverse health effects may result. Any "decrease is potentially more likely to have adverse effects in sensitive populations

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[2] The National Academy of Sciences "is a private, nonprofit, self-perpetuating society of distinguished scholars engaged in scientific and engineering research, dedicated to the furtherance of science and technology and to their use for the general welfare."

(people with thyroid disorders, pregnant women, fetuses, and infants) . . . ." Ordinarily, the body maintains concentrations of thyroid hormones within limits through the body's own "feedback control mechanisms." However, "even small decreases in thyroid hormone levels may be associated with significant adverse effects, including altered cognitive development in children and increased cardiovascular risk factors in adults."

OEHHA's 2004 PHG for Perchlorate

In 2002, a court ordered OEHHA to submit a revised PHG for perchlorate for public comment and to subject its PHG to peer review. Each of three peer reviewers agreed with the identification of particularly sensitive subpopulations, specifically pregnant women, fetuses, and people with compromised thyroid function, arriving at a PHG sufficient to protect those subpopulations.

The first peer reviewer noted "the potential impact of trace levels of perchlorate may be nil." He did not recommend a particular PHG. He noted OEHHA determined that "iodine uptake per se is an adverse effect and, therefore, suitable for use in risk assessment and the determination of PHG." He further concluded the "critical effect," which the reviewer equated to the "first adverse effect," of perchlorate exposure was "not inhibition of iodine entry, but" rather a decrease in thyroid hormone during pregnancy.

The second reviewer noted that "the calculation of the PHG in the OEHHA document is based on an effect that is not a direct adverse health event, but rather a precursor to an adverse health event." The second reviewer opined that a PHG of 2 ppb "seems reasonably justified."[3]

The third peer reviewer recommended a PHG of 18.6 micrograms per liter.

In 2004, OEHHA announced its PHG of 6 ppb for perchlorate.

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[3] While the peer reviewers at the time were not identified, OEHHA stipulated the second peer reviewer in 2002 was Dr. Steinmaus.

OEHHA's 2015 PHG for Perchlorate

OEHHA began the process of reviewing its PHG for perchlorate in 2008. It issued a draft PHG in January 2011, proposing a PHG of 1 ppb for perchlorate in drinking water. Dr. Steinmaus authored the draft, which was reviewed by five OEHHA scientists.

The draft stated the "current OEHHA PHG of 6 ppb was set in 2004. The methods used to develop the proposed PHG described here are similar to those used to develop the 2004 PHG in that both are based on the same thyroidal [IUI] data . . . ." The draft further stated the "major difference between the 2004 PHG calculations and the present proposal is that the 2004 PHG document focused on pregnant women and their fetuses as the primary susceptible population, whereas the proposed PHG focuses on infants." The draft noted new data indicated drinking water intakes per body weight were higher in infants than previously thought, resulting in the likelihood that infants had greater perchlorate exposure per body weight from drinking water than estimated in 2004.

The draft further stated: "[T]he identification of the point of departure, prevention of thyroidal iodide uptake, is a health-protective decision since it is intended to prevent the very first step of a process that leads to thyroid hormone imbalance and other related adverse health effects." The draft continued: "The purpose of the proposed perchlorate PHG is to help prevent any perchlorate-related reduction in thyroid iodine uptake that might lead to decreases in thyroid hormone production. As discussed above, recent evidence suggests that even small decreases in thyroid hormone levels may be associated with significant adverse effects, including altered cognitive development in children and increased cardiovascular risk factors in adults. Importantly, these changes have been seen at thyroid hormone levels that are within what have been traditionally defined as normal reference ranges, and have occurred in people without any other evidence of overt thyroid disease. These findings suggest that any change in thyroid hormone levels, no matter how small, may be associated with at least some increased risk of thyroid-related

adverse outcomes." Among other sources, the draft relied on studies Dr. Steinmaus coauthored in 2007 and 2010.

Three outside scientists reviewed the draft. One reviewer noted the most vulnerable subpopulation identified by the PHG was infants, and further noted that, given "the small thyroidal reserves of neonates and the possible need for an uninterrupted supply of iodine, this seems to be a reasonable change from the previous PHG's focus on pregnant women, whose fetuses may be protected by larger maternal stores." She further stated that, given "how little we know about the sensitivity of infants, particularly neonates, to thyroid hormone disruption or about iodine intake among pregnant women and breastfed infants it seems reasonable to be cautious about exposing them to thyroid-hormone disrupting agents." She stated it was "appropriate and reasonable" to consider the decrease in iodide uptake, and that "[u]sing inhibition of iodide uptake as the critical event is appropriate since this is the first step in perchlorate toxicity, and any other effects would follow subsequently." She concluded that, until more information was gathered, "a drinking water concentration of 1 ppb is likely protective to the population." Another reviewer concurred infants were more sensitive to the effects of perchlorate. He recommended a PHG of 2 ppb.

OEHHA circulated a second draft PHG in December 2012. The second draft adhered to the proposed 1 ppb PHG. OEHHA received several letters offering feedback, much of it negative.

OEHHA issued the final PHG for perchlorate in February 2015. Dr. Steinmaus was the author. There were eight OEHHA reviewers of the final PHG. Consistent with the draft PHG's, OEHHA set the PHG at 1 ppb. As with the drafts, "OEHHA used decreased uptake of iodide by the thyroid gland as the key biochemical event for assessing the risks due to perchlorate toxicity." "OEHHA considers effects on thyroid hormone production and subsequent changes to be adverse. [IUI] is the key event that leads to other possible effects from perchlorate exposure. Prevention of [IUI] prevents

progression to the adverse health effects of perchlorate." The PHG noted the National Academy of Sciences "deemed 'inhibition of iodide uptake by the thyroid as the basis of the perchlorate risk assessment to be the most health-protective and scientifically valid approach.' OEHHA agrees with this approach and used it in developing its original 2004 PHG for perchlorate." Thus, the PHG stated that the value of 1 ppb "is intended to help prevent any perchlorate-related decrease in iodide uptake by the thyroid that could lead to decreased thyroid hormone production and that could disrupt the important functions of this hormone."

