

ENVIRONMENT

NOISE REGULATION – AGRICULTURE – WHETHER “DEER CANNONS” ARE EXEMPT FROM MARYLAND’S STATEWIDE NOISE REGULATION UNDER THE EXEMPTION FOR “AGRICULTURAL FIELD MACHINERY”

May 17, 2023

The Honorable Earl F. Hance

President, Board of County Commissioners of Calvert County

The Board of County Commissioners of Calvert County has asked for our opinion on whether a farmer’s use of a “deer cannon”—a propane-powered device that creates an explosive sound to frighten deer and other wildlife away from crops—is exempt from Maryland’s statewide noise regulation under an exemption for “agricultural field machinery.” COMAR 26.02.03.02C(2)(c). Based on the language of the regulation as well as the history and apparent purpose of the regulation and its authorizing statute, we answer this question in the affirmative. Provided that the propane cannon is “used and maintained in accordance with [the] manufacturer’s specifications,” COMAR 26.02.03.02C(2)(c), our opinion is that the device, when used for its intended purpose to frighten wildlife away from crops, falls within the exemption for agricultural field machinery. Neither the regulation nor its authorizing statute, however, prohibits a local government that is otherwise authorized to regulate noise from enacting its own, stricter noise control ordinance or regulation restricting the use of propane cannons.

I

Background

A. Farmers’ Use of Auditory Scare Devices to Protect Crops

Farmers “ha[ve] been in conflict with wild animals since [they] first planted crops in animal habitat,” John D. Harder, *A Literature Review on Orchard Damage by Deer* 15 (1968) [hereinafter “*Orchard Damage by Deer*”], and have long used noisemaking devices to scare off pests. “Until the early twentieth century,” farmers in England paid “human scarers . . . to pace field perimeters, equipped with a wooden rattle or clapperboard, to sound a likeness of the shotgun’s sharp retort.” Hayden Lorimer, *Scaring Crows*, 103-2 *Geographical Rev.* 177, 181 (2013). As early as 1932, farmers in the United States began using frightening

devices called automatic flash guns or carbide guns, which created intermittent loud explosions and flashes of light by dripping water on carbide and igniting the resulting explosive gas. *Orchard Damage by Deer* at 9; Earl Roy Biehn, *Crop Damage by Wildlife in California with Special Emphasis on Deer and Waterfowl* 48 (June 1950) (unpublished M.A. thesis, University of the Pacific).

By 1967, the Maryland Department of Game and Inland Fish was supplying farmers with noisemaking scare devices, which were considered, at the time, “the most widely used and effective method available for preventing damage to crops” by wildlife. Committee on Damage to Crops by Birds and Wildlife, *Report on the Problem of Damage to Agricultural Crops by Wildlife in Maryland* 11-12 (1967) [hereinafter “1967 Report”]; see also R.K. Murton, *Man and Birds* 306 (1971) (noting that, by 1971, “[n]oise machines” for scaring birds away from crops “ha[d] been in vogue for ages”). Scare devices included shotguns loaded with exploding shells called shell crackers and rope-firecracker assemblies, in which firecrackers arranged along a cotton rope would ignite and explode at periodic intervals. *1967 Report* at 12. The most commonly used devices, however, were gas exploders, which produced automatically timed explosions. *Id.*

“Gas-operated exploders, sometimes referred to as gas or propane cannons,”¹ “deer cannons,”² or “bird bangers,” have a cylindrical barrel, a spark plug, valves, and a tank of propane gas. Hugh Fraser, *Using Propane-Fired Cannons to Keep Birds Away from Vineyards*, Ontario Ministry of Agric., Food and Rural Affairs (July 2010), <https://www.ontario.ca/page/using-propane-fired-cannons-keep-birds-away-vineyards>. When activated, a valve sends propane into the barrel, where the spark plug ignites the gas, creating an explosive sound. *Id.* People have compared the noise to the sound of bomb explosions,³ a “loud thunderclap,”⁴ and

¹ National Academies of Sciences, Engineering, and Medicine, *Bird Harassment, Repellent, and Deterrent Techniques for Use on and Near Airports* 11 (2011).

² See Memorandum from John Norris, County Attorney for Calvert County, to the Board of County Commissioners of Calvert County, at 1 (Aug. 10, 2022) (“Norris Memorandum”).

³ John Flink, *Sea Gull Solution a Problem for Humans: Noisy Cannons Used to Scare Away Birds*, Chicago Tribune, Apr. 23, 1998 (Metro Lake), at 1.

