

CEHA BULLETIN

California Environmental Health Association

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President's Message

Wow... happy new year. 2018 went by so quickly! As always, CEHA is hard at work trying to better your experience as a member and support our colleagues during both cheerful and challenging times. This year has taught us to prepare for the unexpected and give with meaning because you never know when you'll need to be the one receiving. Change is constantly shaping environmental health and how we address our community and deliver service to protect public health. Hopefully this season finds you well and ready to take on whatever the new year brings you in life, love, and your profession.

Jahniah McGill, MPH, REHS

2018-2019 CEHA Executive President





My UK Environmental Health Experience

Sharyn Jupp, R.E.H.S.

I was selected to represent CEHA in a twinning opportunity in Manchester, England, on September 14, 2018. CEHA and the Chartered Institute of Public Health (CIPH) have been exchanging Environmental Health delegates annually for 29 years. My career as an Environmental Health Specialist began in Santa Clara county in 1986. I currently work for Marin County Environment Health Services. My passion has always been food safety and I still enjoy it after 32 years!

After a few days of sightseeing in London, I attended the CIPH Environmental Health Update near Manchester, England. My CIPH host, Barrie Whitehead, arranged home stays with three families. I also shadowed food inspectors in a micro-blading office, a nursing home kitchen, and a pizza restaurant – which we closed! I also helped with Trades and Standards inspections at a pub and vape shop.

I also have been a member of the International Federation of Environmental Health (IFEH) for over ten years and have attended World Congress events in various international locations every other year. Through this organization, I have met many wonderful Environmental Health friends from all over the world.

After my visit in Manchester, I stayed with my IFEH friend, Cairiona, and her family out in the country near Dublin, Ireland. She arranged for me to shadow food inspectors at a large catering facility and butcher shop. Next, I spent a few days in Edinburgh, Scotland, with my IFEH friend, Colin, and his wife in nearby Ayrshire. Colin is a past president of the Royal Environmental Health Institute of Scotland, and he arranged for me to attend a Food Update Course on World Environmental Health Day, September 26th, and to join a team inspection of Graham's Family Dairy butter production in Stirling, Scotland.

This has been an amazing experience and I am so grateful to all who helped to make it possible. We all have the same goal of safe and wholesome food all over the world.



With members of the REHIS, Edinburgh, Scotland



What EHS folks wear during food inspections



Sharyn with CIPH host, Barrie Whitehead, and Brigsteer host family with welcome flag.

What California Chefs & Retailers Need to Know Before They Start Canning Foods

Charlie Kalish, Co-Founder, Food Safety Guides

Despite canning being one of the hottest trends in the food industry, most chefs and store owners (and diners) are unaware of the regulatory requirements that apply to food service and retail canning operations. This isn't surprising: the rules governing canning are confusing.

Provided below is a list of basic canning terminology followed by an analysis of the regulatory language and practices concerning canning in food service and retail food establishments. To help illustrate an otherwise very dry set of rules, several examples are given. If you have questions or concerns, please do not hesitate to reach out to CDPH-Food and Drug Branch (FDB).

Terminology

Contrary to what the name suggests, the term "canned" applies to any food that is packaged in a hermetically sealed container (e.g., a glass jar fixed with an airtight lid). Below are other useful terms when talking about canned foods:

Acid foods - Foods that have a natural pH of 4.6 or below.

Acidified foods - Low-acid foods to which acid or acid food is added. They have a finished equilibrium pH of 4.6 or below and a water activity (A_w) of greater than 0.85. Acidified foods include, but are not limited to, pickled vegetables and peppers, sauces, salsas, tapenades, marinades, and some beverages. In contrast, "acid foods" have a natural pH of 4.6 or below.

Low-acid foods - Any foods, other than alcoholic beverages, with a finished equilibrium pH of greater than 4.6 and a water activity (A_w) of greater than 0.85. Tomatoes and tomato products having a finished equilibrium pH of less than 4.7 are not classified as low-acid foods.

Low-acid canned foods (LACF) - Shelf-stable (non-refrigerated) low-acid foods packed in hermetically sealed (airtight) containers. LACF products include, but are not limited to, canned vegetables, black olives, beans, hominy, rice, noodles, soups, fish, meat, and some dairy and non-dairy beverages.

Water Activity (A_w) - A measure of the free moisture in a product and is the quotient of the water vapor pressure of the substance divided by the vapor pressure of pure water at the same temperature. Water activity measures the available water for microorganisms to grow.