CMTA's Writ Petition

Pursuant to Code of Civil Procedure section 1085, CMTA filed a petition for a writ of mandate ordering OEHHA "to withdraw the current revised PHG for perchlorate and to identify a new revised PHG for perchlorate in compliance with legal requirements."

CMTA asserted section 116365 requires that the PHG "shall be set at the level at which no known or anticipated adverse effects on health occur, with an adequate margin of safety." (§ 116365, subd. (c)(1)(A).) According to CMTA, in its determination of the PHG, OEHHA violated this statutory mandate.

CMTA also asserted that, as both "principal author of the PHG technical support document on which the PHG is based, and the author of the key studies on which the technical support document relies," Dr. Steinmaus had a conflict of interest which "should have resulted in his recusal . . . ." According to CMTA, "OEHHA's decision to have Dr. Steinmaus conduct the required assessment and author the corresponding report created a conflict of interest which compromised the PHG process and violated OEHHA's obligations under both the Health and Safety Code and common law conflict of interest principles."

The trial court denied CMTA's writ petition and entered judgment in OEHHA's favor.

DISCUSSION

I

Compliance with Section 116365 in Setting the PHG

A. Standard of Review

"Code of Civil Procedure section 1085 permits judicial review of ministerial duties as well as quasi-legislative and legislative acts." (*County of Los Angeles v. City of Los Angeles* (2013) 214 Cal.App.4th 643, 653.) Here, we address OEHHA's interpretation of a statute, specifically section 116365, subdivision (c)(1). In reviewing the trial court's denial of a writ of mandate pursuant to Code of Civil Procedure section 1085, "[w]here the facts are undisputed and the issue is one of statutory interpretation, we review the trial court's ruling de novo." (*Asian Americans Advancing Justice—Los Angeles v. Padilla* (2019) 41 Cal.App.5th 850, 863, fn. omitted; accord, *Lopez v. Ledesma* (2022) 12 Cal.5th 848, 857 [generally appellate court reviews questions of statutory interpretation de novo].)

However, " '[i]n determining whether an agency has incorrectly interpreted the statute it purports to implement, a court gives weight to the agency's construction.' [Citation.] 'How much weight to accord an agency's construction is "situational," and greater weight may be appropriate when an agency has a " 'comparative interpretative advantage over the courts,' " as when " 'the legal text to be interpreted is technical, obscure, complex, open-ended, or entwined with issues of fact, policy, and discretion.' " [Citation.] Moreover, a court may find that "the Legislature has *delegated* the task of interpreting or elaborating on a statute to an administrative agency," for example, when the Legislature "employs open-ended statutory language that an agency is authorized to apply or 'when an issue of interpretation is heavily freighted with policy choices which the agency is empowered to make.' " [Citations.] In other words, the delegation of legislative authority to an administrative agency sometimes "includes the power to elaborate the meaning of key statutory terms." [Citation.] Nevertheless, the proper

interpretation of a statute is ultimately the court's responsibility.' " (*California Manufacturers, supra*, 64 Cal.App.5th at pp. 279-280.)

B. Principles of Statutory Interpretation

" ' "Under settled canons of statutory construction, in construing a statute we ascertain the Legislature's intent in order to effectuate the law's purpose. [Citation.] We must look to the statute's words and give them their usual and ordinary meaning. [Citation.] The statute's plain meaning controls the court's interpretation unless its words are ambiguous." [Citations.] If the words in the statute do not, by themselves, provide a reliable indicator of legislative intent, "[s]tatutory ambiguities often may be resolved by examining the context in which the language appears and adopting the construction which best serves to harmonize the statute internally and with related statutes. [Citation.]" [Citation.] . . . If the statute is ambiguous, we may consider a variety of extrinsic aids, including legislative history, the statute's purpose, and public policy.' " (*People v. Lucero* (2019) 41 Cal.App.5th 370, 394-395; accord, *Union of Medical Marijuana Patients, Inc. v. City of San Diego* (2019) 7 Cal.5th 1171, 1183-1184.)

C. CMTA's Contentions

As stated, in setting the PHG, "OEHHA used decreased uptake of iodide by the thyroid gland," or IUI, "as the key biochemical event for assessing the risks due to perchlorate toxicity." CMTA maintains this violated the statutory mandate because the PHG must be set at a level to prevent *adverse* health effects, not *nonadverse* health effects, and IUI is not an adverse health effect.[4]

CMTA notes, correctly, that the National Academy of Sciences has explicitly stated IUI is a "*nonadverse* effect rather than an *adverse* effect." That body nonetheless recommended use of IUI "as the point of departure for the perchlorate risk assessment"

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[4] The California Safe Drinking Water Act does not specifically define the terms "adverse" or "adverse effects on health." (See § 116275.)

because using "a nonadverse effect that is upstream of the adverse effects is a conservative, health-protective approach to the perchlorate risk assessment." CMTA also cites OEHHA's "Questions and Answers" published in connection with the 2004 PHG. In it, OEHHA noted: "The perchlorate health effect of primary concern is the reduction of the uptake of iodide, an essential nutrient, by the thyroid gland . . . . *While not harmful by itself*, inadequate iodide uptake may lead to the harmful disruption of proper thyroid function." (Italics added.) In the same document, OEHHA further noted that its 2004 perchlorate PHG, like the current PHG and like the National Academy of Sciences approach, "focused on the reduction of iodide uptake as the critical health effect." Additionally, OEHHA acknowledged in the 2015 PHG that IUI was "the key event that leads to other possible effects from perchlorate exposure" and that prevention of IUI "prevents progression to the adverse health effects of perchlorate." Similarly, in its 2015 publication responding to public comments, OEHHA stated it treated IUI "*as it would an adverse event* because it is in the direct causal pathway between perchlorate exposure and several important adverse events." (Italics added.)

