

The Honorable Paul Pinsky, Chair
The Honorable Cheryl Kagan, Vice Chair
Senate Education, Health and Environmental Affairs Committee
2 West Miller Senate Office Building
11 Bladen Street
Annapolis, MD 21401

Re: SB 302 (Legionnaires' Disease Prevention Act)

Dear Chairman Pinsky, Vice Chair Kagan and Distinguished Committee Members:

IDEXX supports Senator Lam's efforts to protect the citizens of Maryland from Legionnaires' disease.

My name is Patsy Root, and I am the Senior Regulatory Manager for IDEXX Water in North America. As a long-time member of American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), I have participated in writing standards and guidelines that are used to help building system managers prevent Legionnaires' disease. I have also provided free training in many forums on how effective Water Management Plans (WMPs) can protect people from water containing *Legionella pneumophila* bacteria, the causative agent of Legionnaires' disease¹.

IDEXX Water has collaborated on global research and education on preventing Legionnaires' disease with organizations such as US Environmental Protection Agency (EPA), Centers for Disease Control (CDC), Veteran's Administration, various state public health departments, the World Health Organization (WHO) and with many other scientific experts in this field. I am pleased to share what we have learned over years to assist Maryland public policy makers develop laws and health policies that protect public health, are cost effective, and can easily be implemented in the state.

Today, I would like to discuss three provisions contained within SB0302 which will help ensure effective public health protection with very reasonable efforts by those covered under this bill. The areas that are most important to the success of this bill include:

1. Leading by example, this bill focuses on those publicly owned, leased or managed buildings that fit the ASHRAE 188 criteria for having potential risk,
2. Leverage the industry best practice by directing covered buildings to use the only national standard as a guide: ASHRAE 188 *Legionellosis: Risk Management for Building Water Systems*
3. Focusing on prevention and routine testing to reduce the incidence of *Legionella pneumophila* bacteria in water,

By way of background, *Legionella pneumophila* is a significant and dangerous waterborne bacterium that causes Legionnaires' Disease^{2a, 2b}, a severe form of pneumonia contracted by breathing in water mist or vapor into the lungs that contains *L. pneumophila* bacteria. Some examples of exposure to *L. pneumophila* in water include inhaling shower mist, cooling tower or hot tub vapor or inhaling

aerosolized water from similar devices. Those at highest risk for Legionnaires' disease include people over 50, current or former smokers, and especially immunocompromised individuals, including those who have recovered from COVID-19. The death rate from Legionnaires' disease is as high as 33%¹. Fortunately, the US CDC has clearly stated that Legionnaires' disease is 90% preventable³ through the implementation of water management plans (WMPs) that effectively reduce the risk of bacteria in the water that can become aerosolized and inhaled. Several countries around the globe, and some states and local municipalities throughout the United States have adopted regulations or voluntary guidance to prevent Legionnaires' disease, some with more success than others. Those areas doing the best at prevention have focused regulatory activity and actions on reducing *L. pneumophila* in water. IDEXX supports the focus of SB0302 by managing *Legionella pneumophila*.

1. IDEXX supports the focus on publicly owned, leased, or managed buildings

Voluntary adherence to industry standards has not taken hold and these basic steps to reduce *Legionella pneumophila* bacteria and disease potential are not widely adopted. By focusing now on publicly owned, leased or managed buildings, Maryland is leading by example, setting the standard of risk-reduction, which could encourage other owners and operators to follow this lead.

2. IDEXX supports leveraging the nationally accredited standard: ASHRAE 188 Legionellosis: Risk Management for Building Water Systems

This nationally accredited standard was developed by CDC, EPA, Veterans Administration, and many other subject matter experts as the best practices to reduce the risk of Legionnaires' disease in building water systems. This standard is already a reference for the Centers for Medicare and Medicaid (CMS) rules for healthcare and for buildings owned, leased, or managed by the Veteran's Administration. Not one size fits all, the standard is written so that the water management plan will be tailored to the specific building and water system and consider the risks associated with potential aerosolization of *Legionella pneumophila* for that building's particular uses and occupants.

Implementation of this standard allows for a measured response to minor risks before the system gets out of control, such as flushing water pipes, changing water temperature or other low-cost efforts. These simple actions not only help prevent disease but also helps avoid more costly actions if a case or outbreak were to occur.

