

SAFEGUARDING THE PUBLIC'S HEALTH

The protection of the health and safety of residents and visitors is the first priority and responsibility of government. This report examines the policies and procedures of the Environmental Health Division of the San Luis Obispo County Health Agency in regard to their handling of complaints.

INTRODUCTION

The Environmental Health Division (EHD) is a part of the San Luis Obispo County Department of Public Health (DPH). Likewise, DPH is housed within the San Luis Obispo County Health Agency. EHD's mission statement reads, "Our mission is to protect the health of the community by preventing the transmission of disease and exposure to harmful levels of environmental contaminants through continuous education, innovative state of the art surveillance, and creative mitigation of environmental health hazards."¹

EHD's authority to regulate is derived from the California Health and Safety Code (HSC) and extends to a diverse group of activities such as restaurant and food service inspections (increasingly important as the number of meals sourced at locations other than in the home continues to rise)², inspection of some above-ground and underground petroleum product storage, beach water quality testing, inspection of sanitary conditions at body art establishments, and testing and inspections of public swimming pools, spas and hot tubs. However, under the HSC, in-room hot tubs are not subject to inspection by EHD. Small water purveyors - those serving from five to two hundred customers - are subject to inspection. EHD has a staff of Registered Environmental Health Specialists (REHS) who perform inspections and testing on both a scheduled and unannounced basis. Customer complaints are an important source of information for EHD as their

¹ <http://www.slocounty.ca.gov/Departments/Health-Agency/Public-Health/eh.aspx>

² <https://www.ers.usda.gov/data-products/food-expenditures.aspx>

staff cannot be in all places at once, and unhealthy conditions can literally appear overnight. Two examples of the importance of customer complaints are the recent temporary closures of a food market in Cayucos and a restaurant in Templeton due to infestation.

The DPH maintains a website that offers information on the full range of EHD activities, including access to results of restaurant inspections and the division's permit and inspection fee structure. The DPH website also offers disease frequency statistics for the County. EHD places a strong emphasis on educating permit holders what the applicable environmental health regulations are and how to maintain compliance with them.

ORIGIN

The origin of this report was a complaint received by the 2017-2018 San Luis Obispo County Grand Jury from a customer of a local business.

AUTHORITY

The authority for this report and the investigation that preceded it is contained within Penal Code Section §925.

METHOD

The Grand Jury conducted interviews with appropriate County staff and reviewed documentation provided by the complainant, EHD, and the California DPH.

NARRATIVE

The complainant in this case was an out-of-county California resident who stayed overnight in a local hotel and used the in-room hot tub. Upon returning home, the complainant felt ill and became more so as the days passed. The complainant sought diagnosis and treatment at a local hospital emergency room and was admitted as a patient within that hospital. Several days passed before a

definitive medical diagnosis was made; the complainant had contracted *Legionnaires' disease*, and it would require a week of intensive treatment before the complainant was released from the hospital. The hospital, in compliance with California DPH regulations, contacted the health department of the complainant's residence county.

The complainant stated to their home county's health department the only out-of-the-ordinary activity they had engaged in before the diagnosis of *Legionnaires' disease* was the use of the hot tub in San Luis Obispo County. Hot tubs have been a known potential source of *Legionella* bacteria, and it was reasonable at that time to assume the disease was acquired at the hotel in this County. The complainant's county health department then contacted San Luis Obispo County EHD with the information that a case of *Legionnaires' disease* had been diagnosed in that county, with the possible source of the disease located in this County.

An EHD inspector (REHS) was dispatched to the hotel. The inspector found a number of the hot tubs in the facility had been replaced, including the one utilized by the complainant, without the required inspection on completion and proper permits from the San Luis Obispo County Department of Planning and Building (DPB). The hot tub in question was classified as an in-room type and as such not subject under State law to periodic inspection by EHD. At the time, a number of in-room hot tubs had not been replaced. The hotel also offers public hot tubs/spas which are subject to EHD inspection. The hotel was not following the manufacturer's instructions for operation and maintenance of the new hot tubs, but rather the instructions for the earlier installations. In addition, the hotel operator was not following California DPH guidelines for in-room "fill and drain" hot tubs, something the operator previously agreed to do. No sampling or testing of the hot tub was performed. The hotel was asked to discontinue use of the newer in-room hot tubs, until they could be brought into compliance with the State guidelines.

The complainant questioned the judgment of EHD in not performing sampling and testing; complainant believed the REHS had not complied with California DPH guidelines for that set of circumstances.

EHD reasoning in this case was as follows:

- Considerable time (days) had passed between the onset of *Legionnaires' disease* and receipt of the complaint, rendering sampling and testing likely inconclusive related to this case.
- There have been no other reported cases of *Legionnaires' disease* attributed to the location's hot tubs either before or since the complainant's stay in the hotel.
- It is established DPH protocol that a single (possible) case does not constitute an outbreak of a disease.
- There was no water in the hot tub at the time of the inspection. Fill and Drain hot tubs are periodically drained similar to a bathtub.
- EHD consulted with the County's Public Health Laboratory and Epidemiologist to determine whether sampling and testing should be conducted.
- The clinical test employed by the complainant's health care provider did not include a culture that a sample result could be compared to in a human case.