Thus, according to CMTA, IUI is not an adverse health effect, and OEHHA has explicitly acknowledged as much. By regulating to prevent it, OEHHA violated section 116365, expanding the scope of that section and exceeding the authority granted to it thereunder.

D. Analysis

There is no dispute among the parties that perchlorate is an acutely toxic substance within the meaning of section 116365, subdivision (c)(1)(A). Accepting the premise that perchlorate is indeed an acutely toxic substance, we consider whether OEHHA acted within its authority in identifying IUI as the effect on health to prevent such that, in avoiding it, the PHG would be "set at the level at which no known or anticipated adverse effects on health occur, with an adequate margin of safety." (§ 116365, subd. (c)(1)(A).) In other words, as a corollary, we essentially consider whether IUI gives rise to a "known

or anticipated adverse effect[ ] on health." (*Ibid.*) We conclude that, in setting the PHG, OEHHA properly identified IUI as a "known or anticipated adverse effect[ ] on health," and therefore it complied with section 116365, subdivision (c)(1)(A) in setting the PHG.

If the statute specifically required OEHHA to set the PHG at a level at which no *known* adverse effects on health occur, we might find CMTA's position—that IUI is not an adverse effect on health and therefore should not be used in setting the PHG—to be more persuasive. However, the statute also requires OEHHA to set the PHG at a level "at which no . . . anticipated adverse effects on health occur, with an adequate margin of safety." (§ 116365, subd. (c)(1)(A).) In other words, the statute requires OEHHA to set the PHG at a level that will prevent the occurrence of anticipated adverse health effects. CMTA accuses OEHHA of effectively reading the word "adverse" out of the statute. However, we conclude CMTA's interpretation essentially reads the words "or anticipated" out of the statute.

Based on our reading of the plain language of the statute, we conclude OEHHA acted within its statutory authority in concluding that the onset of IUI results in "anticipated adverse effects on health," and that therefore the PHG must be set at a level so as to prevent IUI. (§ 116365, subd. (c)(1)(A).) The California Safe Drinking Water Act does not define "anticipated" in its definitions (§ 116275), and we find it helpful to resort to dictionary definitions for this term and others (see *Wasatch Property Management v. Degrate* (2005) 35 Cal.4th 1111, 1121-1122 [when ascertaining ordinary, usual meaning of a word, courts appropriately refer to dictionary definition]). Dictionary definitions of "anticipate" include: "to give advance thought, discussion, or treatment to," "to meet (an obligation) before a due date," "to foresee and deal with in advance," "to act before (another) often so as to check or counter," and "to look forward to as certain." (Merriam-Webster's Collegiate Dict. (11th ed. 2006) p. 54.) Synonyms include "foresee" and "prevent." (*Ibid.*, capitalization omitted.) Employing these definitions, OEHHA could conclude, for example, the onset of IUI resulted in foreseeable adverse

health effects to be dealt with in advance. Thus, in setting the PHG to avoid IUI, OEHHA set the PHG "at the level at which no known *or anticipated* adverse effects on health occur, with an adequate margin of safety." (§ 116365, subd. (c)(1)(A), italics added.)

The record fully supports the conclusion that, with the onset of IUI, adverse effects on health are anticipated. OEHHA stated in the 2015 PHG that IUI was "the key event that leads to other possible effects from perchlorate exposure" and that prevention of IUI "prevents progression to the adverse health effects of perchlorate." In its 2015 publication responding to public comments, OEHHA stated IUI "is in the direct causal pathway between perchlorate exposure and several important adverse events." OEHHA stated the use of IUI in establishing the PHG was a "health-protective decision since it is intended to prevent the very first step of a process that leads to thyroid hormone imbalance and other related adverse health effects." It further stated, "OEHHA considers effects on thyroid hormone production and subsequent changes to be adverse. [IUI] is the key event that leads to other possible effects from perchlorate exposure. Prevention of [IUI] prevents progression to the adverse health effects of perchlorate."

We reach this conclusion notwithstanding the fact, as stated by the National Academy of Sciences, that "outcomes at the end of the continuum" of health effects caused by perchlorate exposure may not be "inevitable consequences" of that exposure. Based on our interpretation of the statutory language, OEHHA could set the PHG at a level where there exist foreseeable, if not inevitable, adverse health effects. Indeed, if there were a condition, such as IUI, the onset of which *always and inevitably* resulted in adverse health effects, it is not difficult to imagine characterizing such condition itself as a known adverse effect on health.

Further reinforcing our determination is the statutory language stating that the PHG shall be set at the specified level, "with an adequate margin of safety." (§ 116365, subd. (c)(1)(A).) We conclude this language builds into the PHG determination a degree

of latitude, particularly where the precise point at which known adverse effects on health may occur, or the precise volume of exposure to a contaminant that will cause such effects, is uncertain. In other words, we read this qualifier as building into the process reasonable room—a margin—to account for uncertainty so as to ensure public health.

In its grammatical and lexical interpretation, CMTA asserts the phrase, "with an adequate margin of safety" modifies the sentence's main subject, the level at which the PHG shall be set. CMTA further asserts that the words "level" and "margin" are metrics, and thus the phrase effectively calls for the further refining of a numerical value of the PHG. Essentially, CMTA's reading of the statute would call for the setting of the initial PHG at a specified value and then adjusting that numerical value by the additional numerical value of a margin of safety.

