



Ms. Paula Pullano
Department of Health
3 Capitol Hill
Providence, RI 02908

Document: 216-RICR-50-05-4 Licensing Aquatic Venues

July 28, 2021

Dear Ms. Paula Pullano,

IDEXX appreciates the opportunity, from the Rhode Island Department of Health (RIDOH) to submit our input regarding the proposed amendments to rule: Licensing Aquatic Venues (216-RICR-50-05-4). IDEXX commends and supports the proposed revisions to add additional testing requirements to better protect public health. In addition, IDEXX would like to request RIDOH to consider the following comment.

We suggest adding an additional testing requirement for the monitoring of *Legionella pneumophila*, by a laboratory certified for a culture method, for licensees with hot tubs, spas and therapeutic pools, when the Agency may require.

Rational: *Legionella* bacteria live within potable and non-potable water systems. People become ill when the *Legionella* species *Legionella pneumophila*, the primary species linked to Legionnaires' disease, is aerosolized from the water and inhaled or aspirated infecting the macrophages within a person's lungs, producing a severe pneumonia [1,2].

Legionnaires' disease has an associated risk with hot tubs, spas, and therapeutic pools [3, 4, 5, 6, 7, 8, 12] as these systems can facilitate the bacterium becoming airborne causing the transmission to people [5].

With the transmission of *L. pneumophila* associated with manmade environmental settings [9], the prevention of Legionnaires' disease can be completed by monitoring, identifying and controlling the bacteria's presence [10].

Multiple entities provide guidance and/or legislation for action limits when the presence of *L. pneumophila* is detected [see attached Legionella Action Limits - Guidance/Legislation water tables at the end of this comment].

Even though there are currently few U.S. guidelines and/or regulations on the prevention of Legionnaires' disease [11], IDEXX encourages the RIDOH to consider adding the suggested edit to strengthen the Licensing Aquatic Venues (216-RICR-50-05-4) regulation and as a way to better protect public health against Legionnaires' disease. We appreciate the opportunity to provide these comments and look forward to the next steps for this rule.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'Jody Frymire', is written in a cursive style.

Jody Frymire MPH, Regulatory Affairs Specialist, IDEXX Water
One IDEXX Drive | Westbrook, ME 04038 | idexx.com/water | jody-frymire@idexx.com

References

1. Centers for Disease Control and Prevention. (2018, April 30). Legionella (Legionnaires' Disease and Pontiac Fever), Causes, How it Spreads, and People at Increased Risk. Retrieved from <https://www.cdc.gov/legionella/about/causes-transmission.html>
2. Garrison, L.E., Kunz, J.M., Cooley, L.A., Moore, M. R., & Lucas, C. (2016, June 10). Vital Signs: Deficiencies in Environmental Control Identified in Outbreaks of Legionnaires' Disease - North America, 2000-2014. *MMWR. Morbidity and Mortality Weekly Report*. 65(22). Retrieved from <https://search-proquest-com.unr.idm.oclc.org/docview/1799006305/fulltext/836E931CE2C4EC4PQ/1?accountid=452>
3. Thomas, D. L., Mundy, L. M., Tucker, P.C. (1993, November 22). Hot Tub Legionellosis: Legionnaires' Disease and Pontiac Fever After a Point-Source Exposure to *Legionella pneumophila*. *Arch Intern Med*. 153, 2597-2599. Doi: 10.1001/archinte.1993.00410220113013 Retrieved from <https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/618082>
4. Kerry, L. (2008, June 7). Motel hot tub believed source of Legionnaires'. *Daily Herald: Arlington Heights, Illinois*.
5. Arnold, K. (2017, June 13). Hot tubs eyed as another case of Legionnaires' reported. *Orlando Sentinel (Online)*, Orlando, Florida: Tribune Interactive LLC.
6. Signor, R. (1994, November 08). Hot tub linked to Legionnaires' disease cases. *St. Louis Post – Dispatch: St. Louis, Missouri*.
7. Murray, J. (2019, September 26). Hotel faces lawsuit over death from Legionella exposure. *Star – Gazette: Elmira, New York*.
8. Rosbach, M. (2017, December 19). Two cases of Legionnaires' disease traced to gym hot tub. *TCA Regional News: Chicago, Illinois*.
9. American Society of Heating and Ventilating Engineers (ASHRAE). (2018). ANSI/ASHRAE standard 188-2018. *Legionellosis: risk management for building water systems*. American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Atlanta.
10. Yu, A., Kamali, A., Vugia, D. J. (2019, August 6). Legionella Epidemiologic and Environmental Risks. *Current Epidemiology Reports*. 6, 310-320. <https://doi.org.10.1007/s40471-019-00207-3>
11. Parr, A., Whitney, E., & Berkelman, R. (2015, September/October). Legionellosis on the Rise: A Review of Guidelines for Prevention in the United States. *Journal of Public Health Management and Practice*. 21(5), E17-E26. Doi:10.1097/PHH.000000000000123
12. Krupa, M. (2019, October 4). A hot tub display at North Carolina state fair may be the origin of a deadly outbreak of Legionnaires' disease. *CNN health*. Retrieved from <https://www.cnn.com/2019/10/04/health/legionnaires-north-carolina-hot-tubs-trnd/index.html>

Legionella Action limits – Guidance / Legislation

Potable water



Country	Entity	Type of rule	Potable water limit
United States	CDC	Guidance	Depends on Risk Mgmt Plan
	ASHRAE	Guideline 12	See slide 3
	AIHA	Guidance	≥ 10 per mL
	OSHA	Guidance	≥ 10 per mL
	VA Directive 1061	Guidance	Any positive
	New York State Dept. of Health	Legislation	≥ 30% “positive” outlets (healthcare facilities only)
France	Ministry of Health	Legislation	≥ 1 per mL
Germany	Trinkwasserverordnung TrinkwV 2001	Legislation	≥ 1 per mL

Legionella Action Limits – Guidance / Legislation

Nonpotable water



Country	Entity	Type of rule	NonPotable water limit
United States	CDC	Guidance	Depends on Risk Mgmt Plan
	ASHRAE	Guideline 12	(see slide 3)
	AIHA	Guidance	≥ 100 per mL
	OSHA	Guidance	≥ 100 per mL
	New York State Dept. of Health New York City Dept. of Health	Legislation	≥ 20 per mL
	New Orleans, LA (CTs)	Legislation	≥ 10 per mL
	Garland, TX	Legislation	≥ 10,000 mL At City Dept. of Health discretion
France	Ministry of Health	Legislation	≥ 1 per mL
Germany	Trinkwasserverordnung TrinkwV 2001	Guidance	≥ 1 per mL
Canada	Quebec	Legislation	≥ 10 per mL

Action limits – Potable & Nonpotable water

ASHRAE Guideline 12 and US CDC



Guidance	Limit
Program under control	<ul style="list-style-type: none">• If ≤ 1 CFU* per mL for potable water• If ≤ 10 CFU per mL for cooling towers
Conditions may allow for growth	<ul style="list-style-type: none">• If > 1 CFU per mL for potable water• If > 10 CFU per mL for cooling towers
Growth appears to be poorly controlled	<ul style="list-style-type: none">• 10 to 100-fold increase for potable water or cooling towers
Growth appears to be uncontrolled	<ul style="list-style-type: none">• > 100-fold increase

* CFU and MPN reporting units are used interchangeably, See ISO 6107