TREATING SUPERBUGS WITH LITIGATION: ANTIBIOTIC-RESISTANT BACTERIA FROM ANIMAL AGRICULTURE AS A PUBLIC NUISANCE

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Antibiotic resistance is a large and growing threat to public health, causing over 35,000 deaths a year in the United States alone. The animal agriculture industry is the largest user of medically important antibiotics and a major contributor to the development of antibiotic-resistant bacteria (AR-bacteria). AR-bacteria pose a massive health risk to the public, with agricultural workers and people living near animal agriculture facilities at particular risk. In light of the insufficient regulatory regime, new pathways are needed. Public nuisance offers one potential avenue for protecting the public. This Essay considers a claim in Washington State and argues that (1) a public nuisance per se claim could be used to protect communities from animal agriculture–associated antibiotic resistance and (2) this claim is not foreclosed by Washington's Right to Farm Act (RTF Act or the Act).

INTRODUCTION

On August 18, 2016, a woman was admitted to an acute care hospital in Nevada with a primary diagnosis of systemic inflammatory response syndrome, likely from an infection in her hip.[1] One week later, health care workers reached out to the county health district with a terrifying report: The bacteria responsible for the woman's infection was resistant to all available antimicrobial drugs.[2] She died in September of 2016 from the infection.[3]

We live in the era of antibiotics. Infections and diseases that would have been life-threatening just 100 years ago are now easily treatable with widely available drugs.[4] However, there are signs that this era is drawing to a close. Drugs previously seen as the last line of defense no

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[1] Lei Chen et al., *Pan-Resistant New Delhi Metallo-Beta-Lactamase-Producing* Klebsiella pneumoniae — *Washoe County, Nevada, 2016*, 66 MORBIDITY MORTALITY WKLY. REP. 33, 33 (2017).

[2] *Id.*

[3] *Id.*

[4] *See* W.A. Adedeji, Editorial, *The Treasure Called Antibiotics*, 14 ANNALS IBADAN POSTGRADUATE MED. 56, 56 (2016).

longer work to treat all infections.[5] Patients are refused chemotherapy, joint replacements, and heart transplants because they have infections resistant to antibiotics.[6] Antibiotic resistance is developing in bacteria faster than we are developing new drugs.[7] And antibiotic resistance is now causing over 2.8 million antibiotic-resistant infections and over 35,000 resulting deaths a year in the United States.[8] We face a question unknown in our lifetimes: What would it be like to live in a world without effective antibiotics?

Despite the risk of developing AR-bacteria from overuse of antibiotics,[9] the majority of medically important antibiotics are used on animals, not on humans.[10] As a result, antibiotic use by concentrated animal-feeding operations (CAFOs) is a leading factor in the development of antibiotic resistance,[11] with little discussion of whether lower costs of

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[5] *See* Chen et al., *supra* note 1, at 33; *see also* ANTIMICROBIAL RESISTANCE DEP'T, WORLD HEALTH ORG. [WHO], GLOBAL ANTIBIOTIC RESISTANCE SURVEILLANCE REPORT 2025, at xiv–xvi, 8–9, 52–54 (2025) [hereinafter WHO, GLOBAL ANTIBIOTIC RESISTANCE] (discussing global trends in antimicrobial resistance (AMR)).

[6] Beth Howard, *Where Are We in the Battle Against Antibiotic-Resistant Infections?*, AAMCNEWS (Dec. 4, 2025), https://www.aamc.org/news/where-are-we-battle-against-antibiotic-resistant-infections [https://perma.cc/587M-MMM2].

[7] *See* Katia Iskandar et al., Review, *Antibiotic Discovery and Resistance: The Chase and the Race*, ANTIBIOTICS, Feb. 2022, art. 182, at 10, 14.

[8] ANTIBIOTIC RESISTANCE COORDINATION AND STRATEGY UNIT, CTRS. FOR DISEASE CONTROL & PREVENTION, ANTIBIOTIC RESISTANCE THREATS IN THE UNITED STATES, 2019, at 3 (2019). In the absence of concerted action, an estimated 204,000 deaths annually in the United States could be associated with AMR by 2030. INST. FOR HEALTH METRICS & EVALUATION, THE BURDEN OF ANTIMICROBIAL RESISTANCE (AMR) IN THE UNITED STATES OF AMERICA 1 (2023). Globally, AMR causes over one million deaths annually. Christopher J.L. Murray et al., *Global Burden of Bacterial Antimicrobial Resistance in 2019: A Systematic Analysis*, 399 THE LANCET 629, 639 (2022). By 2050, there will be an estimated 1.91 million deaths per year attributable to AMR and 8.22 million deaths per year associated with AMR. Mohsen Naghavi et al., *Global Burden of Bacterial Antimicrobial Resistance 1990–2021: A Systematic Analysis with Forecasts to 2050*, 404 THE LANCET 1199, 1213 (2024). And according to the World Bank, AMR could increase healthcare costs by an additional 1 trillion USD per year by 2050 and could result in GDP losses of 1 trillion to 3.4 trillion USD per year by 2030. *Antimicrobial Resistance*, WORLD HEALTH ORG. [WHO] (Nov. 21, 2023), https://www.who.int/news-room/fact-sheets/detail/antimicrobial-resistance [https://perma.cc/9KGG-752F].

[9] *See* Charlotte S. Ho et al., Review, *Antimicrobial Resistance: A Concise Update*, LANCET MICROBE, Jan. 2025, art. 100947, at 1–2; Yasufumi Matsumura et al., Review, *Integrating Whole-Genome Sequencing into Antimicrobial Resistance Surveillance: Methodologies, Challenges, and Perspectives*, CLINICAL MICROBIOLOGY REVS., Dec 2025, art. 00140-22, at 3; *infra* section I.A, pp. 265–66.

[10] Ho et al., *supra* note 9, at 2. In 2017, an estimated 73% of all antimicrobials used globally were used in animals, and annual antibiotic consumption is projected to increase by 67% from 2010 levels by 2030. *Id.*

[11] *See* Julian Davies & Dorothy Davies, Review, *Origins and Evolution of Antibiotic Resistance*, 74 MICROBIOLOGY & MOLECULAR BIOLOGY REVS. 417, 423 (2010); Ho et al., *supra* note 9, at 2 (identifying agricultural practices as the most likely factor "to influence the distribution of AMR genes"); Matsumura et al., *supra* note 9, at 3 ("AMR is associated with the overuse of antimicrobials in humans, animals (especially livestock), and the environment, and this resistance may spread and circulate among these niches.").

meat are worth the public health risks.[12] Though antibiotic use is regulated, regulation in the United States is insufficient to meaningfully prevent risks or even to reduce the volume of antibiotics sold to the animal agriculture industry.[13] The industry's overuse of antibiotics puts us all at risk, but it poses particular risks to people working in the industry and people who live near CAFOs or slaughterhouses.[14] These people are disproportionately likely to be members of marginalized communities.[15]

Despite the risks and justice implications thereof, there is currently no clear path for people harmed by animal agriculture–associated AR-bacteria to hold the animal agriculture industry accountable for its role in an evolving public health crisis. This Essay proposes using tort law — specifically, public nuisance — as a tool. To do so, this Essay

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[12] For an excellent discussion of the potential tradeoffs, see DOUG GURIAN-SHERMAN, UNION OF CONCERNED SCIENTISTS, CAFOS UNCOVERED 5–6, 62–64 (2008).

[13] *See infra* section I.C, pp. 267–70.