We read the phrase "with an adequate margin of safety" in a more general way. We read this language as providing latitude for OEHHA to ensure public health, particularly where the level at which known adverse effects on health may arise, or the amount of exposure that will cause such effects, is not entirely clear. CMTA is correct that one definition of the word "margin" is a "spare amount or measure or degree allowed or given for contingencies or special situations." (Merriam-Webster's Collegiate Dict. (11th ed. 2006) p. 759.) However, contrary to CMTA's suggestion, this does not necessarily mandate a precise numerical value for a margin of safety. For example, the word "amount," in addition to meaning "the total number or quantity" can also mean, among other things, "the whole effect, significance, or import." (Merriam-Webster's Collegiate Dict. (11th ed. 2006) p. 42.) "Measure" can mean, among other things, "an adequate or due portion," "a moderate degree," "a measured quantity," and "a step planned or taken as a means to an end." (Merriam-Webster's Collegiate Dict. (11th ed. 2006) p. 769.) And "degree" can mean, among many other things, "the extent, measure, or scope of an action, condition, or relation." (Merriam-Webster's Collegiate Dict. (11th ed. 2006) p. 328.) In our view, these definitions do not mandate the employment of

strictly numerical values to adjust the initial numerical PHG value as asserted by CMTA. Putting aside these definitions, we are of the opinion the term "margin of safety" has a more commonly understood meaning, employed here as a reasonable degree of latitude to ensure the health of all populations.

We further note we afford deference to OEHHA's interpretation of the statute it is tasked with implementing. While " 'the proper interpretation of a statute is ultimately the court's responsibility,' " we nevertheless give due weight to OEHHA's construction. (*California Manufacturers, supra*, 64 Cal.App.5th at p. 280.) The Legislature enacted the California Safe Drinking Water Act, among other things, "to ensure that the water delivered by public water systems of this state shall at all times be pure, wholesome, and potable." (§ 116270, subd. (e).) As the Legislature stated: "Every resident of California has the right to pure and safe drinking water." (§ 116270, subd. (a).) We conclude the Legislature has delegated interpretation of the statute to OEHHA, as the interpretation of section 116365 involves " ' " 'an issue of interpretation [that] is heavily freighted with policy choices which the agency is empowered to make.' " ' " (*California Manufacturers, supra*, 64 Cal.App.5th at p. 280.) Safeguarding the right of every Californian to pure and safe drinking water, and, in so doing interpreting section 116365, is a charge " ' " 'heavily freighted with policy choices which [OEHHA] is empowered to make.' " ' " (*California Manufacturers*, at p. 280.) As such, we afford deference to its interpretation.

Additionally, as stated, the National Academy of Sciences (or a committee thereof) employed the same method as OEHHA here in identifying IUI as the basis for its risk assessment: "[T]he committee recommends that inhibition of iodide uptake by the thyroid in humans, which is the key biochemical event and not an adverse effect, should be used as the basis of the risk assessment. Inhibition of iodide uptake is a more reliable and valid measure, it has been unequivocally demonstrated in humans exposed to perchlorate, and it is the key event that precedes all thyroid-mediated effects of

perchlorate exposure." It is true, as asserted by CMTA, that, unlike OEHHA, the National Academy of Sciences does not operate under the mandates of section 116365. However, that this "society of distinguished scholars" advocated the method employed by OEHHA here further supports OEHHA's determinations.

We conclude OEHHA properly considered IUI and established its PHG "at the level at which no known or anticipated adverse effects on health occur, with an adequate margin of safety." (§ 116365, subd. (c)(1)(A).) OEHHA did not exceed its authority under the statute.

II

Conflict of Interest

A. Additional Background, CMTA's Contentions, and Standard of Review

In 2005, OEHHA hired Dr. Steinmaus in the capacity of Public Health Medical Officer II. In 2007, 2010, and 2013, Steinmaus coauthored and published three studies involving perchlorate. The studies specified the views expressed therein were those of the authors and did not necessarily represent those of OEHHA.

CMTA asserts the PHG is void due to Dr. Steinmaus's conflict of interest. It asserts the record establishes Steinmaus's conflict under the common law conflict of interest doctrine based on circumstances in which he would be tempted to serve his own interests. According to CMTA, through his publications, Steinmaus had already taken public positions on issues OEHHA was deciding in setting the PHG for perchlorate and his positions conflicted with other opinions in the scientific community. Therefore, according to CMTA, Steinmaus could not objectively participate in setting the PHG because he had the conflicting interest in protecting his reputation and the propriety of his prior studies and positions he had publicly taken. CMTA contends that these circumstances demanded Steinmaus's recusal from setting the PHG.

"We assess the court's factual findings under the substantial evidence standard, but exercise independent judgment on legal issues. [Citations.] Legal issues include the

interpretation of the governing statute or regulation and whether the agency took into account the relevant factors and acted 'consistent with applicable law.' " (*Manderson-Saleh v. Regents of University of California* (2021) 60 Cal.App.5th 674, 693, quoting *Associated Builders & Contractors, Inc. v. San Francisco Airports Com.* (1999) 21 Cal.4th 352, 361.) Thus we exercise our independent judgment in determining whether the " 'common law doctrine against conflicts of interest' " (*Clark v. City of Hermosa Beach* (1996) 48 Cal.App.4th 1152, 1171 (*Clark*)) applies, and, if so, whether OEHHA acted "consistent with applicable law" (*Associated Builders & Contractors, Inc.*, at p. 361).

B. The Common Law Conflict of Interest Doctrine

" '[T]he common law doctrine against conflicts of interest . . . prohibits public officials from placing themselves in a position where their private, personal interests may conflict with their official duties.' " (*Clark, supra*, 48 Cal.App.4th at p. 1171.) This doctrine extends to noneconomic conflicts of interest. (*Id.* at p. 1171, fn. 18.) " 'Actual injury is not the principle the law proceeds on. Fidelity in the agent is what is aimed at, and as a means of securing it the law will not permit him to place himself in a position in which he may be tempted by his own private interests to disregard those of his principal.' " (*Id.* at p. 1171.) A finding of self-interest sufficient to set aside a challenged action " 'need not be based upon actual proof of dishonesty, but may be warranted whenever a public official, by reason of personal interest in a matter, is placed in a situation of temptation to serve his or her own purposes, to the prejudice of those for whom the law authorizes that official to act. . . . [A]n individual member ordinarily cannot vote on a matter in which that member . . . is interested. If the member does, the action taken by the body of which he or she is a member is invalidated. . . . Where the vote of a member interested is necessary to pass an ordinance or bylaw, such ordinance or bylaw is void, irrespective of how beneficial the ordinance may be.' " (*Ibid.*, italics omitted.)