The HACCP Regulation

Section §114419 of the [California Retail Food Code](#) (Cal Code) lists seven food service and retail "activities" that require a HACCP Plan. These activities are divided into subparts (a) and (b). Two of the activities (highlighted below) apply to canned foods: §114419(a)(3) and §114419(b)(1).

California Retail Food Code

Effective January 1, 2016

Article 5. HACCP Exemptions**114419.**

- (a) Food facilities may engage in any of the following activities only pursuant to an HACCP plan as specified in Section 114419.1:
- (1) Smoking food as a method of food preservation rather than as a method of flavor enhancement.
 - (2) Curing food.
 - (3) Using food additives or adding components such as vinegar as a method of food preservation rather than as a method of flavor enhancement, or to render a food so that it is not potentially hazardous.
 - (4) Operating a molluscan shellfish life support system display tank used to store and display shellfish that are offered for human consumption.
 - (5) Custom processing animals that are for personal use as food and not for sale or service in a food facility.
 - (6) Preparing food by another method that is determined by the enforcement agency to require an HACCP plan.
- (b) Food facilities may engage in the following only pursuant to an HACCP plan that has been approved by the department:
- (1) Using acidification or water activity to prevent the growth of *Clostridium botulinum*.
 - (2) Packaging potentially hazardous food using a reduced-oxygen packaging method as specified in Section 114057.1.

§114419(a)(3) and §114419(b)(1) They Look the Same—What’s the Difference?

Activities listed under §114419(a) are generally approved by the local health department. Activities listed under §114419(b) are also generally regulated by the local health department, but require approval by CDPH-FDB.

How the HACCP Regulation Is Actually Enforced

While Cal Code explicitly states that any food service or retail operator engaged in the activities listed in §114419 is required to have a HACCP plan, the regulation is a little misleading. More accurately, a HACCP plan is required *unless* the activities are determined by the regulatory authority to be sufficiently controlled by another means. For example, vinegar pickles and low-acid jams are typically regulated through the state’s [Cannery Inspection Program](#) (CIP). Curing, smoking and drying of meats (for preservation purposes) is regulated by the California Department of Food and Agriculture Meat Poultry and Egg Safety Branch (CDFA-MPES). Neither CIP nor CDFA-MPES requires a HACCP plan for these activities.

True, the HACCP requirement applies to retail and food service production of certain vinegar pickles, low-acid jams and cured, smoked and dried meats. However, local health departments responsible for enforcing these HACCP requirements may defer to another agency to regulate the activities on their behalf. Of course, specific circumstances determine which regulatory agency takes the lead role with oversight. In other words, nothing is written in stone.

How Are Activities Under §114419(a)(3) and §114419(b)(1) Enforced?

Example 1: String beans pickled in vinegar (shelf-stable) prepared by a restaurant kitchen for immediate consumption onsite.



- Pickling string beans in vinegar extends shelf-life and renders the string beans shelf-stable. This activity fits within the scope of §114419(a)(3) and so a HACCP plan is required.
- Pickling string beans in vinegar also fits within the scope of §114419(b)(1) because “acidification” is used to control *Clostridium botulinum*. Pickling string beans in vinegar (an acidified food) therefore requires approval by CDPH-FDB per §114419(b)(1).
- CDPH-FDB’s apparatus for “approving” production of string beans pickled in vinegar is the CIP (i.e., not review of a HACCP plan, as is the case with reduced oxygen foods).
- To confirm with CDPH-FDB whether the vinegar pickled string beans is subject to the CIP, the maker must:
 - Determine if the food is an acidified food and the best/safest way to make it (this could involve contracting with a private laboratory or consultant if help is needed); *and*
 - Submit samples of the food to the University of California Laboratory for Research in Food Preservation (UCLRFP) for analysis and verification. To submit samples, CDPH-FDB has a formal process, which includes completing verification forms and providing specific information about the product, such as the recipe or a list of ingredients. You can learn more under the section entitled "Procedures & Guidelines" on CDPH-FDB's CIP webpage.

After receiving samples, CDPH-FDB will issue an Official Scheduled Process Letter (or S Letter) for each product submitted to UCLRFP. The S Letter will indicate which of the products analyzed are subject to the CIP. To learn more about the S Letter, visit the CDPH-FDB CIP webpage and click on the link "What Does my Official Process Letter Mean?"