[14] *See* Alexandra N. George et al., *Risk of Antibiotic-Resistant* Staphylococcus aureus *Dispersion from Hog Farms: A Critical Review*, 40 RISK ANALYSIS 1645, 1645 (2020); Ricardo Castillo Neyra et al., *Multidrug-Resistant and Methicillin-Resistant* Staphylococcus aureus *(MRSA) in Hog Slaughter and Processing Plant Workers and Their Community in North Carolina (USA)*, 122 ENV'T HEALTH PERSPS. 471, 471 (2014); Liese Van Gompel et al., *Description and Determinants of the Faecal Resistome and Microbiome of Farmers and Slaughterhouse Workers: A Metagenome-Wide Cross-Sectional Study*, ENV'T INT'L, Oct. 2020, art. 105939, at 1; Ons Bouchami et al., *Evidence for the Dissemination to Humans of Methicillin-Resistant* Staphylococcus aureus *ST398 Through the Pork Production Chain: A Study in a Portuguese Slaughterhouse*, MICROORGANISMS, Dec. 2020, art. 1892, at 1; Meghan F. Davis et al., *Occurrence of* Staphylococcus aureus *in Swine and Swine Workplace Environments on Industrial and Antibiotic-Free Hog Operations in North Carolina, USA: A One Health Pilot Study*, 163 ENV'T RSCH. 88, 88 (2018); Maya Nadimpalli et al., *Persistence of Livestock-Associated Antibiotic-Resistant* Staphylococcus aureus *Among Industrial Hog Operation Workers in North Carolina over 14 Days*, 72 OCCUPATIONAL & ENV'T MED. 90, 90 (2012); Roberto Bava et al., Review, *Antimicrobial Resistance in Livestock: A Serious Threat to Public Health*, 13 ANTIBIOTICS 551, 557–59 (2024); Ling Jin et al., *Airborne Transmission as an Integral Environmental Dimension of Antimicrobial Resistance Through the "One Health" Lens*, 52 CRITICAL REVIEWS ENV'T SCI. & TECH. 4172, 4173–74, 4178, 4181–82 (2022); Chen Chen & Felicia Wu, *Livestock-Associated Methicillin-Resistant* Staphylococcus aureus *(LA-MRSA) Colonisation and Infection Among Livestock Workers and Veterinarians: A Systematic Review and Meta-Analysis*, 78 OCCUPATIONAL & ENV'T MED. 530, 531 (2021); Weidong Liu et al., *The Prevalence and Influencing Factors of Methicillin-Resistant* Staphylococcus aureus *Carriage in People in Contact with Livestock: A Systematic Review*, 43 AM. J. INFECTION CONTROL 469, 469, 471 (2015); Chunming Xu et al., *A Review of Current Bacterial Resistance to Antibiotics in Food Animals*, FRONTIERS MICROBIOLOGY, May 2022, art. 822689, at 1–2, 6–7.

[15] *See* Leah Salzano, Characterizing Populations Living Near Concentrated Animal Feeding Operations 22 (Jan. 2023) (M.P.H. thesis, Yale School of Public Health) (on file with the Harvard Law School Library); Ji-Young Son et al., *Disparities in Exposure to Concentrated Animal Feeding Operations (CAFOs) and Other Animal Feeding Operations Across Multiple States in USA*, 36 J. EXPOSURE SCI. & ENV'T EPIDEMIOLOGY 167, 170 (2025). *Compare* Xitlali Herrera, *CAFOS in Washington State*, ARCGIS, https://www.arcgis.com/apps/dashboards/b90832e84dfa441b809c0f764bc2fdbe [https://perma.cc/5XNW-N3XR], *with Washington Environmental Health Disparities Map*, WASH. STATE DEP'T OF HEALTH, https://fortress.wa.gov/doh/wtnibl/WTNIBL [https://perma.cc/A8NR-53K6].

examines public nuisance law in one state, Washington,[16] and argues that CAFOs' overuse of antibiotics leading to the development of AR-bacteria is a cognizable public nuisance. Part I provides background on the issue; Part II outlines the contours of a public nuisance claim in Washington State; Part III argues that this claim is not barred by Washington's Right to Farm Act[17] (RTF Act); and Part IV makes policy suggestions.

I. BACKGROUND

A. Animal Agriculture and AR-Bacteria

Antibiotics not only prevent disease in animals by killing pathogenic bacteria, but also promote growth and increase feed efficiency independently of disease prevention effects.[18] CAFOs therefore have a financial incentive to utilize antibiotics for reasons beyond disease prevention.[19] Use of antibiotics is a key contributing factor to antibiotic resistance because application of antibiotics provides selective pressure.[20] In the presence of antibiotics, only bacteria with a genetic trait conferring resistance to the antibiotic will survive and proliferate as a general matter.[21] Many mutations that give rise to antibiotic resistance result in additional energy expenditure by the bacteria.[22] These mutations will thus lead to decreased relative fitness in the mutated population *unless* the mutation is needed because of the presence of the antibiotic.[23] Application of antibiotics thus provides selective pressure toward antibiotic resistance. Over time, strains of bacteria may develop

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[16] This theory could certainly be explored in other jurisdictions as well. Because public nuisance sounds in common law, the precise shape of the legal claim would vary between states, so this Essay focuses on one state to articulate the claim. I consider Washington because it has a health and safety exemption in its RTF Act and a significant number of CAFOs. *See infra* Part IV, pp. 278–82; Rusty Rumley, *Right-To-Farm: Typical Provisions*, NAT'L AGRIC. L. CTR. (last updated June 2023), https://nationalaglawcenter.org/state-compilations/right-to-farm-provisions [https://perma.cc/5FXB-TYKK]; EPA, NPDES CAFO PERMITTING STATUS REPORT 1 (2021), https://www.epa.gov/sites/default/files/2021-05/documents/cafo_status_report_2020.pdf [https://perma.cc/469T-MB5H]. But note that EPA's estimates of the number of CAFOs in a state are notoriously poor. *See* D. LEE MILLER & GREGORY MUREN, CAFOS: WHAT WE DON'T KNOW IS HURTING US 10–12 (2019).

[17] WASH. REV. CODE. §§ 7.48.300–.320 (2024).

[18] Madhab K. Chattopadhyay, Opinion Article, *Use of Antibiotics as Feed Additives: A Burning Question*, FRONTIERS MICROBIOLOGY, July 2014, art. 334, at 1 (2014).

[19] *Id.*

[20] Jose L. Martinez, *General Principles of Antibiotic Resistance in Bacteria*, 11 DRUG DISCOVERY TODAY: TECHS. 33, 36–37 (2014).

[21] *See id.*

[22] Anita H. Melnyk et al., *The Fitness Costs of Antibiotic Resistance Mutations*, 8 EVOLUTIONARY APPLICATIONS 273, 279 (2014); Jose M. Munita & Cesar A. Arias, *Mechanisms of Antibiotic Resistance*, MICROBIOLOGY SPECTRUM, Apr. 2016, art. VMBF-0016-2015, at 3 (2016); *see* Martinez, *supra* note 20, at 37.

[23] Munita & Arias, *supra* note 22, at 3; *see* Melnyk et al., *supra* note 22, at 273, 279; Martinez, *supra* note 20, at 37.

resistance to many antibiotics, making those bacterial infections difficult to treat.[24]

Two major genetic strategies lead to antibiotic resistance in bacteria.[25] The first is mutational resistance, in which the bacteria acquire resistance through random mutations.[26] The second is horizontal gene transfer (HGT).[27] In HGT, bacteria acquire genes from their environment and from each other.[28] Through HGT, development of genes providing antibiotic resistance in one species increases the risk that other species develop resistance to that same antibiotic.[29] This spread of antibiotic resistance genes can be mapped through modern genetic sequencing techniques.

B. Genetic Sequencing Technology and AR-Bacteria

Just as humans can have portions of their DNA sequenced through commercial platforms like 23andMe,[30] bacterial DNA can also be sequenced to identify near relatives. Genetic sequencing can determine the origin of particular strains of AR-bacteria.[31]

Using existing technologies, scientists are able to take samples from humans, animals, and the environment.[32] Bacteria can be isolated from those samples.[33] Scientists may then identify the species of bacteria and whether the isolates are resistant to antimicrobial drugs.[34] Once the sequence of each isolate is determined, the sequences can be compared to each other and to existing databases of genetic information to determine the most closely related strains.[35] Using statistical analysis, scientists are able to construct a model for the evolution of a particular strain, based upon the relation between the strains.[36] This model can be used to identify where a particular strain emerged; for example, if a strain isolated from an infected individual is most closely related to a strain isolated from an animal at a CAFO, that individual was likely infected with a strain that evolved at that CAFO.[37] Sequencing technologies thus make attribution possible.

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[24] *See* WHO, GLOBAL ANTIBIOTIC RESISTANCE, *supra* note 5, at xiv–xvi, 8–9, 52–54.

[25] Munita & Arias, *supra* note 22, at 2–3.

[26] *Id.* at 2.

[27] *Id.* at 2–3.

[28] *Id.* at 3.

[29] *See id.* at 3–4.

[30] *See* Geoffrey A. Fowler, *Delete Your DNA from 23andMe Right Now*, WASH. POST (Mar. 24, 2025), https://www.washingtonpost.com/technology/2025/03/24/23andme-dna-privacy-delete [https://perma.cc/2W6P-W7D9].

[31] *See* Matsumura et al., *supra* note 9, at 20–23.

[32] *See* Bouchami et al., *supra* note 14, at 3.

[33] *See id.*

[34] *See id.* at 3–4.

[35] *See id.* at 5–6.

[36] *See id.* at 5–9.

[37] *See id.* at 8–9.