C. Analysis

The cases CMTA relies upon as applying the common law doctrine against conflicts of interest are factually distinguishable. However, of far greater importance, almost all involve quasi-judicial acts and challenges to them by writ petitions for administrative mandate pursuant to Code of Civil Procedure section 1094.5.[5] (*Petrovich Development Co., LLC v. City of Sacramento* (2020) 48 Cal.App.5th 963; *Fisher v. State Personnel Bd.* (2018) 25 Cal.App.5th 1; *Nasha v. City of Los Angeles* (2004) 125 Cal.App.4th 470 (*Nasha*); *Clark, supra*, 48 Cal.App.4th 1152.)

" '[T]he terms "quasi-legislative" and "quasi-judicial" are used to denote . . . differing types of action. Quasi-legislative acts involve the adoption of rules of general application on the basis of broad public policy, while quasi-judicial acts involve the determination and application of facts peculiar to an individual case. [Citations.] *Quasi-legislative acts are not subject to procedural due process requirements* while those requirements apply to quasi-judicial acts regardless of the guise they may take. . . .' " (*Save Civita Because Sudberry Won't v. City of San Diego* (2021) 72 Cal.App.5th 957, 983 (*Save Civita*), fn. omitted, quoting *Beck Development Co. v. Southern Pacific Transportation Co.* (1996) 44 Cal.App.4th 1160, 1188 (*Beck Development Co.*).) "The principle that procedural due process protections do *not* apply to quasi-legislative action is well established. [Citations.] ' "Legislative action generally is not governed by these procedural due process requirements because it is not practical that everyone should have a direct voice in legislative decisions; elections provide the check there." ' " (*Save Civita*, at pp. 983-984, citing *Western Oil & Gas Assn. v. Air Resources Board* (1984) 37

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[5] One of the cases on which CMTA principally relies is *Noble v. Palo Alto* (1928) 89 Cal.App. 47. While *Noble* did not involve administrative mandamus, it also did not involve a quasi-legislative matter and, to our knowledge, it has not been applied in such a case.

Cal.3d 502, 525 & *Horn v. County of Ventura* (1979) 24 Cal.3d 605, 612-613.) This matter, involving OEHHA's setting of the PHG for perchlorate in drinking water, is a quasi-legislative act.

"Quasi-legislative actions are generally reviewed by a proceeding in ordinary or traditional mandate (Code Civ. Proc., § 1085), in which judicial review is confined to the question whether the classification is arbitrary, capricious, or without reasonable or rational basis." (*Save Civita, supra*, 72 Cal.App.5th at p. 984.) "Administrative mandamus (Code Civ. Proc., § 1094.5) is available only when 'by law a hearing is required to be given, evidence is required to be taken, and discretion in the determination of facts is vested in the inferior tribunal, corporation, board, or officer . . . .' " (*Ibid.*; see also *Beach & Bluff Conservancy v. City of Solana Beach* (2018) 28 Cal.App.5th 244, 259 [determination whether Code of Civ. Proc., §§ 1094.5 or 1085 applies does not depend on whether agency is required to hold evidentiary hearing, but instead turns on nature of challenged action; traditional mandamus under § 1085 applies to quasi-legislative decisions defined as those involving formulation of a rule to be applied to all future cases while administrative mandamus under § 1094.5 applies to quasi-judicial decisions which involve actual application of a rule to a specific set of facts].)

As stated, the majority of cases on which CMTA relies for applicability of the common law conflict of interest doctrine are cases addressing petitions for writs of administrative mandate involving quasi-judicial acts. (*Petrovich Development Co., LLC v. City of Sacramento, supra*, 48 Cal.App.5th 963; *Fisher v. State Personnel Bd., supra*, 25 Cal.App.5th 1; *Nasha, supra*, 125 Cal.App.4th 470; *Clark, supra*, 48 Cal.App.4th 1152.) And, as stated, in such cases, rules of procedural due process apply. These include, among other things, hearings " ' " '*before a reasonably impartial, noninvolved reviewer.*' " ' " (*Nasha*, at p. 483.) In quasi-legislative matters, such as this, these procedural due process rules do not apply. (*Save Civita, supra*, 72 Cal.App.5th at p. 983; *Beck Development Co., supra*, 44 Cal.App.4th at p. 1188.) Regardless of the

merits of CMTA's contention that Dr. Steinmaus was conflicted, in the absence of the procedural due process safeguards applicable to quasi-judicial matters, we conclude the common law conflict of interest doctrine does not apply to these quasi-legislative proceedings.

CMTA offers no direct authority standing for the proposition that, despite the inapplicability of procedural due process protections, the common law conflict of interest doctrine should nevertheless apply to circumstances such as these. While CMTA in its reply brief faults OEHHA for failing to cite any cases stating the common law conflict of interest doctrine applies *only* to quasi-judicial matters, what we find more significant is the lack of any case law we have found applying the doctrine to quasi-legislative matters such as this.