- If the S Letter indicates that a food is not subject to the CIP requirements, the HACCP requirement still applies. By default, the food service/retailer's regulating authority (typically a local health department) is responsible for enforcing the HACCP requirement.
- If the S Letter indicates that a food is subject to the CIP requirements, the local health department will still inspect the establishment (as it remains under the local health department’s jurisdiction). At any time, the local health department has the right under §114419(a)(3) to require a HACCP plan. Specific circumstances may determine which regulatory agency takes the lead role. The CDPH-FDB and local health department reserve the right to coordinate as they deem necessary to ensure that a product is safe.

Example 2: A retail shop owner making and selling fermented cabbage (e.g., cabbage kimchi or sauerkraut)

- §114419(a)(3) applies to vinegar-pickled foods and fermented foods, to which vinegar, salt, or another food additive (or combination of additives) is used to extend the food's shelf life or render the food shelf-stable.
 - Certain foods are claimed to be “fermented” but are in fact “acidified food” because they contain fresh or acidified foods that are added after fermentation has taken place. Depending



on how the food is prepared and stored, **it could be unsafe**. If the operator is relying on acidification to control *C. botulinum*, verification of the food's safety is required per §114419(b)(1) prior to sale to consumers. [Click here for a compilation of food safety articles on fermented foods.](#)

- Salted shredded cabbage fermented in a non-hermetically sealed container does not fall within the definition of “acidified food” and §114419(b)(1) would not apply if it is determined that *C. botulinum* is not a potential hazard. Of course, just as there are many varieties of fermented foods, there are many varieties of kimchi with many varieties of ingredients. [Foodborne outbreaks involving kimchi have occurred.](#)
- If §114419(b)(1) does not apply, then, per §114419(a)(3), a HACCP plan is required for the fermented cabbage. The HACCP plan must be submitted to and approved by the establishment's regulatory authority, typically the local health department.
- If the cabbage is fermented, stored under refrigeration and consumed or discarded within a short period of time, the local health department may choose not to enforce the HACCP requirement. A careful analysis of the safety of the processing method is necessary to determine when HACCP is required or if the food is permitted to be sold at all.

Example 3: Jams, jellies & preserves made by a small retail store

- §114419(a)(3) applies to foods where vinegar, salt, or another food additive (or combination of additives) is used to extend the food's shelf life or render the food shelf-stable.
 - Sugar is added to jams, jellies, and preserves (JJs) for this purpose.
- Foods covered by §114419(b)(1) (i.e., foods relying on acidification or water activity to control *C. botulinum*) include JJs.
 - While no public list of JJs exempt from CIP currently exists, JJs made from acid foods (i.e., foods that have a natural pH of 4.6 or below) are typically exempt from the CIP.
 - Low-acid foods that border 4.6 and above (such as peppers, onions, and even tomatoes) may pose a safety risk if improperly processed, providing dangerous conditions for *C. botulinum* to reproduce and form deadly toxins.
 - It is the responsibility of the retail store to determine whether or not the JJ can be made safely. Safety can be determined by working with a process authority, sending samples for analysis by [an independent laboratory](#) and verifying the results through a formal CIP submission.
- CDPH-FDB's apparatus for “approving” production of JJs is the CIP (i.e., not review of a HACCP plan, as is the case with reduced oxygen foods). See Example 1 for instructions on how to make a submission.
 - If the S Letter indicates that the JJs are not subject to CIP requirements, the HACCP requirement still applies. By default, the food service/retailer's regulating authority (typically a local health department) is responsible for enforcing the HACCP requirement.
 - If the S Letter indicates that one or more JJs is subject to CIP requirements, the local health department will continue to inspect the establishment (as it remains under the local health department's jurisdiction). At any time, the local health department has the right under §114419(a)(3) to require a HACCP plan. Again, specific circumstances may determine which regulatory agency takes the lead role.

Summary for Retailers

Even if you believe deep in your heart that the canned foods you plan to make are safe, having an official letter from CDPH-FDB verifying the safety of your food will deliver peace of mind and go far with your local health enforcement agency. Visit the [Cannery Inspection Program webpage](#) and do not hesitate to contact CDPH-FDB if you have any questions.

If you submit samples to UCLRFP and receive an S Letter indicating your JJs or vinegar pickles are not subject to the CIP, great! But remember, the HACCP requirement may still apply. Contact your local health department before selling to the public.

Notes

¹ Questions about CIP and CDFA-MPES for regulatory oversight? Contact David Schurr david.schurr@cdfa.ca.gov

² While the first sample submission to UCLRFP is free, fees apply to subsequent submissions. Firms should be aware that the aim of UCLRFP is to verify product safety, not provide laboratory services as if it were a commercial laboratory. For this reason, retail and food service operators are advised to independently confirm their determinations prior to submitting samples.