C. History of Antibiotic Regulation in the United States

There is a long history of ineffectual antibiotic regulation in the United States. In the 1950s, the U.S. Food and Drug Administration (FDA) "approved applications for the use of various antibiotics in food-producing animals for a variety of non-disease-treatment purposes, including growth promotion, feed efficiency, and disease prevention,"[38] acting under its authority granted by the Federal Food, Drug, and Cosmetic Act.[39] These antibiotics were approved for use at subtherapeutic levels and for administration on a herd- or flock-wide basis, rather than merely to specific diseased animals.[40] By the late 1960s, science began to link the use of antibiotics on food-producing animals to increased antibiotic resistance in bacteria that could affect humans.[41] In 1970, the FDA assembled a task force with scientists from the FDA, the National Institutes of Health (NIH), the U.S. Department of Agriculture (USDA), the Centers for Disease Control and Prevention (CDC), academia, and industry.[42] The task force published its report in 1972, which found that "use of antibiotics, especially in subtherapeutic amounts, favors the selection and development of single and multiple antibiotic resistant . . . bacteria" and recommended restricting use of medically important classes of antibiotics in feed.[43]

In 1973, the FDA proposed withdrawing approval for the subtherapeutic use of antibiotics in food-producing animals unless the industry submitted data conclusively demonstrating the safety of antibiotic use, including by showing that subtherapeutic use of a drug would not increase the risk of antibiotic resistance to humans.[44] After receiving evidence submitted by the industry, the FDA did not withdraw approval of all subtherapeutic uses, and instead "proposed to withdraw approval of all subtherapeutic uses of penicillin in livestock and to restrict subtherapeutic use of two tetracyclines in livestock."[45] However, the FDA did not take any action on the proposed withdrawal,[46] and instead

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[38] Nat. Res. Def. Council, Inc. v. FDA, 872 F. Supp. 2d 318, 322 (S.D.N.Y. 2012), *rev'd*, 760 F.3d 151 (2d Cir. 2014);

[39] 21 U.S.C. §§ 301–399d; *see* Emilie Aguirre, *Contagion Without Relief: Democratic Experimentalism and Regulating the Use of Antibiotics in Food-Producing Animals*, 64 UCLA L. REV. 550, 570 (2017).

[40] Aguirre, *supra* note 39, at 570.

[41] *Id.* at 570–71.

[42] *Id.*

[43] FDA, REPORT TO THE COMMISSIONER OF THE FOOD AND DRUG ADMINISTRATION BY THE FDA TASK FORCE ON THE USE OF ANTIBIOTICS IN ANIMAL FEEDS 3, 10 (1972).

[44] Aguirre, *supra* note 39, at 571 (citing Antibiotic and Sulfonamide Drugs in the Feed of Animals, 38 Fed. Reg. 9811, 9813 (Apr. 20, 1973) (formerly codified at 21 C.F.R. § 558.15); Penicillin-Containing Premixes, Opportunity for Hearing, 42 Fed. Reg. 43772, 43774 (Aug. 30, 1977)).

[45] *Id.* (citing Antibiotic and Sulfonamide Drugs in the Feed of Animals, 38 Fed. Reg. at 9813).

[46] *Id.*

approved new drug applications for the subtherapeutic use of penicillin and tetracycline in food-producing animals in the 1980s.[47]

No progress was made on curbing subtherapeutic antibiotic use over the following decades. Advocacy groups submitted citizen petitions to the FDA in 1999 and 2005, and in 2011, advocacy organizations filed suit against the FDA, seeking to compel "the FDA to withdraw approval for the subtherapeutic use of penicillin and tetracyclines in animal feed."[48] During the course of the lawsuit, the FDA denied both citizen petitions.[49] The advocacy organizations eventually lost the case.[50]

In the 2010s, the FDA introduced a new policy framework around the use of medically important antimicrobial drugs in food-producing animals through three core documents.[51] The first of these documents was published in April 2012 as Guidance for Industry (GFI) #209.[52] GFI #209 set forth a voluntary framework for the management of medically important microbial drugs in animal agriculture.[53] This guidance recommended two key principles to help minimize antimicrobial resistance (AMR) development: first, to limit the use of medically important antimicrobial drugs in animals to "uses that are considered necessary for assuring animal health," and second, to ensure "veterinary oversight or consultation."[54]

The FDA released the second document, GFI #213, in December 2013.[55] GFI #213 outlined a process to bring drug sponsors into voluntary compliance with GFI #209.[56] The FDA expected the industry to voluntarily transition feed-use antimicrobial drugs from over-the-counter (OTC) to veterinary feed directive (VFD) marketing status.[57] Drugs with VFD marketing status occupy a middle ground between OTC and prescription drugs.[58] OTC drugs do not require a prescription or any veterinary oversight.[59] Prescription drugs require a prescription from a

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47 *Id.* at 572 (citing New Animal Drugs for Use in Animal Feeds; Penicillin- and Tetracycline (Chlortetracycline and Oxytetracycline)-Containing Premixes, 48 Fed. Reg. 4490, 4490 (Feb. 1, 1983)).

48 Nat. Res. Def. Council, Inc. v. FDA, 884 F. Supp. 2d 127, 137 & n.6 (S.D.N.Y. 2012).

49 *Id.* at 137 n.6.

50 Nat. Res. Def. Council, Inc. v. FDA, 760 F.3d 151, 175–76 (2d Cir. 2014).

51 *See* Veterinary Feed Directive, 80 Fed. Reg. 31708, 31708 (June 3, 2015) (codified at 21 C.F.R. pts. 514, 558).

52 *Id.* (citing FDA, GUIDANCE FOR INDUSTRY #209: THE JUDICIOUS USE OF MEDICALLY IMPORTANT ANTIMICROBIAL DRUGS IN FOOD-PRODUCING ANIMALS (2012) [hereinafter FDA, GUIDANCE FOR INDUSTRY #209]).

53 FDA, GUIDANCE FOR INDUSTRY #209, *supra* note 52, at 4.

54 *Id.* at 21–22.

55 FDA, GUIDANCE FOR INDUSTRY #213: NEW ANIMAL DRUGS AND NEW ANIMAL DRUG COMBINATION PRODUCTS ADMINISTERED IN OR ON MEDICATED FEED OR DRINKING WATER OF FOOD-PRODUCING ANIMALS: RECOMMENDATIONS FOR DRUG SPONSORS FOR VOLUNTARILY ALIGNING PRODUCT USE CONDITIONS WITH GFI #209 (2013).

56 *Id.* at 4.

57 *Id.*

58 Aguirre, *supra* note 39, at 574.

59 *Id.*

veterinarian and a pharmacist to dispense.[60] VFD drugs require veterinary supervision to use, but do not require a prescription.[61] GFI #213 provided drug sponsors with a timeline and specific recommendations on aligning with the two principles in GFI #209 and recommended that the drug sponsors update the use conditions of the drugs to forbid use for production purposes and allow use "only for therapeutic purposes with the supervision of a licensed veterinarian,"[62] thus moving these drugs into the VFD program.[63]

On June 3, 2015, the FDA promulgated a final rule as the third and final core document in its new policy framework.[64] The rule aimed to make the VFD process as efficient as possible, in order "to facilitate transition of [the drugs] from OTC to VFD marketing status."[65] To that end, the rule changed certain definitions and clarified general requirements for VFD drugs, responsibilities of the VFD drug sponsor, and specific responsibilities of the veterinarian issuing the VFD.[66] The FDA expected affected feed-use antimicrobial drugs to transition from OTC to VFD marketing status,[67] and by 2017, "[t]wenty-five out of twenty-six of the current drug sponsors, representing over 99.95% of the total sales of products affected by [GFI] #213, . . . committed to change the use conditions of their feed-use drugs so that they [were] VFD."[68]

Though there was industry buy-in to the new framework, the framework did little to meaningfully limit overapplication of antibiotics. The animal agriculture industry was still permitted to use subtherapeutic doses on healthy animals, as long as the application was for disease prevention purposes and not for growth promotion.[69] However, as Professor Emilie Aguirre puts it, "[b]acteria . . . do not distinguish between low doses of antibiotics administered for production purposes and low doses administered for disease prevention."[70] One drug sponsor stated it did not anticipate any drop in revenues under the new framework, while another planned to have its drug reclassified as prevention-related instead of production-related.[71]

And indeed, there has not been a meaningful drop in antimicrobial sales for use in animal agriculture. Antimicrobial sales dropped

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[60] *Id.*

[61] *See id.*

[62] Veterinary Feed Directive, 80 Fed. Reg. 31708, 31710 (June 3, 2015) (codified at 21 C.F.R. pts. 514, 558).

[63] *See id.*

[64] *Id.* at 31708.

[65] *Id.* at 31710.

[66] *Id.*

[67] *Id.* at 31708.

[68] Aguirre, *supra* note 39, at 574.

[69] Lisa Heinzerling, *The FDA's Continuing Incapacity on Livestock Antibiotics*, 33 STAN. ENV'T. L.J. 325, 337 (2014).

[70] Aguirre, *supra* note 39, at 575.