Among other things, in rejecting CMTA's conflict of interest contention, the trial court relied on *Friends of La Vina v. County of Los Angeles* (1991) 232 Cal.App.3d 1446 (*Friends of La Vina*), disapproved on another ground in *Western States Petroleum Assn. v. Superior Court* (1995) 9 Cal.4th 559, 569-570 and footnote 2. *Friends of La Vina* was an appeal from a judgment granting a writ of mandate challenging the approval of a project and seeking a proper environmental impact report in compliance with the California Environmental Quality Act (CEQA). (*Friends of La Vina*, at p. 1450.) Insofar as relevant here, the court in *Friends of La Vina* stated: "The trial court's ruling derived in large measure from what the court termed 'general principles of conflict of interest,' as applicable to applicants and their consultants. In so ruling, the court assumed an unwarranted role. The issue in this case is compliance with CEQA. To the extent policing of specific conflicts of interest might accurately be perceived as a legislative provision or purpose of CEQA, it could be pursued. But not otherwise. *Except where the law clearly provides rules for identification and rectification of what might be termed conflicts of interest, that is a legislative not a judicial function*." (*Id*. at p. 1456, italics added.)

CMTA distinguishes *Friends of La Vina* on the ground that it was a CEQA case and the trial court's employment of "general principles of conflict of interest" in its ruling was inappropriate given there was a statutory authorization for the challenged action. (*Friends of La Vina, supra*, 232 Cal.App.3d at pp. 1452-1453, 1456.) This is true, as far as it goes. However, the case nevertheless articulates a principle with which we agree: that we are not to identify and rectify purported conflicts of interest in areas where such has not previously been done, where there do not exist procedural due process protections, and where the choice to do so is more appropriately left to the Legislature. (See *id*. at p. 1456.)

CMTA also notes that the same appellate district that decided *Friends of La Vina* decided *Clark* approximately five years later, when it "directly applied *Noble*'s common law principles and found a conflict of interest." CMTA argues this suggests *Friends of La Vina* is strictly limited to its facts. *Clark* and *Friends of La Vina* were indeed both decided by the Second Appellate District, although the cases were decided by different divisions. (*Clark, supra*, 48 Cal.App.4th 1152; *Friends of La Vina, supra*, 232 Cal.App.3d 1446.) What is more pertinent, however, is the fact, discussed *ante*, that *Clark* was an administrative mandate case implicating procedural due process protections.

Ultimately, here, we will not invoke the common law conflict of interest doctrine in circumstances in which, to our knowledge, it has never been applied. We are not persuaded it is appropriate to apply that doctrine here, where we are addressing a quasi-legislative matter, as opposed to a quasi-judicial matter with its attendant procedural due process safeguards. We conclude the common law conflict of interest doctrine does not apply here. Accordingly, the PHG is not invalid as a result of any conflict of interest involving Dr. Steinmaus.

DISPOSITION

The judgment is affirmed. Respondents shall recover their costs on appeal. (Cal. Rules of Court, rule 8.278(a)(1), (2).)

/s/
HOCH, J.*

I concur:

/s/
RENNER, J.

* Retired Associate Justice of the Court of Appeal, Third Appellate District, assigned by the Chief Justice pursuant to article VI, section 6 of the California Constitution.

DUARTE, Acting P. J., Dissenting.

The California Safe Drinking Water Act (Health & Saf. Code § 116270 et seq.) (Act)[1] directs that the Office of Environmental Health Hazard Assessment (OEHHA) protect the right to safe drinking water by setting aspirational public health goals (PHG) for acutely toxic substances, such as perchlorate, "at the level at which no known or anticipated adverse effects on health occur, with an adequate margin of safety." (§ 116365, subd. (c)(1)(A).) Because OEHHA clearly did not do so in this case, and declined to do so in a manner that signals future noncompliance with the statute, I am compelled to dissent.

I do not dispute that the Act protects the quality of drinking water, and, in my view, PHGs and drinking water standards set by the State Water Resources Control Board are a welcome presence. But OEHHA's power to set PHGs is not unrestricted; OEHHA must comply with plain language of the Act as it goes about the critical business of safeguarding the right to pure and safe drinking water for every Californian.

Relying on an overly expansive definition of "anticipate," the majority concludes that OEHHA complied with the Act's requirements in this case because, "with the onset of IUI, adverse effects on health are anticipated." (Maj. opn., *ante*, p. 14.) According to the majority, OEHHA is authorized to set the PHG to avoid a nonadverse health effect--here iodide uptake inhibition (IUI)--so long as there exist "foreseeable, if not inevitable, adverse health effects." (Maj. opn., *ante*, p. 14.) But the plain language of the Act requires OEHHA to set the PHG based on the level at which it expects the target substance to "cause or contribute to adverse health effects." (§ 116365, subd. (c)(1), (c)(1)(A).) Here, rather than setting the PHG at the level at which OEHHA did not expect perchlorate exposure to cause or contribute to adverse health effects, OEHHA treated IUI as if it were an adverse health effect and set the PHG to avoid a 5 percent

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[1] Further undesignated statutory references are to the Health and Safety Code.

reduction in iodide uptake. This methodology is not in compliance with the statute, because it is undisputed that a 5 percent reduction in iodide uptake *does not* cause or contribute to any adverse health effects.

The majority also concludes that OEHHA is entitled to set the PHG below the level expressly required by the statute because the Act requires it to set the PHG "with an adequate margin of safety." (Maj. opn., *ante*, pp. 15-16.) It reasons that "margin" provides OEHHA with "a reasonable degree of latitude" to set the PHG as OEHHA feels is necessary. (Maj. opn., *ante,* p. 16.) As I will explain, I disagree with the majority's formulation of the phrase "with an adequate margin of safety," and I view that formulation as at odds with OEHHA's methodology in this case. I conclude instead that the statute requires OEHHA to first determine the level at which the target substance is anticipated to cause or contribute to adverse health effects--which OEHHA failed to do here--and then to apply an adequate margin of safety.

Accordingly, I disagree with Part 1 of the majority opinion and dissent from its disposition affirming the trial court's order.