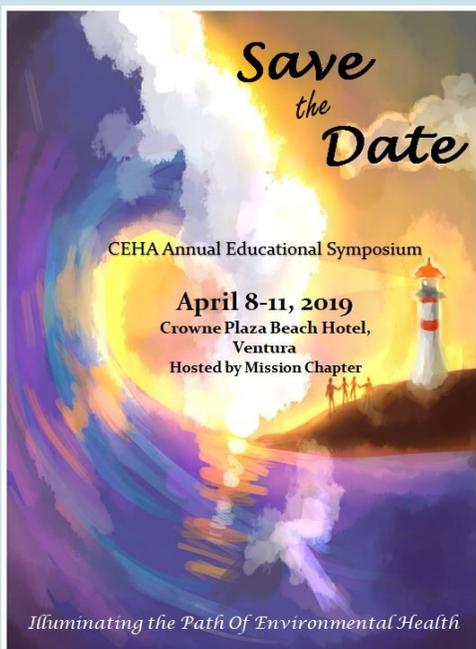
³ CDPH-FDB's apparatus for "approving" production of string beans pickled in vinegar is the CIP (i.e., not review of a HACCP plan, as is the case with reduced oxygen foods). See Example 1.

⁴ Vinegar-pickled foods and certain fermented foods (e.g., fermented foods mixed with vinegar-pickled foods) also fall within the scope of §114419(b)(1).

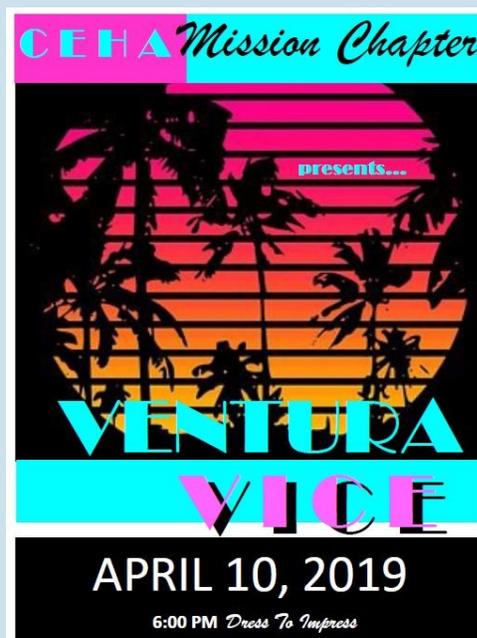
⁵ CDPH-FDB is not responsible for reviewing or approving a HACCP plan for fermented foods. CDPH-FDB only reviews and approves HACCP plans for reduced oxygen packaging (i.e., vacuum packaging and sous vide/cook-chill processing).

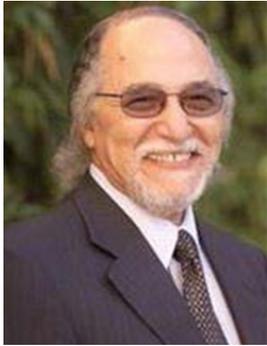
⁶ A couple of years ago, CDPH-FDB had a reference on its CIP webpage to the exemption of certain canned foods, like "traditional jams". The Department removed the reference, likely because many people may have a different idea of what constitutes a "traditional jam" and fears by the Department that producers of JJs may (erroneously) think that certain jams are exempt from the CIP requirement and not bother submitting a sample for analysis.

⁷ Here is an [article I published in Food Safety Magazine](#) on how to choose a food laboratory



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On the Field of Public Health: An Advocacy for the “Right to Health and Healthful Longevity”

Dr. Amer El-Ahraf, REHS

Professor of Health Sciences
Vice President Emeritus
California State University, Dominguez Hills
Past President: CEHA and NEHA

Introduction

Public Health is a major and wonderful field composed of two broad-based words: *Public* and *Health*. Each one is important in its own right. Together, they contribute to the significance of a huge field of human interest concerning the promotion of health primarily through preventive measures. Therefore, current and future public health students and professionals have an exciting and rewarding field of practice. By its nature, Public Health is a dynamic field—adding the rewards of promoting population health and allowing each of us to contribute to the academic and professional nature of the field.

Who Is the “Public” in Public Health?

Four major levels of health organizations correspond to four major populations: The local level, e.g., the Los Angeles Department of Public Health; the state level, e.g., the California Department of Public Health; the federal level, e.g., the United States Public Health Service; and the international level, e.g., the World Health Organization (WHO).