⁴ Gregory B. Hladky, *Loud Noise, Big Response: ‘Corn Cannons’ Scare Birds, but Shatter Nerves, Too*, Hartford Courant, Apr. 27, 2015, at B1.

fireworks.⁵ A single cannon can emit a sound that is 120 or 130 decibels.⁶ John Cummings, U.S. Dep’t of Agric., *Geese, Ducks and Coots* 3 (2016) [hereinafter “*Geese, Ducks and Coots*”] (asserting that the devices can emit a 120-decibel sound); Nixalite of America, Inc., *Wildlife Propane Cannon*, <https://www.nixalite.com/products/wildlife-propane-cannon> (last visited May 2, 2023) (describing a model that emits a 130-decibel sound). By comparison, normal conversation is about 60 decibels, and the sound of a gas-powered lawnmower is about 80 to 85 decibels.⁷

Propane cannons are considerably louder than many other machines used on a farm. The sound of an idling tractor is about 80 decibels, a typical grain auger (a device used to transport grain on a farm) operates at about 95 decibels, and a grain dryer operates at about 110 decibels.⁸ The sound of a tractor “at full load,” however, is about 120 decibels—the same volume as many propane cannons.⁹ Today, propane cannons remain “the most common scare devices” used to prevent crop damage.¹⁰

⁵ David Southwell, *North Suburb in Uproar over Bid to Oust Seagulls*, Chicago Sun Times, Apr 23, 1998, at 1.

⁶ A decibel is “a unit for expressing the relative intensity of sounds on a scale from zero for the average least perceptible sound to about 130 for the average pain level.” *Merriam-Webster Dictionary*, www.merriam-webster.com/dictionary/decibel (last visited May 2, 2023).

⁷ Centers for Disease Control & Prevention, *What Noises Cause Hearing Loss?* (Nov. 8, 2022), https://www.cdc.gov/nceh/hearing_loss/what_noises_cause_hearing_loss.html#:~:text=A%20whisper%20is%20about%2030,immediate%20harm%20to%20your%20ears.

⁸ U.S. Dep’t of Health and Human Servs., *How Loud Is Too Loud on the Farm?*, <https://www.ncagromedicine.org/pdf/resources/HowLoudisTooLoudFarmBookmark.pdf> (last visited May 3, 2023); David W. Smith, *Hearing Loss Protection for Agricultural Workers*, AgriLife Extension, Texas A & M System, at 1, <http://agrilife.org/agsafety/files/2011/06/HEARING-LOSS-PROTECTION2.pdf>.

⁹ See Smith, *supra* note 8, at 1.

¹⁰ Jonathan Kays, Maryland Cooperative Extension, Bulletin 354, *Managing Deer Damage in Maryland*, at 8 (updated Feb. 4, 2021) [hereinafter “*Managing Deer Damage in Maryland*”], https://extension.umd.edu/sites/extension.umd.edu/files/publications/E-B354_ManagingDeerDamage.pdf; see also C.A. Wyenandt et al., *2022/2023 Mid-Atlantic Commercial Vegetable Recommendations*, at 21-22, <https://extension.umd.edu/resource/2022-2023-mid-atlantic-commercial-vegetable-production-recommendations> (recognizing that propane cannons are still used for protecting crops against birds and

B. Regulation of Noise in Maryland

“Meaningful governmental regulation aimed at securing a quieter environment is a relatively new development.” 4 Frank P. Grad, *Treatise on Environmental Law* § 5.03(2) (2015). In 1972, upon finding that “inadequately controlled noise present[ed] a growing danger to the health and welfare of the Nation’s population,” Congress enacted the Noise Control Act “to deal with major noise sources in commerce.” 42 U.S.C. § 4901(a)(1), (3). But Congress acknowledged that “primary responsibility for control of noise rest[ed] with State and local governments.” *Id.* § 4901(a)(3).

That same year, Maryland’s Department of Transportation began studying noise pollution related to aviation. Maryland Dep’t of Transp., *Environmental Noise Act of 1974: Final Report of the Noise Pollution Legislation Study* 1 (1974) [hereinafter “*Final Report of the Noise Pollution Legislation Study*”]; see S. Res. No. 102, 1972 Leg., Reg. Sess. Working with several other State agencies,¹¹ the Department expanded the study’s scope “to include all forms of transportation-generated noise” and developed “a legislative proposal” that became the Environmental Noise Act of 1974. *Final Report of the Noise Pollution Legislation Study* at 1.