[71] *Id.*

substantially between 2016 and 2017 (around 34% by mass), but then climbed by 9% between 2017 and 2018.[72] Sales stayed approximately constant between 2018 and 2023, but increased by 17% between 2023 and 2024.[73] While sales are still below 2016 levels, sales continue to climb from 2017 levels, and nearly seven million kilograms of medically important antimicrobials were sold in 2024.[74] CAFOs' continuous use of high levels of antibiotics places communities at risk, with no signs of abatement in sight.

II. An AR-Bacteria Public Nuisance Claim

In light of the massive threat that CAFOs' overuse of antibiotics presents to human health and the failure of the government to meaningfully regulate in this space, new strategies are needed to hold CAFOs accountable and protect the public. Public nuisance offers a promising path. As public nuisance sounds in state law, this Essay focuses on outlining the theory in a specific state: Washington.[75]

Nuisance claims are statutory claims in Washington State under Chapter 7.48 of the Revised Code of Washington.[76] Washington defines "nuisance" as that which "annoys, injures or endangers the comfort, repose, health or safety of others, offends decency, or unlawfully interferes with . . . any lake or navigable river, bay, stream, canal or basin, . . . or in any way renders other persons insecure in life, or in the use of property."[77] A "public nuisance" is defined as "one which affects equally the rights of an entire community or neighborhood, although the extent of the damage may be unequal."[78] The state may bring an action for any public nuisance, but private individuals may bring an action for a public

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[72] *See Biomass-Adjusted Antimicrobial Sales and Distribution Data in Food-Producing Animals: Interactive Summary*, FDA (Dec. 5, 2025), https://www.fda.gov/animal-veterinary/antimicrobial-resistance/biomass-adjusted-antimicrobial-sales-and-distribution-data-food-producing-animals-interactive [https://perma.cc/34LJ-2AGC] (click on the "Trends Over Time" tab; to view year-over-year sales data, click on the year label (e.g., "2016") in the first bar chart).

[73] *See id.*

[74] *See id.*; *2024 Summary Report On Antimicrobials Sold or Distributed for Use in Food-Producing Animals*, FDA (Nov. 11, 2025), https://www.fda.gov/animal-veterinary/antimicrobial-resistance/2024-summary-report-antimicrobials-sold-or-distributed-use-food-producing-animals [https://perma.cc/A6Q5-J977] (scroll right on the tabs (starting with "Table of Contents"), click on the tab titled "III. Data on Med Imp Drugs"; scroll down to Table 4b); *cf.* Dep't of Glob. Coordination and P'ship of Antimicrobial Resist., World Health Org. [WHO], WHO List of Medically Important Antimicrobials 12–13, 16 (2024) (providing a list that is similar, though not identical, to the FDA designation).

[75] *See supra* note 16 and accompanying text.

[76] Wash. Rev. Code § 7.48 (2024).

[77] *Id.* § 7.48.120.

[78] *Id.* § 7.48.130.

nuisance only "if it is specially injurious to himself or herself."[79] Damages or injunctive relief may be awarded.[80]

The use of public nuisance to address impacts from animal agriculture has a long history in Washington. Washington's statutory nuisance law dates back to 1875,[81] and the definition of a public nuisance has remained unchanged since.[82] In 1904, the Washington Supreme Court held that a slaughterhouse was a public nuisance.[83] The court declared that "[t]here can be no doubt" of its status, emphasizing the "unclean and filthy condition," the "offal, filth, and animal refuse matter" that entered the waters of the bay, the pollution of air and water, and the harm to people living in the area.[84] Though our understanding of the threats from animal agriculture has evolved, there is no reason to presume that these newly understood harms are less actionable than traditionally understood harms under public nuisance law.

In Washington, a plaintiff could bring an actionable public nuisance per se claim against a CAFO for the harm caused to the community by its overapplication of antibiotics. In general, to bring a public nuisance claim, the plaintiff must show the existence of a nuisance that affects equally the rights of an entire community or neighborhood[85] and that constitutes an unreasonable use of land.[86] However, Washington's public nuisance law also enumerates, in section 7.48.140, certain activities that constitute public nuisances per se.[87] When bringing a per se claim under section 7.48.140, a plaintiff need not show that the challenged activity affects a broad community or is unreasonable, as the legislature has already made those determinations.[88] To bring a public nuisance

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[79] *Id.* § 7.48.210; *see id.* §§ 7.48.200–.220; *see also id.* § 9.66.010 (defining public nuisance in criminal context); *id.* § 9.66.040 (allowing abatement of nuisance).

[80] *Id.* § 7.48.200; *see* Asche v. Bloomquist, 133 P.3d 475, 482 (Wash. Ct. App. 2006).

[81] *See* An Act Defining Nuisance, and Securing Remedies, 1875 Wash. Sess. Laws 79.

[82] *Compare id.* ("A public nuisance is one which affects equally the rights of an entire community or neighborhood, although the extent of the damage may be unequal."), *with* WASH. REV. CODE § 7.48.130 (2024) ("A public nuisance is one which affects equally the rights of an entire community or neighborhood, although the extent of the damage may be unequal.").

[83] Wilcox v. Henry, 77 P. 1055, 1056 (Wash. 1904).

[84] *Id.*

[85] WASH. REV. CODE. § 7.48.130.

[86] *See* Animal Legal Def. Fund v. Olympic Game Farm, Inc., 533 P.3d 1170, 1172 (Wash. 2023) ("Our case law has recognized that the statutory definition of nuisance is expansive but generally requires that an actionable nuisance 'must either injure the property or unreasonably interfere with enjoyment of the property.'" (quoting Tiegs v. Watts, 954 P.2d 877, 883–84 (Wash. 1998))).

[87] *See* WASH. REV. CODE § 7.48.140 (2024).

[88] *See* Sauk-Suiattle Indian Tribe v. City of Seattle, 525 P.3d 238, 243 (Wash. Ct. App. 2023) ("A public nuisance requires either a violation of one of the statutorily enumerated public nuisances in RCW 7.48.140, *or* for the plaintiff to show that the nuisance activity 'affects equally the rights of an entire community or neighborhood, although the extent of the damage may be unequal.'" (emphasis added) (quoting Kitsap County v. Kev, Inc., 720 P.2d 818 (Wash. 1986); WASH. REV. CODE § 7.48.140 (2024))); S. Lake Union Hotel L.L.C. v. F&F Rogers Fam. Ltd. P'ship, No. C23-1868, 2025 WL 1744784, at *5 (W.D. Wash. June 24, 2025) (quoting *Sauk-Suiattle*, 525 P.3d at 243);

per se claim under section 7.48.140, a plaintiff must instead show that (1) defendant's conduct constitutes a nuisance per se;[89] (2) defendant's conduct interfered with a right;[90] and (3) plaintiff suffered special injury.[91] Each of these requirements are discussed in turn.

A. Public Nuisance Per Se

A nuisance per se is "an act, thing, omission, or use of property which of itself is a nuisance, and hence is not permissible or excusable under any circumstance."[92] Section 7.48.140 includes nine enumerated activities that are per se nuisances.[93] The CAFO's activities are per se nuisances under sections 7.48.140(1), 7.48.140(2), and 7.48.140(7).

1. Section 7.48.140(1). — The first enumerated public nuisance in section 7.48.140 is "[t]o cause or suffer the carcass of any animal or any offal, filth, or noisome substance to be collected, deposited, or to remain in any place to the prejudice of others."[94] Plaintiffs have successfully brought claims on these grounds. For example, in *Elves v. King County*,[95] the Washington Supreme Court considered whether a town's collection and diversion of water containing human and animal excreta through a culvert on the plaintiffs' property was a public nuisance.[96] The court affirmed the lower court's finding that "human and animal excreta . . . present in the waters . . . constituted a menace to public health and safety," and found for the plaintiffs.[97]

Moore v. Steve's Outboard Serv., 339 P.3d 169, 170 (Wash. 2014) (en banc) ("When, however, an activity is a nuisance per se, plaintiffs need not show that the activity is also unreasonable."); *Animal Legal Def. Fund*, 533 P.3d at 1173 (quoting *Moore*, 339 P.3d at 171) (observing that the legislature has "already struck the balance").

89 *See* WASH. REV. CODE § 7.48.140 (2024).

90 Even when bringing a nuisance per se claim, a plaintiff must show some minimal interference with a right. *See S. Lake Union Hotel*, 2025 WL 1744784, at *4 ("Even if Plaintiff is correct that the Building constitutes a nuisance *per se*, it still must show that this nuisance caused some level of interference with its property interest, even if insignificant." (citing Gostina v. Ryland, 199 P. 298, 234 (Wash. 1921))).

91 *See* WASH. REV. CODE § 7.48.210 (2024); *S. Lake Union Hotel*, 2025 WL 1744784, at *5.