DISCUSSION

I

Anticipated Adverse Effects on Health

There is no dispute but that IUI is not an adverse health effect. In its 2005 study, the National Academy of Sciences recognized when recommending that IUI be used as the point of departure for the perchlorate risk assessment that it was "recommending using a *nonadverse* effect [IUI] rather than an *adverse* effect." OEHHA acknowledged this fact at various places throughout the record. For example, following the 2005 National Academy of Sciences study, OEHHA recognized that IUI was "not harmful by itself" but "may lead to the harmful disruption of proper thyroid function." In the technical support document accompanying the 2015 PHG, OEHHA observed that IUI "is the key event that *leads to other possible effects* from perchlorate exposure," and that

"[p]revention of iodide uptake inhibition *prevents progression to the adverse health effects* of perchlorate." (Italics added.) Thus, rather than asserting that IUI is an adverse health effect, OEHHA acknowledged that it "*treat[ed] [IUI] as it would an adverse event* because it is in the direct causal pathway between perchlorate exposure and several important adverse events." (Italics added.)

OEHHA considered effects on *thyroid hormone production*--not IUI--to be an adverse health effect. It considered effects on thyroid hormone production to be adverse because "[a]ny downward shift in the mean level of the thyroid hormone T4 in a population *could* increase the number of people who fall into the range of T4 values that are associated with high risks of either subtle or overt thyroid-related disease and toxicity." (Italics added.) But in setting the PHG to avoid a 5 percent reduction in iodide uptake, OEHHA did not conclude that a 5 percent reduction in iodide uptake was expected to cause the adverse health effect it had identified, reduced thyroid hormone production. Instead, OEHHA acknowledged that IUI "*can* lead to reduced thyroid hormone production" only if it were "severe enough." (Italics added.) Indeed, the 2005 National Academy of Sciences study recognized that IUI can cause reduction in thyroid hormone production "if iodide intake is very low."

The majority agrees that OEHHA set the PHG to avoid the onset of IUI. (Maj. opn., *ante*, p. 13.) In approving this practice, the majority considers the meaning of the word "anticipated," settles on the synonym "foreseeable," and then observes that "OEHHA could conclude, for example, the onset of IUI resulted in foreseeable adverse health effects to be dealt with in advance." (Maj. opn., *ante*, pp. 13-14.) In other words, the majority appears to conclude that OEHHA may set a PHG below the level at which the target substance would be expected to cause or contribute to an adverse health effect, for the purpose of heading off those adverse health effects that might occur at higher concentrations of the substance. (Maj. opn., *ante*, p. 14.) But this reading of the statute authorizes OEHHA to set the PHG at *any* level below the level at which adverse health

effects might be expected to actually occur for the purpose of heading off adverse health effects that are only foreseeable at concentrations of the target substance greater than the level set as the PHG. As one comment in opposition to the January 2011 draft PHG observed: "In essence, OEHHA seems to imply that any initiating events that have even the slightest potential to pose a downstream adverse physiological effect should be considered adverse. This is a critically important science policy change that has ramifications for future PHG risk assessments."

Indeed, under the majority's reading, OEHHA could set the PHG at "zero" in order to head off adverse health effects that are foreseeable at greater concentrations of perchlorate. Were OEHHA authorized to set the PHG based on any precursor effect that was within the causal pathway between exposure to a contaminant and subsequent adverse health effects, the requirement that the PHG be set at the level at which no anticipated adverse health effects occur would be meaningless. (See *State Farm General Insurance Co. v. Lara* (2021) 71 Cal.App.5th 148, 179 [statutory interpretation aims to avoid rendering any words meaningless].)

I interpret the term "anticipated" differently. "Dictionaries define 'anticipated' as meaning 'to look forward to as certain' [citation] and '[a]pprehended beforehand, looked for, expected' [citation]. 'The plain and ordinary meaning of "expect," as reflected in dictionary definitions, is to anticipate, to consider probable or certain.' " (*SN Sands Corp. v. City and County of San Francisco* (2008) 167 Cal.App.4th 185, 193.) These definitions indicate that an "anticipated adverse health effect" is an adverse health effect that is at least probable or expected, if not necessarily certain. As relevant here, the word "level" is defined as "a position in a scale or rank (as of achievement, significance, or value)" or "a concentration of a constituent especially of a body fluid (such as blood)." (Merriam-Webster Collegiate Dict. (11th ed. 2003) p. 714, col. 2.) Applying these definitions, "level" clearly refers to a numerical value of the concentration of perchlorate in drinking water. Accordingly, the requirement that OEHHA set the PHG at "the level

at which no . . . anticipated adverse effects on health occur" compels OEHHA to set the PHG at the concentration of the target substance (the level) at which OEHHA determines it is probable or expected that adverse health effects will occur. Thus, I agree with the majority's observation that "OEHHA could set the PHG at a level where there exist foreseeable, if not inevitable, adverse health effects." (Maj. opn., *ante*, p. 14.)

My disagreement stems from the indisputable reality that there are no foreseeable adverse health effects associated with a 5 percent reduction in iodide uptake. OEHHA set the PHG at a level that *avoids* IUI, a *nonadverse precursor effect*, well *below* the level at which it was even arguably foreseeable that this precursor effect would lead to adverse health effects. Rather than attempting to determine the concentration of perchlorate that would be expected to cause or contribute to adverse health effects, as the statute requires, OEHHA simply treated IUI as if it were an adverse health effect.

To summarize my points thus far: it is undisputed that the Act provides that OEHHA "shall" set the PHG "at the level at which no known or anticipated *adverse effects on health occur*, with an adequate margin of safety." (§ 116365, subd. (c)(1)(A); italics added.) It is also undisputed that IUI is *not* an adverse health effect. Finally, it is undisputed that a 5 percent reduction in iodide uptake is not expected to cause or contribute to adverse health effects. The statute does not authorize OEHHA to set the PHG to avoid a precursor health effect below the level at which the precursor effect would be expected to cause or contribute to adverse health effects.

I next discuss the majority's reliance on what it deems the "qualifier," the phrase "with an adequate margin of safety," and explain why I find it unconvincing. (Maj. opn., *ante*, p. 15.)