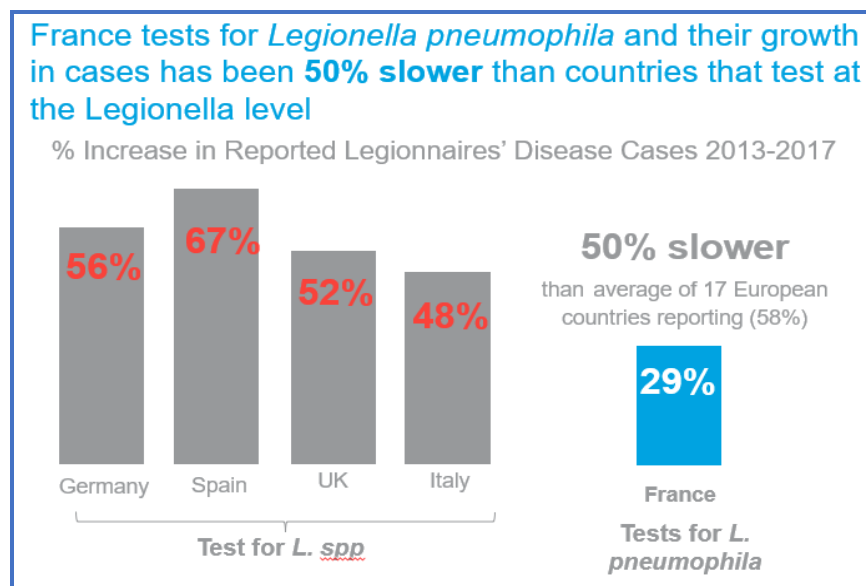
3. IDEXX supports the focus on control and validation testing of *Legionella pneumophila*, as supported by global data

- A. In September 2016, the World Health Organization recommended focusing on: "*monitoring and target setting on Legionella pneumophila since this is the causative agent of legionellosis, and not Legionella spp.*"⁸
- B. US CDC Outbreak Data 2009-2017⁴ show *L. pneumophila* is the pathogen of highest concern. The CDC defines Legionnaires' disease outbreaks as two or more people who are exposed

and get sick about the same time and has published data for 290 outbreaks affecting 1,917 patients.

- *L. pneumophila* caused all the outbreak deaths where a cause was determined.
 - Only 0.6% of the outbreaks were defined as non-pneumophila Legionella. These non- *L. pneumophila* cases affected two patients, and both occurred in settings in which *L. pneumophila* was also found, meaning that remediation that would have been taken based on validation testing for *L. pneumophila* would have mitigated the other Legionella species as well.
- C. 97.3% of Legionnaires' disease cases which were confirmed by a clinical culture (which means they looked for any type of Legionella in the patient), were caused by *L. pneumophila*. That number represents 4,719 Total Cases (Outbreak and Sporadic) from 17 countries (2009-2015).^{5,6}
- D. Over a 10-year period across all of Europe, 99.6 % of the Legionnaire' disease cases associated with healthcare facilities were caused by *L. pneumophila* 2008-2017 (98.1% of the cases with culture test results).⁷
- E. Regulations in other regions demonstrate the effectiveness of focusing on managing *L. pneumophila*. Research and data support that risk-reduction measures focused on reducing and testing for *L. pneumophila* are effective public health policies. For example:

Example #1: France vs. other EU Countries: France manages and tests for *L. pneumophila* and has slowed the increase of LD to $\frac{1}{2}$ the rate of England and neighboring countries that test for Legionella species.^{5,6}



Example #2: New York vs. Quebec: Both have cooling tower regulations to prevent LD. However, by focusing on mitigating and testing for *L. pneumophila*, Quebec is doing much better at protecting its citizens versus New York, which has seen a similar growth in case rates since regulations were put in place. Quebec has seen much less need for remediation and fewer cases of disease.

- F. Focusing testing on *L. pneumophila* makes it easier for building owners and operators to comply with prevention and mitigation efforts. This results in more effective, more efficient, less expensive implementation and risk reduction efforts. There are 60+ species of *Legionella*, most of which have no major disease implications at all.⁹ Broader species-level testing can lead to the unnecessary shut down and disinfection of a water system after detection of a non-pathogenic *Legionella* species, which can lead to higher levels of non-compliance and increased public health risk, as well as much higher costs. In contrast, managing a clear target (*L. pneumophila*) produces targeted actions – if you find *L. pneumophila*, there is no gray area, we know actions that are spelled out in the water management plan must be taken.

Again, thank you for allowing me to share my expertise and comments on SB0302. I welcome the opportunity to answer any questions there may be with regards to this testimony. I encourage this Committee to move Senator Lam's bill forward.

Respectfully submitted,



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