The resulting statute, now found in Title 3 of the Environment Article, recognized that excessive noise could have “adverse effects” on Marylanders’ “health, general welfare, [] property,” and “quality of life.” Md. Ann. Code, Art. 43, § 822(a), (b) (1971 Repl. Vol. & 1974 Supp.). The Legislature thus directed the Department of Health and Mental Hygiene to establish noise standards with the advice and input of an interagency noise control committee, composed of representatives of the Governor’s office and various State agencies, and an environmental noise advisory council, made

deer); *Geese, Ducks and Coots* at 3 (noting that gas-operated cannons, “generally referred to as propane cannons, are commonly used to disperse geese . . . from a number of locations, including agricultural crops”); cf. *Briggs v. Hughes*, 316 So. 3d 193, 195 (Miss. 2021) (characterizing propane cannons as “part of . . . farms’ best agricultural-management practices”).

¹¹ Cooperating with the Department of Transportation were the Departments of Health and Mental Hygiene, Natural Resources, Public Safety and Correctional Services, and State Planning. *Final Report of the Noise Pollution Legislation Study* at 1. The Department of Agriculture, newly established in 1972, did not participate, and the study makes no mention of noise associated with agriculture.

up of five members appointed by the Secretary of Health and Mental Hygiene. *Id.* §§ 824, 825, 827, 828.

In establishing environmental noise standards, the statute directed the Department to “take into consideration scientific information concerning the volume, frequency, duration and other characteristics of noise which may adversely affect public health, safety, or general welfare,” and adverse effects such as:

temporary or permanent hearing loss, interference with sleep, speech communication, work or other human activities, adverse physiological responses or psychological distress, adverse effects on animal life, devaluation or damage of property, and unreasonable interference with the enjoyment of life or property.

Id. § 828(a). The legislation further directed the Department to adopt, with input from the noise advisory council, “sound level limits” and related regulations “for various categories of land use to control noise emanating from activities on private real property,” taking into account, “among other things, the residential, commercial or industrial nature of the area affected, zoning, the nature and source of various kinds of environmental noise, the degree of noise reduction achievable through the application of the best available technology, and the cost of compliance.” *Id.* § 828(b); *see also id.* § 824 (directing the Department to promulgate regulations).

On August 6, 1975, the Department of Health and Mental Hygiene promulgated the predecessor of the regulation that is the subject of your opinion request (and which now appears at COMAR 26.02.03).¹² The current regulation sets forth “Environmental Noise Standards” in COMAR 26.02.03.02. Subsection B establishes “general” noise level standards for the State, including the allowable “day” and “night” decibels for all activities in “industrial,” “commercial,” and “residential” zoning

¹² The original “Rules and Regulations Governing the Control of Air Pollution in the State of Maryland” appeared at COMAR 10.03.45. 2:17 Md. Reg. 1189-92 (Aug. 6, 1975). The regulation was later recodified at COMAR 10.20.01 before moving to COMAR 26.02.03.

districts, as designated by the political subdivisions of the State.¹³ In commercial settings, for instance, noise levels generally may not exceed 67 decibels during the day and 62 decibels at night. COMAR 26.02.03.02B(1). The regulation imposes a lower limit—62 decibels during the day and 57 decibels at night for commercial settings—for “the emission of prominent discrete tones and periodic noises.”¹⁴ COMAR 26.02.03.02B(1), (3). But subsection C of the regulation contains exemptions to these general restrictions, including, as relevant here, that “[t]he provisions of this regulation do not apply to . . . [a]gricultural field machinery when used and maintained in accordance with manufacturer’s specifications[.]” COMAR 26.02.03.02C(2)(c).

The Environmental Noise Act generally does not limit any power that a political subdivision might otherwise have to adopt its own noise control ordinances, rules, or regulations, provided they are not less stringent than State environmental noise standards, sound level limits, and noise control rules and regulations. Md. Code Ann., Env’t (“EN”) § 3-105(a). But Calvert County, even though it is authorized under a public local law to adopt its own noise ordinance, *see* Calvert County Code of Public Local Laws § 13-101 (2010), apparently has not adopted any noise restrictions more stringent than the State noise standards, *see* Calvert County Code § 80-1 (adopting as the noise control ordinance for Calvert County the State regulations).