92 Tiegs v. Watts, 954 P.2d 877, 883 (Wash. 1998) (en banc).

93 WASH. REV. CODE § 7.48.140 (2024). Other statutes may also form the basis for a negligence per se claim, but violation of a statute does not automatically constitute a nuisance per se. In assessing whether a statutory violation constitutes a nuisance per se, "the court will consider whether evidence exists demonstrating a legislative intent to declare the alleged statutory violations a nuisance per se." *Animal Legal Def. Fund*, 533 P.3d at 1173.

94 WASH. REV. CODE § 7.48.140(1) (2024).

95 299 P.2d 206 (Wash. 1956).

96 *Id.* at 206.

97 *Id.*

Two separate theories could arise under section 7.48.140(1). First, animal carcasses[98] or animal waste (filth) carrying AR-bacteria[99] are a nuisance if they are left in a place that exposes people ("prejudices others") to the AR-bacteria they carry. This interpretation could include animal waste applied to fields which seeps into local waters,[100] or animal carcasses left to rot which are encountered by workers at a facility.[101] Second, AR-bacteria themselves are a "noisome substance." Though noisome frequently implies an odor or fumes of some sort, it alternatively is used to describe diseases.[102] AR-bacteria, as pathogens, fit into this definition of noisome substance.

2. Section 7.48.140(2). — The second enumerated public nuisance in section 7.48.140 is "[t]o throw or deposit any offal or other offensive matter, or the carcass of any dead animal, in any watercourse . . . or common sewer, street, or public highway, or in any manner to corrupt or render unwholesome or impure the water . . . to the injury or prejudice of others."[103] In *Bales v. City of Tacoma*,[104] the Washington Supreme Court held that discharge of sewage into a swamp constituted a public nuisance.[105] The harm arose due to the contamination of water, including by the presence of colon bacilli (bacteria).[106] The water ran downstream and poisoned fish in the plaintiff's hatchery.[107] The court relied on section 7.48.140(2) for this holding, either including sewage under the banner of "offensive matter" or considering sewage "to corrupt . . . the water."[108]

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98 Animal carcasses are unfortunately common at CAFOs. *See* ANIMAL EQUAL., MORTALITY IN CHICKENS RAISED FOR MEAT 3, 7–14 (2025) (556 million broiler chickens die every year before slaughter in the United States); *Iowa State University to Lead Research to Increase Pig Survivability*, IOWA STATE UNIV. (Dec. 6, 2018), https://www.cals.iastate.edu/news/2018/iowa-state-university-lead-research-increase-pig-survivability [https://perma.cc/VP4C-RGFP] ("[A]n estimated 30 to 35 percent of pigs born die before reaching the market . . . .").

99 *See* Alice Checcucci et al., *Exploring the Animal Waste Resistome: The Spread of Antimicrobial Resistance Genes Through the Use of Livestock Manure*, FRONTIERS MICROBIOLOGY, July 2020, art. 1416, at 2–3; Ya He et al., Review, *Antibiotic Resistance Genes from Livestock Waste: Occurrence, Dissemination, and Treatment*, 3 NPJ CLEAN WATER, 2020, art. 4, at 1–3; John R. Walton, *Contamination of Meat Carcasses by Antibiotic-Resistant Coliform Bacteria*, 296 THE LANCET 561, 562 (1970).

100 *See* WASH. STATE BD. OF HEALTH, KEEPING OF ANIMALS 14 (2018).

101 *See* WASH. STATE DEP'T OF AGRIC., ROUTINE ANIMAL MORTALITY CARCASS DISPOSAL MANUAL 3 (2022).

102 *See Noisome*, MERRIAM-WEBSTER, https://www.merriam-webster.com/dictionary/noisome [https://perma.cc/7FJ8-DJB5] (defining noisome as "noxious" or "harmful" and using the example of "a *noisome* pestilence"); *Psalm* 91:3 (King James) ("Surely he shall deliver thee from the snare of the fowler, and from the noisome pestilence.").

103 WASH. REV. CODE § 7.48.140(2) (2024).

104 20 P.2d 860 (Wash. 1933).

105 *Id.* at 862–63.

106 *See id.* at 862.

107 *See id.*

108 *See id.* at 864.

More recently, in *City of Seattle v. Monsanto Co.*,[109] the U.S. District Court for the Western District of Washington considered the city's claim that polychlorinated biphenyls (PCBs) had escaped from defendants' use and entered local water systems, constituting a public nuisance.[110] The city pled a claim both as a public nuisance per se under section 7.48.140(2) and as a public nuisance in fact.[111] The court considered both claims together and denied Monsanto's motion for summary judgment, finding the evidence of injury "more than sufficient" to survive the motion.[112]

In both *Bales* and *Monsanto*, the courts demonstrated a willingness to liberally construe the text of section 7.48.140(2). They interpreted "or in any manner to corrupt or render unwholesome or impure the water"[113] broadly to cover defendants' contaminating waters with sewage, bacteria, and PCBs, making no attempt to limit the language to disposal of only carcasses, offal, or related substances.[114] The courts also did not limit nuisance to substances directly observable by the plaintiffs, and instead allowed water quality testing to demonstrate the existence of a nuisance.[115] Like colon bacilli in *Bales* and PCBs in *Monsanto*, AR-bacteria "corrupt or render unwholesome or impure the water"[116] and can be identified with scientific testing, though they are not observable to the naked eye.

3. Section 7.48.140(7). — The seventh enumerated public nuisance in section 7.48.140 is to "use any building, or other place, for the exercise of any trade, employment, or manufacture, which, by occasioning obnoxious exhalations, offensive smells, or otherwise is offensive or dangerous to the health of individuals or of the public."[117] This section has

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109 No. 16-cv-00107, 2024 WL 402877 (W.D. Wash. Feb. 2, 2024).

110 *Id.* at *1.

111 *See id.* at *2; *see also* City of Seattle v. Monsanto Co., 237 F. Supp. 3d 1096, 1105–07 (W.D. Wash. 2017) (holding that the same claim survived a motion to dismiss).

112 *Monsanto*, 2024 WL 402877, *2–4.

113 WASH. REV. CODE § 7.48.140(2) (2024).

114 No court has applied *ejusdem generis* to the interpretation of section 7.48.140(2), and the court's application of section 7.48.140(2) to PCBs in *Monsanto* demonstrates that *ejusdem generis* should not be used to limit the scope of "any manner." *See Monsanto*, 2024 WL 402877, at *2–4; *see also* Wolfe v. State Dep't of Transp., No. 77741-6-I, 2018 WL 3026366, at *7 (Wash. Ct. App. June 18, 2018) (agreeing with the trial court that to satisfy a nuisance claim under section 7.48.140(2), "there needs to be evidence of pollution being introduced into a river that renders the river impure and that causes injury to people" in the context of an allegation that sediment deposited into the water was a public nuisance under section 7.48.140(2)).

115 *See* Bales v. City of Tacoma, 20 P.2d 860, 862 (Wash. 1933); *Monsanto*, 2024 WL 402877, at *1.

116 WASH. REV. CODE § 7.48.140(2) (2024).

117 *Id.* § 7.48.140(7).

been applied to slaughterhouses,[118] a sewage disposal plant,[119] and a powder magazine (explosives),[120] suggesting that this section could be applied to animal agriculture, excreta, and activities that are dangerous but do not produce an offensive smell, respectively. CAFOs' use of their facilities to overapply antibiotics — an animal agriculture business, generating hazardous animal excreta and dangerous (but odorless) AR-bacteria — is likewise arguably a nuisance under section 7.48.140(7).

* * *

Each of these public nuisance per se claims is premised on demonstrating that (1) the defendant developed and released AR-bacteria into the community[121] and (2) the community was harmed by its development and release.[122] (Despite not needing to show harm as a separate element in a nuisance per se claim, the text of each of the three subsections of section 7.48.140 discussed above requires a showing of some harm or risk of harm.[123]) Genetic sequencing technologies can be utilized to demonstrate these elements. As discussed in Part I, the technology exists to identify the origin of AR-bacteria isolated from a sample. Thus, by taking samples from public waterways and the local environment as well as the CAFO itself, a plaintiff could demonstrate that the defendant was responsible for the AR-bacteria strain (the noisome substance or offensive matter) that is now present in the local environment. By sequencing samples from infected individuals and the CAFO, a plaintiff could show the harm to the community. Genetic sequencing allows the identification of the source of an AR-bacteria strain, and thus allows a plaintiff to demonstrate violations of section 7.48.140 constituting a nuisance per se.