Indeed, the “Public” in Public Health can represent quite a large human population. However, whether the populations served are as small as one census tract or as large as the world itself, public health professionals serve their community, day after day, to maintain a quality of life through primarily health measures.

What Is the “Health” in Public Health?

Professionals and lay persons have defined *health* in several ways. Three major historical definitions are as follows:

The Absence of Disease: A narrow, older perspective defining *health* negatively and providing no dimension of health other than the physical/biological (El-Ahraf et al., 1999). *Disease* is defined as a set of signs, symptoms, and medically diagnosed pathological changes. *Illness*, a closely related term, is defined as “primarily about how an individual experiences disease.” (Fleming and Parker, 2012).

Well-Being: “Health is a state of complete physical, social, and mental well-being and not merely the absence of disease or infirmity.” This definition moved health from the strictly physical/biological dimensions into the social arena (WHO, 1947).

The Ecological Definition of Health: “Health is a state of complete physical, social, mental and environmental well-being and not merely the absence of disease, infirmity, or eco-pathological conditions.” (El-Ahraf and Hanson, 1972; El-Ahraf et al., 1999). This ecological definition includes environmental determinants as another dimension accompanying the three others identified previously by the WHO. The ecological definition also recognizes the reciprocity of personal and environmental health much akin to the reciprocity between the fetus and its womb environment—the health of each is essential to the health of the other. The definition also introduces a significant expression of eco-pathology, stressing that health is not merely the absence of pathological changes in humans or their environment. The ecological definition calls for a truly “Holistic Approach to Health.”

So...What Is “Public Health”?

“The science and art of preventing disease, prolonging life and promoting physical health and efficiency through organized community efforts for the sanitation of the environment, the control of community infections, the education of individuals in the principles of human hygiene, the organization of medical and nursing services for the early diagnosis and preventive treatment of disease, and the development of the social machinery which will ensure to every individual in the community a standard of living adequate for the maintenance of health” (Winslow, C.E.A, 1920). This definition identified the practice of Public Health as both a science and an art. It described traditional public health areas of practice (environmental health/sanitation of the environment, health education, communicable disease control, etc.) that remain among the basic components of public health departments today. Progressive for its time, this definition referred to the social and economic machineries necessary to maintain health.

“The fulfillment of society’s interest in assuring the conditions in which people can be healthy” (Institute of Medicine, 1988). This definition utilizes “society’s interest” as the guiding post to describe public health as the desired “Health of the Public.”

“An organized community effort to prevent disease and disability, promote health and well-being; and otherwise advocate for the right to health and healthful longevity in a safe, socially just and ecologically sustainable environment” (El-Ahraf, 2000). This definition describes the basic features of traditional public health, but it moves further to emphasize the modern advocacy of public health: the right to health and healthful longevity as basic human rights; social justice and ecological sustainability as essential to the success of public health’s objectives; the fact that public health is tied to the concept of “Quality of Life”; and that “Health” should be considered as a human right and not as a commercial commodity.

Today, the field is defined as an organized community effort of human society to act and advocate for the promotion, protection, and restoration of population health (Winslow, 1920; El-Ahraf, 2000). A multidisciplinary field, Public Health is influenced by a multitude of determinants of health ranging from genetic and physical influences to economic and political factors (Fleming and Parker, 2012).

Public Health Practice vs. Medical Care Practice

Public Health’s emphasis is on the population, while medical care’s is on the individual, i.e., identifying the clinical condition of an ill individual and treating that patient accordingly.

Public Health focuses on improving health through public works projects such as water purification, sewage disposal, food hygiene/inspection programs and proper land use.

It stresses collective action of government and quasi-official organizations.

It provides primary attention to both the sick and the healthy in a human population.

It traditionally has been characterized by prevention of disease and promotion of health; when treatment is offered, its primary nature is preventive and its overall purpose protective of public health.

It addresses the “root causes” of disease and health conditions on the community level such as poverty, lack of education and other socio-economic issues.

Public Health is more economical than the medical care model. For every \$1.00 spent on public health, \$100.00 are spent on medical care. Yet, of the estimated 30-year increase in American life longevity, Public Health accounts for 25 years of this gain (Fleming and Parker, 2012). Accordingly, Public Health is a representation of the philosophy and old wisdom of “an ounce of prevention is better than a pound of cure”.