C. Deer Cannon Use in Calvert County

Our understanding, based on your opinion request, is that Calvert County officials have received complaints from residents, some of whom are military veterans with post-traumatic stress disorder, about the “disruptive effect” of a soybean farmer’s use of a propane cannon causing “loud noises . . . without respite, day or night, multiple times per hour.” Letter from Board of County

¹³ COMAR 26.02.03.01B(26) defines a “zoning district” as “a general land use category, defined according to local subdivision, the activities and uses for which are generally uniform throughout the subdivision.” Subsections (a) through (c) of that regulation further define the terms “industrial,” “commercial,” and “residential” according to types of land use, for any property subject to the regulation that has not been zoned by a subdivision as one of these three categories of “zoning districts.”

¹⁴ “Prominent discrete tone” means “any sound which can be distinctly heard as a single pitch or a set of single pitches.” COMAR 26.02.03.01B(19). “Periodic noise” means “noise possessing a repetitive on-and-off characteristic with a rapid rise to maximum and a short decay not exceeding 2 seconds.” *Id.* (17).

Commissioners of Calvert County to Attorney General Brian E. Frosh (Aug. 12, 2022); Norris Memorandum at 1. Specifically, residents of three households have complained that the cannon “[s]ounds like constant gun shot,” which “spook[s] the neighborhood dogs and keep[s] [the residents] up all night.” Calvert County Health Dep’t, Sanitary Nuisance Complaint Investigation (July 25, 2022).

On July 26, 2022, around 1 p.m., an official with the Calvert County Health Department visited the house site closest to the farm and heard the cannon blast four times in about twenty minutes. Matthew N. Cumers, Director, Calvert County Health Dep’t, Div. of Env’t Health, *Report of observations made during investigation of complaints* (July 26, 2022) [hereinafter “*Cumers Report*”]. The official described the noise as “unexpected and annoying” but not a “danger to public health or safety.” *Id.*

The County Attorney for Calvert County has opined that, in his view, a propane cannon—used as the manufacturer intended, to scare deer away from crops—qualifies as “agricultural field machinery” and is thus exempt from noise regulation under COMAR 26.02.03.02C(2)(c). Norris Memorandum at 2. Nonetheless, the County Attorney suggested that you seek our opinion.

II Analysis

To determine whether a farmer’s use of a deer cannon is exempt from the statewide noise regulation under the “agricultural field machinery” exemption, we must interpret the regulation and try to divine the drafters’ intent. *See, e.g., Department of Pub. Safety & Corr. Servs. v. Howard*, 339 Md. 357, 369 (1995) (noting that “the same rules applicable to the interpretation of statutes” generally apply to the interpretation of regulations); *Huggins v. State*, 479 Md. 433, 442 (2022) (recognizing that the goal of statutory interpretation is “to understand and implement” the intent of the drafters). We do this by considering the text of the regulation, as well as the legislative history and apparent purpose of the regulation and its authorizing statute. *See Lockshin v. Semsker*, 412 Md. 257, 275-76 (2010).

A. Text of the Regulation

Our first step is to examine the regulation’s text. *See GenOn Mid-Atlantic, LLC v. Maryland Dep’t of Env’t*, 248 Md. App. 253,

270 (2020). The regulation plainly exempts from noise regulation “[a]gricultural field machinery when used and maintained in accordance with [a] manufacturer’s specifications.” COMAR 26.02.03.02C(2)(c). But neither the Environmental Noise Act nor the statewide noise regulation defines the term “agricultural field machinery.” Nor have we been able to locate any judicial opinions or administrative decisions from Maryland or any other state interpreting this phrase. We thus look to the “ordinary and commonly-accepted meaning” of those words. *Controller, Anne Arundel County v. Pleasure Cove Yacht Club, Inc.*, 334 Md. 450, 464 (1994) (quoting *Scoville Serv., Inc. v. Comptroller*, 269 Md. 390, 395 (1973)).

To “ascertain the natural and ordinary meaning of” a term, in turn, we may “look to dictionary definitions,” *Montgomery County v. Cochran*, 471 Md. 186, 221 (2020) (quoting *Bottini v. Department of Fin.*, 450 Md. 177, 195 (2016)), “consult[ing] those editions (in addition to current editions) of dictionaries that were extant at the time of the pertinent legislative enactments,” *Minh-Vu Hoang v. Lowery*, 469 Md. 95, 120 (2020) (quoting *Ali v. CIT Tech. Fin. Servs., Inc.*, 416 Md. 249, 262 (2010)). “Although dictionary definitions do not provide dispositive resolutions of the meaning of statutory terms,” *Marriott Emps. Fed. Credit Union v. Motor Vehicle Admin.*, 346 Md. 437, 447 (1997) (citing *Morris v. Prince George’s County*, 319 Md. 597, 606 (1990)), “dictionaries . . . do provide a useful starting point for determining what statutory terms mean, at least in the abstract, by suggesting what the legislature could have meant by using particular terms,” *id.* (ellipsis in original) (quoting 2A Norman J. Singer, *Sutherland Statutory Construction*, § 47.28 (5th ed. 1993 & 1996 Cum. Supp.)). As noted above, the regulation at issue here was promulgated in 1975. We thus consult dictionaries printed before 1975, as well as current editions, to determine the ordinary meaning of “agricultural field machinery.”