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118 *See, e.g.*, Wilcox v. Henry, 77 P. 1055, 1056 (Wash. 1904) (finding that slaughterhouse was a public nuisance); *see also* State v. Schaffer, 71 P. 1088, 1090 (Wash. 1903) (dismissing a claim against a slaughterhouse for "obnoxious exhalations and offensive smells, which are offensive and dangerous to the health of the said thirty families living in the said immediate neighborhood of the said real estate, and which are offensive and dangerous to the health of the public," because the complaint did not clearly allege when the actions took place); State *ex rel.* Tollefson v. Mitchell, 171 P.2d 245, 245, 247 (Wash. 1946) (considering complaint that a piggery "creates obnoxious exhalations and offens[ive] smells which are offensive and dangerous to the health of the public; that said garbage, refuse, offal, and filth annoys, injures, and endangers the comfort, repose, health and safety of others who live in the vicinity thereof" and affirming the trial court's finding that a piggery constituted a public nuisance).

119 *See* Aliverti v. City of Walla Walla, 298 P. 698, 699 (Wash. 1931).

120 *See* State v. Paggett, 36 P. 487, 487–88 (Wash. 1894).

121 *See* WASH. REV. CODE § 7.48.140(1) (2024) ("[t]o cause . . . [a] noisome substance to be collected, deposited, or to remain in any place"); *id.* § 7.48.140(2) (to deposit offensive matter in a watercourse or "corrupt or render unwholesome or impure" any waters); *id.* § 7.48.140(7) (to use a building "which, by occasioning obnoxious exhalations . . . or otherwise is offensive or dangerous").

122 *See id.* § 7.48.140(1) ("to the prejudice of others"); *id.* § 7.48.140(2) ("to the injury or prejudice of others"); *id.* § 7.48.140(7) ("offensive or dangerous to the health of individuals or of the public").

123 Though not necessarily to the plaintiff. *See* sources cited *supra* note 122.

B. Interference with a Right

Even if the CAFO's conduct constitutes a nuisance per se, a plaintiff must still show that the nuisance caused some interference with a property interest[124] or is a threat to public health or safety.[125] In Washington, courts have recognized a wide variety of harms as property interference or a threat to public health or safety. Recognized harms include "private interference on the public use of [a state] resource;"[126] disturbance of the right to quiet enjoyment and property rights due to a public misrepresentation by the defendant leading to "public ire, harassment, and vandalism" directed at the plaintiff;[127] impaired ability to enjoy plaintiff's own property due to defendant's illegal junkyard (which posed a threat of "irreparable harm" because it was an attractive nuisance to children and a habitat for rats, and also caused depreciation of property values);[128] risks to public health and safety from a potential mosquito infestation in old tires;[129] and reasonable fear of injury to health and property from a gas plant leak.[130]

AR-bacteria present actionable harms to the plaintiff and the public. First, a plaintiff could demonstrate threats to health and safety just by demonstrating the presence of AR-bacteria.[131] Second, a plaintiff could allege mental harm. Washington courts recognize mental harms from *perceived* risks of harm to health.[132] In *Goodrich v. Starrett*,[133] a public nuisance case concerning an undertaking establishment and morgue, the Washington Supreme Court noted that the plaintiffs were harmed because "they lived in dread of acquiring some contagious disease."[134] In *Champa v. Washington Compressed Gas Co.*,[135] the Washington Supreme Court held that "the dread which is the disquieting element upon

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124 *See* sources cited *supra* note 122.

125 S. Lake Union Hotel L.L.C. v. F&F Rogers Fam. Ltd. P'ship, No. C23-1868, 2025 WL 1744784, at *4 (W.D. Wash. June 24, 2025) (citing Gostina v. Ryland, 199 P. 298, 234 (Wash. 1921)); Moore v. Steve's Outboard Serv., 339 P.3d 169, 170 (Wash. 2014) (en banc).

126 Animal Legal Def. Fund v. Olympic Game Farm, Inc., 533 P.3d 1170, 1175 (Wash. 2023) (en banc) (emphasis omitted) ("The public nuisance occurs when the plaintiff is prevented from using the resource that they would otherwise be entitled to, absent the interference. The public must impliedly have had use of the resource in order for that right to use to have been infringed.").

127 Sauk-Suiattle Indian Tribe v. City of Seattle, 525 P.3d 238, 243–44 (Wash. Ct. App. 2023).

128 *See* City of Bremerton v. Sesko, No. 30263-2-II, 2004 WL 1665005, at *2 (Wash. Ct. App. July 27, 2004); *see also* Pierce County v. Sorrels, Nos. 29812-1-II, 30609-3-II, 2005 WL 45543, at *5–6 (Wash. Ct. App. Jan. 11, 2005) ("The description of the items found on the property at Sesko closely resembles the items found on the parcels in the present case.").

129 *Sorrels*, 2005 WL 45543, at *6.

130 *See* Champa v. Wash. Compressed Gas Co., 262 P. 228, 230 (Wash. 1927); *see also Animal Legal Def. Fund*, 533 P.3d at 1172–73 ("We have also stated that actions can be a nuisance if they affect the peace of mind or health of residents and destroy property values of the neighborhood.").

131 *See* sources cited *supra* note 14.

132 *See Champa*, 262 P. at 230–31.

133 184 P. 220 (Wash. 1919).

134 *Id.* at 221–22.

135 262 P. 228 (Wash. 1927).

which plaintiffs' complaint is made to rest" was actionable as a public nuisance claim.[136] Thus, a plaintiff could bring a claim based on a community-wide fear of infection.

C. Special Injury to the Plaintiff

To bring an actionable public nuisance claim, the public nuisance must be "specially injurious" to a plaintiff.[137] This "requirement is not a particularly high bar,"[138] and is not "more demanding or exacting than the injury needed for noneconomic standing generally."[139] A plaintiff must show only that she has suffered an injury in fact that is "sufficiently distinct" from the harms suffered by the general public.[140] Nearby landowners,[141] state or local governments,[142] hospitalized individuals with unique pecuniary and health injuries, workers and veterinarians who face unique exposure risks, and recreational aficionados who are no longer able to swim, boat, or kayak in the waters could all have unique injuries and thus bring a claim.[143] The state could also bring an action without needing to show special injury.[144]

D. Counterarguments

A defendant CAFO would likely respond with several arguments, though these arguments are unlikely to be successful. The most substantial (though not unassailable) barrier is Washington's RTF Act, which is discussed in Part IV. Two other arguments — while flawed — might also be advanced by the CAFO.

1. Longstanding Practice. — The CAFO may argue that the public nuisance claim is barred because it has been using antibiotics for a significant period, and the plaintiff cannot now interfere with established practice. This argument will fail. "[P]rescription or lapse of time cannot

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136 *See id.* at 231 (quoting Everett v. Paschall, 111 P. 879, 881 (Wash. 1910)); *see also* Cunningham v. Town of Tieton, 374 P.2d 375, 380 (Wash. 1962) (holding that a jury instruction based upon an excerpt from *Everett*, 111 P. at 880–81, "correctly stated the applicable rule of law").

137 WASH. REV. CODE § 7.48.210 (2024).

138 Animal Legal Def. Fund v. Olympic Game Farm, Inc., 533 P.3d 1170, 1171 (Wash. 2023) (en banc).

139 Chelan Basin Conservancy v. GBI Holding Co., 413 P.3d 549, 560–61 (Wash. 2018) (en banc).

140 *See id.* at 561.

141 *See* Elves v. King County, 299 P.2d 206, 206 (Wash. 1956).

142 *See* City of Seattle v. Monsanto Co., 237 F. Supp. 3d 1096, 1106 (W.D. Wash. 2017); Town of Kirkland v. Ferry, 88 P. 1123, 1124 (Wash. 1907). Cities and towns are also authorized by statute to abate nuisances. WASH. REV. CODE §§ 35.22.280, 35.23.440, 35.27.410 (2024); *see id.* §§ 35A.21.160, 35.30.070.

143 *See generally* Friends of the Earth, Inc. v. Laidlaw Env't Servs. (TOC), Inc., 528 U.S. 167 (2000) (examining standing requirements); United States v. Students Challenging Regul. Agency Procs. (SCRAP), 412 U.S. 669 (1973) (same).

144 *See* WASH. REV. CODE §§ 7.48.200–.220, 9.66.010, 9.66.050 (2024).

be relied on to establish a right to maintain a public nuisance."[145] Furthermore, use of a given antibiotic presents new risks as antibiotic resistance to *other* drugs grows, given that the largest risks to human health from bacteria come from bacterial infections resistant to most or all medical antibiotics.[146] Thus, the CAFO's practice of using antibiotics becomes a larger nuisance over time, and it cannot argue that the nuisance constitutes an established practice.[147]

2. Regulatory Approval. — Similarly, the CAFO may argue that because antibiotics and the animal agriculture industry are regulated, as long as it is in compliance with applicable laws, the activity is inherently not a public nuisance. This argument is also unlikely to succeed. The Washington Supreme Court found, in a plurality opinion, that a nuisance claim could proceed against a defendant with proper pollution discharge permits if the discharge injured another's property.[148] In *Tiegs v. Watts*,[149] the plurality opinion explained:

> A person who conducts a business or a plant lawfully and in the best manner practicable with a sound operation may still commit a nuisance if the operation interferes unreasonably with other persons' use and enjoyment of their property. . . . The fact a governmental authority tolerates a nuisance is not a defense if the nuisance injures adjoining property.[150]

Thus, regulatory compliance will not bar a nuisance claim. However, Washington's RTF Act presents a more serious barrier.