The complainant again disagreed with EHD and sent a letter to California DPH describing what they believed to have been improper and inadequate actions by EHD. California DPH then notified the County DPH they had received the complainant's letter. Seeking verification that their actions were proper, DPH requested the agency's opinion as to whether they had followed the California DPH regulations related to sampling and testing for *Legionella* bacterium in this case. California DPH responded to the complainant that EHD had complied fully and indeed had gone beyond due diligence in seeking resolution of the complaint. EHD worked collaboratively with DPB and the hotel management to bring the hot tubs into compliance with State guidelines.

There was a confirmed case of *Legionnaires' disease* within the County in 2017. That case was in a different area of the County. Samples were taken, then sent to an out-of-county laboratory equipped to test for *Legionella*. The suspected source was confirmed to have the *Legionella* bacterium present; remediation was undertaken, and the case was duly reported to California DPH.

Testing for the presence of *Legionella* requires sophisticated laboratory equipment and a staff trained in specific protocols to conduct the testing. Some *Legionella* testing-capable labs have earned the Centers for Disease Control (CDC) designation, Environmental Legionella Isolation Techniques Evaluation (ELITE) Program. One of the two outside laboratories used by the County has this designation.

LEGIONELLA

Legionella is a type of bacterium found naturally in freshwater environments, such as lakes and streams. It can become a health concern when it grows and spreads in human-made water systems like:

- Showers and faucets
- Cooling towers (air-conditioning units for large buildings)
- Hot tubs that aren't drained after each use
- Decorative fountains and water features
- Hot water tanks and heaters
- Large plumbing systems
- Misting machines (in supermarkets, entertainment venues, etc.)

After *Legionella* grows and multiplies in a building water system, that contaminated water then has to spread in droplets small enough for people to inhale. People can contract *Legionnaires' disease* when they breathe in small droplets of water in the air that contain the bacteria.

Less commonly, people can contract *Legionnaires' disease* by aspiration of drinking water. This occurs when water goes into the trachea (windpipe) and lungs instead of the digestive tract. People at increased risk of aspiration include those with swallowing difficulties. In general, people do not spread *Legionnaires' disease* and Pontiac fever (a less severe form of *Legionellosis*) to other people. However, this may be possible in rare cases.^{3 4}

³ <https://www.cdc.gov/legionella/about/causes-transmission.html>

⁴ *Legionella* is named for the outbreak of *Legionellosis* at a Philadelphia, Pennsylvania convention of the American Legion in 1976.

Legionnaires' disease is a severe form of pneumonia with the potential to kill. All verified cases of *Legionnaires' disease* in California must be reported to California DPH.

Recent outbreaks of *Legionnaires' disease* include one instance at Disneyland and elsewhere in Orange County in 2017, and another in Illinois in 2018. The source of the bacteria was found in air-conditioning system cooling towers. These outbreaks produced fatalities as do approximately ten percent of cases of *Legionnaires' disease*. That number rises to twenty-five percent when the patient is in a health care setting.

There were approximately six thousand cases of *Legionnaires' disease* diagnosed and reported in the United States in 2016, representing a slow, steady increase in occurrences over the past fifteen years. CDC believes the rise in *Legionnaires' disease* numbers is at least partially due to more accurate diagnosis. CDC also believes as many as six thousand additional cases of *Legionnaires' disease* are undiagnosed or misdiagnosed each year.⁵

OTHER DISEASES OF HEIGHTENED CURRENT CONCERN AT DPH

Hepatitis A

Hepatitis A is a vaccine-preventable, communicable disease of the liver caused by the Hepatitis A virus. It is usually transmitted person-to-person through a fecal-oral route or consumption of contaminated food or water. Hepatitis A is a self-limited disease that does not result in chronic infection. Most adults with Hepatitis A have symptoms, including fatigue, low appetite, stomach pain, nausea, and jaundice, that usually resolve within two months of infection; most children less than six years of age with the disease do not display symptoms. Antibodies produced in response to Hepatitis A infection last for life and protect against re-infection. The best way to prevent Hepatitis A infection is to get vaccinated.⁶

⁵ <http://www.humanillnesses.com/Infectious-Diseases-He-My/Legionnaire-s-Disease.html>

⁶ <https://www.cdc.gov/hepatitis/hav/index.htm>

Vaccination against Hepatitis A is common among young people and has proven effective in preventing outbreaks of the disease in that demographic. Vaccination is less common among older individuals, leaving that group more vulnerable.

There is an ongoing outbreak of Hepatitis A in several California counties, most notably San Diego County. The outbreak has been prevalent in areas of habitation by the homeless and is known to be caused by poor sanitary conditions. The affected counties have undertaken a large-scale program of vaccination of homeless persons and are working to improve conditions by providing better access to toilets and hand-washing stations. The County DPH has a plan to address a potential outbreak.