According to these sources, “agricultural” means “connected with farming”¹⁵ or “of, relating to, used in, or concerned with agriculture,”¹⁶ which is defined as “the science and art of farming”¹⁷ or “of cultivating the soil, producing crops, and raising livestock and in varying degrees the preparation and marketing of

¹⁵ *Webster’s New World Dictionary of the American Language* 29 (1966).

¹⁶ *Merriam-Webster Dictionary*, <https://www.merriam-webster.com/dictionary/agricultural> (last visited May 4, 2023).

¹⁷ *Webster’s New World Dictionary of the American Language* 29 (1966).

the resulting products.”¹⁸ The definition of “field” includes “an open land area free of woods and buildings” and an area of “cleared enclosed land,”¹⁹ “set off . . . for raising crops or pasturing livestock.”²⁰ “Machinery,” meanwhile, is commonly understood to mean “machines” or “the working parts of a machine.”²¹ “Machine,” in turn, means “a mechanically, electrically, or electronically operated device for performing a task,”²² or a “device or apparatus consisting of fixed and moving parts that work together to perform some function.”²³

The dictionary definitions of these component words, read together, suggest that “agricultural field machinery” means mechanical devices used in farming and, more specifically, devices used in areas that farmers have cleared for raising crops or livestock. Although large machinery such as tractors and combine harvesters probably come to mind first, the phrase “agricultural field machinery” is not limited to those archetypal examples and appears broad enough to encompass propane cannons as well. After all, these devices consist of multiple parts designed to perform the function of emitting sonic blasts at regular intervals and, by any rational definition, are “machines” as that term was commonly understood in 1975. Moreover, farmers commonly use these machines in crop fields to assist with their agricultural production by scaring away wildlife that might otherwise damage the crops. See *Managing Deer Damage in Maryland* at 8 (noting that “[g]as exploders . . . are the most common scare devices” used by farmers for crop protection); see also *Wildlife Control Supplies, M8 Multi Bang Propane Cannon*, <https://www.wildlifecontrolsupp>

¹⁸ *Merriam-Webster Dictionary*, <https://www.merriam-webster.com/dictionary/agriculture> (last visited May 4, 2023).

¹⁹ *Merriam-Webster Dictionary*, <https://www.merriam-webster.com/dictionary/field> (last visited May 4, 2023).

²⁰ *Webster’s New World Dictionary of the American Language* 539 (1966).

²¹ *Merriam-Webster Dictionary*, <https://www.merriam-webster.com/dictionary/machinery> (last visited May 4, 2023); *Webster’s New World Dictionary of the American Language* 878 (1966).

²² *Merriam-Webster Dictionary*, <https://www.merriam-webster.com/dictionary/machine> (last visited May 4, 2023).

²³ *Black’s Law Dictionary* (11th ed. 2019); see also *Webster’s New World Dictionary of the American Language* 878 (1966) (defining “machine” to mean, among other things, “a structure consisting of a framework and various fixed and moving parts, for doing some kind of work”).

lies.com/animal/WCSRJM8.html (indicating that the M8 Multi-Bang Cannon “is designed to be fired *in an open field*” to “disperse birds and wildlife from crops, orchards, vineyards” and other locations (emphasis added)) (last visited May 4, 2023); Oesco, Inc., *Mark 4 Propane Cannon*, <https://www.oescoinc.com/mark-4-propane-cannon.html> (indicating that the “Mark 4 Propane Cannon” is “ideal for” use “in vineyards, orchards, . . . *row crops*—practically *any large, open area* with nuisance birds & wildlife” (emphasis added)) (last visited May 5, 2023). Propane cannons thus appear to fall within the plain meaning of “agricultural field machinery.”