IV. WASHINGTON'S RIGHT TO FARM ACT

While far from insurmountable, the most substantial barrier to this claim is Washington's RTF Act.[151] Every state in the United States has

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145 City of Cheney v. Bogle, No. 26000-3-III, 2008 WL 1904177, at *10 (Wash. Ct. App. May 1, 2008) (quoting D'Ambrosia v. Acme Packing & Provision Co., 37 P.2d 887, 888 (Wash. 1934)); *see also* WASH. REV. CODE § 7.48.190 (2024) ("No lapse of time can legalize a public nuisnce, amount to an actual obstruction of public right."); Bales v. City of Tacoma, 20 P.2d 860, 864 (Wash. 1933) ("A [defendant] cannot, by prescription or lapse of time, acquire the right to maintain a nuisance.").

146 *See* Ho et al., *supra* note 9, at 1–3.

147 *See Bales*, 20 P.2d at 864 ("Appellant makes some suggestion in its brief that because the city has used the swamp for garbage and, in part, for sewage purposes for many years, the respondent cannot now interfere with its established practice. We think that the suggestion has two answers: (1) A city cannot, by prescription or lapse of time, acquire the right to maintain a nuisance. (2) The evidence shows that the city has, from time to time and recently, increased the amount of sewage and garbage which found its outlet into the waters of Flett creek. Excess of pollution produced by the continuation of a nuisance is subject to injunctive process." (citations omitted)).

148 Animal Legal Def. Fund v. Olympic Game Farm, Inc., 533 P.3d 1170, 1172 (Wash. 2023) (en banc) (reflecting that *Tiegs* "held that company with proper pollution discharge permits is not absolved of liability for damages under a theory of nuisance per se if the discharge injures another's property").

149 954 P.2d 877 (Wash. 1998) (en banc).

150 *Id.* at 883–84.

151 WASH. REV. CODE §§ 7.48.300–.320 (2024).

a right-to-farm act,[152] and Washington is no exception. Broadly speaking, right-to-farm acts protect agricultural operations from legal liability, though the protections vary by state.[153] Washington's RTF Act protects agricultural activities conducted on farmland and forest practices from nuisance claims.[154]

Washington courts apply a three-step framework in assessing whether the defendant has statutory immunity under the Act.[155] First, the court will look at whether the agricultural activity or forest practice is "consistent with good agricultural and forest practices."[156] Then, the court will look at whether the activity was "established prior to surrounding nonagricultural and nonforestry activities."[157] Finally, the court will consider whether "the activity . . . has a substantial adverse effect on public health and safety."[158]

Courts in Washington construe the Act narrowly. In *Buchanan v. Simplot Feeders Ltd. Partnership*,[159] the Washington Supreme Court found that "public policy considerations urge a narrow application of the Act."[160] The court likened the Act's protections "to a prescriptive easement," writing that the "Act gives the farm a quasi easement against the urban developments to continue . . . nuisance activities."[161] The court proceeded to note that a farm can secure this statutory quasi-easement more readily than a prescriptive easement, which would require a "claimant [to] show (1) open, notorious, uninterrupted use for 10 years which is (2) adverse to the title owner, and (3) the owner was aware of the adverse use and had the opportunity to enforce the owner's rights."[162] From this analogy, the court concluded, "[j]ust as prescriptive rights are difficult to obtain, and are not favored in law, we hold the nuisance protection afforded by the Right-to-Farm Act must be applied cautiously and narrowly."[163]

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[152] Alexandra Lizano & Rusty Rumley, *Right to Farm*, NAT'L AGRIC. L. CTR. (2023), https://nationalaglawcenter.org/state-compilations/righttofarmoverview [https://perma.cc/W5H8-SH27].

[153] *See* NAT'L AGRIC. L. CTR, *supra* note 16.

[154] WASH. REV. CODE § 7.48.305 (2024).

[155] *See* Alpental Cmty. Club, Inc. v. Seattle Gymnastics Soc'y, 111 P.3d 257, 260 (Wash. 2005) (en banc).

[156] WASH. REV. CODE § 7.48.305(1) (2024); *see Alpental*, 111 P.3d at 260.

[157] WASH. REV. CODE § 7.48.305(1) (2024); *see Alpental*, 111 P.3d at 260–261.

[158] WASH. REV. CODE § 7.48.305(1) (2024); *see Alpental*, 111 P.3d at 260.

[159] 952 P.2d 610 (Wash. 1998) (en banc).

[160] *Id.* at 615.

[161] *Id.*

[162] *Id.*

[163] *Id.* at 615–16 (citation omitted). In this case (and with this reasoning), the court held that "RCW 7.48.305 should not be read to insulate agricultural enterprises from nuisance actions brought by an agricultural or other rural plaintiff, especially if the plaintiff occupied the land before the nuisance activity was established." *Id.* at 616. Thus, a claim brought by an "agricultural or other rural plaintiff" would not be barred by the Act. However, since a farm is an unlikely plaintiff for this claim, this option is not explored in the main text.

The Act should not present a barrier to an AR-bacteria public nuisance claim for two reasons: The Act may not bar the claim because of the establishment date of the activity, and the Act will not bar the claim because the activity in question has a substantial effect on health and safety.

A. Establishment Date of the Activity

First, the Act does not block claims brought by a plaintiff who was established in the area before the relevant agricultural operation.[164] Thus, in any cases where the defendant moved into the area or began its practice after the plaintiff, the plaintiff could bring a claim that would not be barred by the Act.

Second, Washington courts have held that the Act does not bar claims based on farming *practices* that began after the plaintiff was established in the area, even if the farm itself predates the plaintiff's establishment. In *Davis v. Taylor*,[165] an appellate court considered whether the temporal requirement in the Act's language protecting "agricultural activities . . . established prior to surrounding nonagricultural and nonforestry activities"[166] referred to the farm or the farming practice.[167] The defendants had operated an apple orchard prior to the construction of a neighboring residential development.[168] After the residential development was established, the farmers converted their property to a cherry orchard and began to use loud guns to scare birds away from the orchard.[169] Plaintiffs, neighboring homeowners, brought suit for nuisance.[170] The trial court reasoned that, "because the farm preexisted the residential development," the Act barred the claim.[171] The appellate court reversed, "conclud[ing] that it is the farming practice or activity that controls, not the fact that a farm predates development."[172] Thus, if a CAFO began a new practice (for example, beginning to use antibiotics again after transitioning to antibiotics-free production[173] or beginning to use a new antibiotic) or established their antibiotic usage policies after the plaintiff was established in the area, a plaintiff could argue that her claim is not barred by the Act.

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164 *See* WASH. REV. CODE § 7.48.305 (2024).
165 132 P.3d 783 (Wash. Ct. App. 2006).
166 WASH. REV. CODE § 7.48.305(1) (2024).
167 *Davis*, 132 P.3d at 784–85.
168 *Id.* at 784.
169 *Id.*
170 *Id.*
171 *Id.*
172 *Id.*
173 *See, e.g.*, Chris Casey, *Tyson Foods Scales Back Its Antibiotic-Free Beef Pledge*, FOOD DIVE (July 3, 2024), https://www.fooddive.com/news/tyson-cuts-back-on-antibiotic-free-beef-poultry-disease-meat/720428 [https://perma.cc/22LZ-5QKJ].

B. Substantial Adverse Effect on Health and Safety

A plaintiff could also bring a successful public nuisance claim, regardless of the establishment date of the CAFO and its activities, by availing herself of the public health and safety exemption. The Act does not protect activities that "ha[ve] a substantial adverse effect on public health and safety."[174] Section 7.48.305(2) presumes that agricultural activities do not adversely affect public health if they are "undertaken in conformity with all applicable laws and rules."[175]

The extent to which section 7.48.305(2)'s presumption is rebuttable has not yet been tested in court, but past case law suggests that a plaintiff could rebut the presumption. Courts have held that "a farmer does not have immunity if a plaintiff can establish: (1) the agricultural activity has a substantial adverse effect on public health and safety; (2) the activity is inconsistent with good agricultural practices, laws, and rules; *or* (3) the activity was not established prior to surrounding nonagricultural activities."[176] Thus, a plaintiff could conceivably demonstrate that an agricultural activity had a substantial adverse effect on public health and safety *without* showing that the activity is inconsistent with good agricultural practices, applicable laws, and rules.[177]

Moreover, the legislative history supports this interpretation. Prior to its passage, the bill stated that the covered agricultural practices were "conclusively presumed to be reasonable."[178] The Washington State Senate adopted an amendment to "strike conclusively" from the statute,[179] and the bill as passed did not contain "conclusively."[180] The discussion in the Senate demonstrated that the removal of "conclusively" was meant to create a rebuttable presumption, as demonstrated by the following interchange:

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174 WASH. REV. CODE § 7.48.305 (2024).