Implications for a New Movement in Health

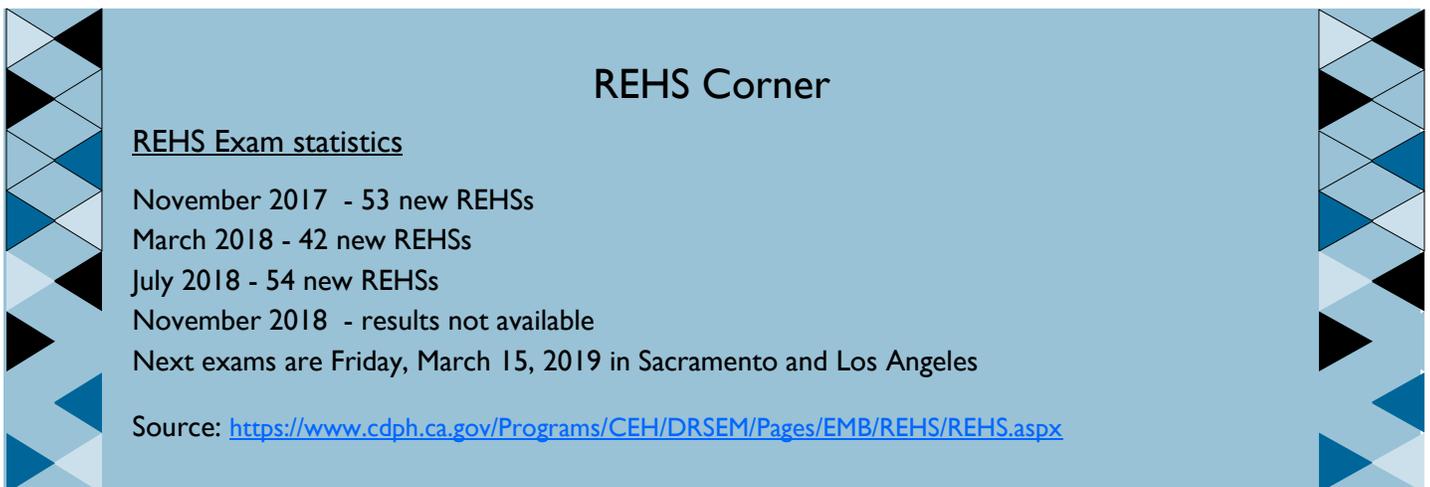
In defining *health* within an ecological context, this author calls for not only a “Continuum of Health Services” that includes curative, preventive, restorative and promotive measures, but also for a “Continuum of Health” that involves the interacting dynamics of human health, animal health, and environmental health. Thus, it provides a philosophical foundation for the concept of the “One Health” movement that is gradually gaining ground today.

Finally, an astute observation on Public Health and its value to society: “The considerable changes in the perspective of public health and preventive medicine have had many scientific, academic, administrative, social, political and economic consequences...the rates for pneumonia, tuberculosis, typhoid fever, typhus and poliomyelitis have plummeted, especially in the developed countries, as a result of clean water, sewage systems, pasteurization, better nutrition, improved housing, and even vaccination and antibiotics” (Sellikof, 1992).

What a tribute to Public Health and those who make these achievements possible!!

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REHS Corner

[REHS Exam statistics](#)

November 2017 - 53 new REHSs
March 2018 - 42 new REHSs
July 2018 - 54 new REHSs
November 2018 - results not available
Next exams are Friday, March 15, 2019 in Sacramento and Los Angeles

Source: <https://www.cdph.ca.gov/Programs/CEH/DRSEM/Pages/EMB/REHS/REHS.aspx>



Awards and Scholarships Nominations

CEHA offers numerous awards and scholarships. Take a few moments to raise awareness of these awards, or better yet, nominate someone yourself.

- NEHA/AAS scholarship
- College Student scholarship
- High School Student scholarship
- Environmental Health Specialist of the Year award
- Distinguished Service award
- Vince Dunham award
- Stuart Richardson award
- And more...



The deadline to submit nominations is February 22, 2019. The recipients will be announced at the 2019 AES. Visit our [webpage](#) or email the [Awards Committee](#) for more information.

From the Publications Committee

We would like to thank all of the authors who wrote articles for this edition of the Bulletin. We greatly appreciate your time and dedication.

If you would like the opportunity to have an article published, submit your article to us at publications@ceha.org. Make sure you submit your article in Microsoft Word format. Include your contact information, any pictures you would like considered to go with the article, as well as captions to go with the pictures. Please note that submitting an article does not guarantee that it will be published. Contact the Publications Committee if you have any questions.

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