Zika Virus

Zika is primarily spread by the bite of an infected *Aedes* species mosquito (*Ae. aegypti* and *Ae. albopictus*). Unlike many other mosquito types, these mosquitoes bite during both day and night. Zika can be passed from a pregnant woman to her fetus. Infection during pregnancy can cause significant birth defects. There is no vaccine or medicine for Zika.⁷

Zika-carrying mosquitoes have been found in all of the counties of southern California and in the Central Valley as far north as Merced. Although no Zika-carrying mosquitoes have been found in San Luis Obispo County, it is bordered by two counties (Kings and Kern) where they are present. The public health community expects Zika-carrying mosquitoes to eventually extend their range to San Luis Obispo County. The County DPH currently has a limited education program to inform the public of mosquito abatement techniques that should be used by residents.

San Luis Obispo County does not currently operate a mosquito abatement (Vector Control) program. It does, however, contract with abatement districts in Santa Barbara and Monterey counties for a mosquito surveillance program using specialized traps. Technicians identify the numbers and types of mosquitoes each time a trap is visited.

⁷ <https://www.cdc.gov/zika/about/index.html>

The EHD, upon receiving direction from the County Board of Supervisors (BoS), presented a proposal at the March 20, 2018 BoS meeting detailing the anticipated cost to the County to operate its own mosquito abatement program. The BoS deferred action until the next budget cycle.

CONCLUSIONS

DPH has the responsibility and authority to regulate sources of pollution and infection which put the public health at risk. EHD conducts inspections, testing, public education programs, and collaborative mitigations to accomplish its mission. The San Luis Obispo County Public Health Department maintains a website which provides disease statistics for the County, restaurant inspection results, mosquito populations, and related information. Based on our investigation, the Grand Jury found the actions of the County Public Health Department exceeded the existing guidelines, and no evidence was found to support the complaint.

FINDINGS

- F1. EHD acted properly with respect to the complaint regarding the case of *Legionnaires' disease* thought to have originated at a hotel in San Luis Obispo County.
- F2. San Luis Obispo County's Public Health testing laboratory does not have the capability to test for *Legionella* and must send samples to an out-of-county laboratory.
- F3. There has been an outbreak of Hepatitis A in several California counties. Hepatitis A can cause death in some cases, especially those with compromised immune systems.
- F4. Mosquitoes carrying Zika virus are in adjacent counties and will soon be in this County.
- F5. There is currently no mosquito abatement (Vector Control) program in San Luis Obispo County. The BoS occasionally reviews that situation but has not authorized funding for an abatement program.

F6. The 2017-2018 Grand Jury reviewed the San Luis Obispo County Public Health Department's website early in the course of its investigation and found the most recent health statistics available were from 2012. However, the website has since been updated to reflect data from 2016. The Grand Jury also found other county health departments update their websites quarterly.

RECOMMENDATIONS

- R1. The San Luis Obispo County Department of Public Health should require that customers at commercial hot tub and spa establishments be informed there is a risk of *Legionnaires' disease* inherent in that environment.
- R2. The San Luis Obispo County Department of Public Health should use only ELITE Program Laboratories to test for the presence of *Legionella* when there is a known case of disease potentially associated with the samples.
- R3. The San Luis Obispo County Department of Public Health should conduct a vaccination and sanitation outreach program among the homeless population to prevent an outbreak of Hepatitis A in the County. Funding to support the program should be allocated by the San Luis Obispo County Board of Supervisors.
- R4. The cost of starting and operating a comprehensive mosquito abatement program (Vector Control) is known. Funding commensurate with that cost should be set aside each year by the San Luis Obispo County Board of Supervisors and County Administration, so that when it becomes necessary, the money will be immediately available.
- R5. The San Luis Obispo County Department of Public Health has a program to educate the public about mosquitoes, how to avoid acting as their host, and how to minimize the risk of becoming infected with the diseases they carry. Before mosquitoes carrying the Zika Virus arrive in this County, additional funding should be allocated by the San Luis

Obispo County Board of Supervisors to support expansion of EHD’s public education efforts.

R6. The San Luis Obispo County Department of Public Health website’s statistics should be updated at least quarterly.

COMMENDATIONS

The Grand Jury commends the County of San Luis Obispo Public Health staff for their cooperation, professionalism and thorough responses to our inquiry of this issue.

REQUIRED RESPONSES

The San Luis Obispo County Department of Public Health is required to respond to findings and recommendations: F2, F3, F4, F5, F6, R1, R2, R3, R4, R5, and R6.

The San Luis Obispo County Board of Supervisors is required to respond to R3 and R4.

The responses shall be submitted to the Presiding Judge of the San Luis Obispo County Superior Court by July 17, 2018. Please provide a paper copy and an electronic version of all responses to the Grand Jury.

Presiding Judge	Grand Jury
Presiding Ginger E. Garrett Superior Court of California 1035 Palm Street Room 355 San Luis Obispo, CA 93408	San Luis Obispo County Grand Jury P.O. Box 4910 San Luis Obispo, CA 93403