II

Adequate Margin of Safety

The majority concludes that OEHHA was entitled to set the PHG to avoid a nonadverse precursor health effect because section 116365, subdivision (c)(1)(A)

requires OEHHA to set the PHG "with an adequate margin of safety," which it interprets as generally providing OEHHA with a "reasonable degree of latitude" in setting the PHG. (Maj. opn., *ante*, pp. 15-16.) Although I do not disagree that OEHHA has some latitude, I read the statute to require that OEHHA establish a margin of safety from the level at which no known or anticipated adverse health effects occur. Indeed, that is what OEHHA purported to do here, as I will explain.

To ascertain the meaning of section 116365, subdivision (c)(1)(A) and its requirement that "[i]f the contaminant is an acutely toxic substance, the [PHG] shall be set at the level at which no known or anticipated adverse effects occur, with an adequate margin of safety," I begin with its grammar. In interpreting the meaning of the provision, "[w]e must presume that the Legislature intended 'every word, phrase and provision . . . in a statute . . . to have meaning and to perform a useful function.' " (*Garcia v. McCutchen* (1997) 16 Cal.4th 469, 476.) The provision begins with a triggering clause: "If the contaminant is an acutely toxic substance." (See Chicago Manual of Style (17th ed. 2017) § 6.24.) The sentence then includes a subject (the PHG), a modal verb (shall be), the main verb (set), and an adverbial prepositional phrase ("at the level"), which is two or more words that function together as an adverb to modify a verb. (*Id.*, § 5.161.) Here, "at the level" tells us *where* the PHG shall be set (at the level). The sentence concludes with two adjectival prepositional phrases modifying "the level." These prepositional phrases inform that the level at which the PHG is to be set is the one "at which no known or anticipated adverse effects on health occur," and "with an adequate margin of safety." Although each of these phrases consists of its own grammatical subparts, each phrase modifies "the level."

As I discussed *ante*, the Act requires OEHHA to set the PHG at the numerical value of the concentration of perchlorate in drinking water (the level) at which OEHHA does not expect that adverse health effects will occur. From that numerical value, the Act requires OEHHA to establish "an adequate margin of safety." As a modification of a

numerical value, the most natural reading of the word "margin" is "a spare amount or measure or degree allowed or given for contingencies or special situations," or "measure or degree of difference." (Merriam-Webster Collegiate Dict. (11th ed. 2003) p. 759, cols. 1-2.) In other words, the "adequate margin of safety" is a numerical reduction of the level as previously defined as necessary to ensure public safety.

The majority concludes that the statute's reference to the term "margin" authorizes OEHHA to set the PHG to avoid a nonadverse health effect because it provides a general degree of latitude "to account for uncertainty so as to ensure public health." (Maj. opn., *ante*, p. 15.) I disagree with that conclusion. First, as stated, "margin" modifies the level at which the PHG is set (a numerical value), not the nature of the health effect--whether adverse or nonadverse--used as the basis for determining the level. In other words, the statute would authorize OEHHA to set the PHG to avoid a nonadverse health effect only if "adequate margin of safety" modified "no known or anticipated adverse health effects," rather than "the level."

Second, OEHHA's methodology indicates that it did not treat IUI as an adverse effect for purposes of establishing a margin of safety, but instead acted to establish the permissible margin *after* determining a level, as contemplated by the statute. In setting the PHG, OEHHA first determined the level at which perchlorate exposure would cause a 5 percent reduction in iodide uptake, which it justified by recognizing that it "treat[ed] [IUI] as it would an adverse effect." In other words, OEHHA first determined the level at which it expected perchlorate exposure to cause a (non)adverse health effect. After establishing the level of perchlorate estimated to cause a 5 percent decrease in iodide uptake, OEHHA applied two separate margins of safety. It applied an uncertainty factor of 10 to "calculate a dose that would address inter-individual variability among humans and be protective of those who are likely to be sensitive to the effects of perchlorate," including infants, which it noted "are particularly susceptible to perchlorate." It also calculated the PHG using the 95th percentile of infant water intake per kilogram of

bodyweight, based on data indicating that infants drink more water on a body weight basis than other sensitive groups. Thus, OEHHA expressly acknowledged that it was treating IUI as it would an adverse effect, and then it *separately* and *subsequently* applied margins of safety to ensure public health.

Based on the grammatical structure of the Act and OEHHA's methodology in establishing the PHG, I cannot agree that the Act authorized OEHHA to proceed directly to establishing an adequate margin of safety by setting the PHG based on avoidance of a nonadverse health effect, as the majority now holds. Indeed, without first ascertaining the level at which no known or anticipated adverse health effects occur, from which the margin of safety is then applied, there is no way to determine whether the margin is "adequate."

III

Conclusion

Although the majority concludes that we should defer to OEHHA's interpretation of the Act, it also correctly notes that this court ultimately decides what the statute requires. (Maj. opn., *ante*, p. 16.) And although the majority observes that the National Academy of Sciences has embraced OEHHA's approach, specifically recommending that IUI, while admittedly "not an adverse effect," should nonetheless "be used as the basis of the risk assessment" (maj. opn., *ante*, p. 16), this recommendation is not relevant to our analysis of the relevant statutory requirements and whether OEHHA complied with them here. Further, although the majority correctly states several times that the statute establishes the right of all Californians to safe drinking water, an observation with which I readily agree, the existence of that right is not at issue here. At issue is the manner in which the Act requires that right be ensured.

Based on the foregoing, I would conclude the 2015 PHG does not conform to the Act's requirements. I would reverse the trial court's October 7, 2020, order denying the Association's petition for writ of mandate and direct the issuance of a peremptory writ of

mandate directing OEHHA to vacate the 2015 PHG and to establish a new PHG that complies with the requirements of section 116365. Because the majority instead affirms the trial court's order, I respectfully dissent.

/s/
DUARTE, Acting P. J.