175 *Id.* § 7.48.305(2).

176 Vicwood Meridian P'ship v. Skagit Sand & Gravel, 98 P.3d 1277, 1281 (Wash. Ct. App. 2004) (emphasis added) (citing Buchanan v. Simplot Feeders Ltd. P'ship, 952 P.2d 610, 614 (Wash. 1998) (en banc)).

177 *See id.* at 1283 ("Thurston County failed to show that Ostrom's composting activities had a 'substantial adverse effect' on the class claimants' health. It also provided no evidence that Ostrom's composting activities were inconsistent with 'good agricultural practices, laws, and rules.'" (first quoting WASH. REV. CODE § 7.48.305 (2024); and then quoting *Buchanan*, 952 P.2d at 614)); *see also* Alpental Cmty. Club, Inc. v. Seattle Gymnastics Soc'y, 111 P.3d 257, 260, 262 (Wash. 2005) (en banc) (considering the two conditions separately by stating that "we need not address the third condition — that the logging had no 'substantial adverse effect on the public health and safety,'" despite concluding that the activity was consistent with good forest practices and noting that the defendant's "fulfillment of the first condition has not been disputed" (quoting WASH. REV. CODE § 7.48.305(1) (2024))).

178 *See* 46th Wash. State Leg., 1 WASH. S.J. 514 (1979), https://leg.wa.gov/media/tvyaoioy/1979senatejournal.pdf [https://perma.cc/5T4D-H9E7].

179 *Id.*

180 *See* Act of Mar. 26, 1979, ch. 122, § 2, 1979 Wash. Sess. Laws 473, 474 (codified as amended at WASH. REV. CODE § 7.48.305 (2024)).

> Senator Rasmussen:
>
> Senator Gaspard, I am a little bit concerned, and it may need a further amendment with this bill. It provides that agricultural activities conducted on farm land if consistent with good agricultural practices and established prior to surrounding non-agricultural activities are, conclusively presumed to be reasonable and therefore do not constitute a nuisance. I can have a place right adjacent to this farm land, you might scatter right up to my fence some very fresh, fragrant fertilizer which might be consistent with good agricultural practices, it might not be detrimental to health, though you think you are going to die anyway when you smell it, and yet this would not constitute a nuisance activity and this is what you are saying in this law, that it is not a nuisance as long as it is used for agricultural purposes. Is that correct?
>
> Senator Gaspard:
>
> Senator Rasmussen, that is one of the reasons we took out 'conclusively'. There is a presumption here and, of course, with the presumption to be reasonable you have a certain amount of proof to overcome that presumption. If we would have had 'conclusively presumed' then it would have been much harder to overcome that and it would in all effect probably been very hard to overcome a 'conclusively presumed' situation. That is why we took out 'conclusively'.[181]

The language used to describe the presumption has remained unchanged since 1979, and thus the legislative history indicates intent to create a rebuttable presumption.[182]

By demonstrating the substantial risks to health and safety from the CAFO's activities, a plaintiff could rebut the statutory presumption and thus proceed with the claim.

V. POLICY SUGGESTIONS

While public nuisance claims offer a potential path, litigation will be reactive, not proactive. Proactive solutions to prevent public health crises from AR-bacteria must come from policy. This Essay proposes two broad policy changes: increased monitoring and better regulation.

1. Increased Monitoring. — Despite the ability to track changing risks from AR-bacteria by sampling environmental sources and infected individuals, the United States largely does not attempt to track the emergence of AR-bacteria at CAFOs and other agricultural facilities. Creating a framework for a comprehensive monitoring system could allow early identification of threats and lower risks to public health. Expanding the National Antimicrobial Resistance Monitoring System (NARMS) — a collaborative program between the FDA, the CDC, the USDA, and state and local public health departments and

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[181] WASH. S.J., *supra* note 178, at 514.

[182] *Compare* WASH. REV. CODE § 7.48.305 (2024) (retaining rebuttable presumption), *with* § 2, 1979 Wash. Sess. Laws at 473–74 (enacting presumption language after Senate struck "conclusively").

universities — is the obvious choice.[183] NARMS tracks AMR in infected individuals, retail meats, and food animals,[184] with the objective of "promot[ing] interventions that reduce resistance among foodborne bacteria," "conduct[ing] research to better understand the emergence, persistence, and spread of [AMR]," and providing data to the FDA to inform its regulation of antimicrobial drugs for animals.[185]

Though NARMS offers a wonderful framework for tracking agriculture-associated AMR, it processes far too few samples to effectively track trends. From 2014 to 2023, the program has annually tested fewer than 2,500 samples from beef cows, 1,500 samples from dairy cows, 1,500 samples from pigs raised for pork, 500 samples from turkeys, and 1,000 samples from chicken annually.[186] In 2024, over 30 million cows, 125 million pigs, 195 million turkeys, and 9 billion chickens were slaughtered.[187] The USDA should take samples from more animals to gain a better picture of emerging AMR and quickly identify the sources of outbreaks.

2. Increased Regulation. — As discussed in Part I, current antibiotic regulation has not meaningfully reduced the quantity of medically important antibiotics used in animal agriculture in the United States. The FDA should align its regulatory approach with OneHealth and EU regulatory models.[188] In particular, the FDA should restrict prophylaxis use to extraordinary cases and should restrict metaphylaxis use to situations in which the risk of the spread of disease "is high and . . . no appropriate alternatives are available."[189]

CONCLUSION

The rising risks from AR-bacteria demand action. The regulatory scheme does not adequately protect the public, and the burden is falling to private parties and state and local governments to seek justice for communities and individuals impacted by AR-bacteria. As this Essay outlines, public nuisance offers a viable pathway to hold CAFOs

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183 *The National Antimicrobial Resistance Monitoring System*, FDA (Jan. 8, 2025), https://www.fda.gov/animal-veterinary/antimicrobial-resistance/national-antimicrobial-resistance-monitoring-system [https://perma.cc/2UNM-7JJX].

184 *Id.*

185 National Antimicrobial Resistance Monitoring System 2026–2030 Strategic Plan; Request for Comments, 90 Fed. Reg. 2007, 2007 (Jan. 10, 2025).

186 *See NARMS Now: Integrated Data*, FDA, https://www.fda.gov/animal-veterinary/national-antimicrobial-resistance-monitoring-system/narms-now-integrated-data [https://perma.cc/S8BF-MLQM].

187 USDA, LIVESTOCK SLAUGHTER 2024 SUMMARY 8 (2025); USDA, POULTRY SLAUGHTER 2024 SUMMARY 5 (2025).

188 *See generally* Shabbir Simjee & Gabriella Ippolito, Review Article, *European Regulations on Prevention Use of Antimicrobials from January 2022*, BRAZILIAN J. VETERINARY MED., 2022, art. e000822 (discussing the EU approach); Maria Elena Velazquez-Meza et al., Review Article, *Antimicrobial Resistance: One Health Approach*, 15 VETERINARY WORLD 743, 743 (2022) (discussing the One Health approach).

189 Commission Regulation 2019/6, art. 107(3)–(4), 2019 O.J. (L 4) 43, 105.

accountable for their overuse of antibiotics. The claim is made possible in large part by genetic sequencing technologies that make it possible to connect AR-bacteria isolated from infections and from the environment with a specific CAFO — with modern problems (overuse of antibiotics) come modern solutions (genetic sequencing).

Other options are also available. More research is needed into public nuisance claims in other states and the viability of other types of theories such as negligence; trespass; federal statutory claims (perhaps under the Resource Conservation and Recovery Act or the Clean Water Act); and consumer protection theories relating to the risks to consumers from AR-bacteria in purchased meat, dairy, and egg products.[190] Regardless of the theory, the continual improvement in scientific technologies and the rising risks from antibiotic resistance suggest that these claims will become stronger and more important over time. Outside of litigation, increased monitoring of antibiotic resistance and improved regulation of antibiotics will also be key to facing this public health crisis. Ultimately, policy, regulation, and litigation must must work in tandem to protect communities from the threats posed by antibiotic resistance.

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[190] This Essay focuses on claims by private individuals, but state enforcement is another option deserving of more research.