We draw further support for this reading from the fact that the Department of Natural Resources (“DNR”) continues to recommend the use of propane cannons to deter wildlife from agricultural crops. See DNR, *Deer Damage Management Techniques*, https://dnr.maryland.gov/wildlife/pages/hunt_trap/dd_mtdeter.aspx (advising “a combination of methods” to deter deer, including auditory deterrents such as “gas or propane exploders”) (last visited May 4, 2023); DNR, *Controlling Conflicts with Resident Canada Geese in Maryland*, https://dnr.maryland.gov/wildlife/Pages/plants_wildlife/ResGeeseProblem.aspx (providing contact information for suppliers of propane cannons) (last visited May 4, 2023). Although DNR is not the agency responsible for promulgating the statewide noise regulation, it was among the agencies represented on the Interagency Noise Control Committee that provided input on the statewide noise regulations. See Interagency Noise Control Committee, *1975 Annual Report 1* (1976) (listing members of the committee). We thus find it significant that this State agency continues to recommend the use of propane cannons to support agricultural production. After all, these cannons are legal only if they fall within the “agricultural field machinery” exemption, as the cannons’ blasts are too loud to meet the general noise restrictions, see COMAR 26.02.03.02B, and none of the regulation’s other sixteen exemptions—covering such things as motor vehicles, emergency operations, construction, and air conditioning equipment—encompass propane cannons used to deter wildlife from agricultural crops. See COMAR 26.02.03.02C(2)(a), (b), and (d) to (q). Thus, DNR’s continued recommendation that farmers use propane cannons suggests that the devices are commonly understood to be “agricultural field machinery” and reinforces our view that this regulatory term encompasses propane cannons. See, e.g., *Gillespie v. State*, 370 Md. 219, 222 (2002) (“We view the words of a statute . . . in the manner in which they are most commonly understood.”).

B. Legislative History

To confirm this conclusion or resolve any lingering ambiguity, we also consult the legislative history. *E.g.*, *Nationstar Mortg. LLC v. Kemp*, 476 Md. 149, 170 (2021). But very little existed in the first place, and much has been lost to time. The General Assembly did not keep a bill file for the 1974 legislation that became the Environmental Noise Act.²⁴ And while the legislation called for an interagency noise control committee to provide input on noise regulations, Md. Ann. Code, Art. 43, § 827 (1971 Repl. Vol. & 1974 Supp.), we have not been able to locate any such input. The committee’s 1974 annual report—and any advice the report may have offered about the 1975 noise regulation at issue here²⁵—is not available in the State Archives, and we have been unable to find a copy anywhere else. Nor have we been able to find any advice that the Environmental Noise Advisory Council, another creature of the Environmental Noise Act, *see* Md. Ann. Code, Art. 43, § 825, may have offered the Department of Mental Health and Hygiene before it promulgated the relevant regulation on August 6, 1975.²⁶

What little legislative history is available indicates that the drafters intended to craft an expansive exemption for noise related to farming. As initially proposed, the regulation would have limited the “agricultural field machinery” exemption to the daytime hours of 7:00 a.m. to 10:00 p.m. 2:8 Md. Reg. 604, 606 (Apr. 16, 1975). While there is no record documenting the reason for the change, the Department consciously deleted the daytime limitation, exempting from regulation agricultural field machinery used at any

²⁴ Bill files containing legislative history for each House and Senate bill were not routinely kept until 1976, *see, e.g.*, Thurgood Marshall State Law Library, *Guide to Maryland Legislative History Research*, <https://mdcourts.gov/lawlib/research/research-guides/guide-to-md-legislative-history-research> (last visited May 4, 2023), and research has confirmed that no such file exists for Senate Bill 870, which became the Environmental Noise Act of 1974.

²⁵ *See* Interagency Noise Control Committee, *1975 Annual Report 2* (1976) (referring to “recommendations of the 1974 Annual Report,” but failing to elaborate on what those recommendations were).

²⁶ The Environmental Noise Advisory Council and the Interagency Noise Control Committee were formally eliminated in 2012. *See* EN § 3-403; 2012 Md. Laws, ch. 360. The advisory council “ha[d] not existed since” 2005, when the Department of the Environment’s noise control program was defunded. Floor Report, Senate Educ., Health, & Env’t Affairs Comm., H.B. 190, 2012 Leg., Reg. Sess., at 2.

time, day or night. *See* 26.02.03.02.C(2)(c). And although the applicable hours do not illuminate whether the drafters intended the exemption to encompass propane cannons, this detail does suggest that the drafters intended to impose fewer restrictions on noise related to farming than on noise related to other activities, such as lawn care, snow removal, blasting operations, and pile-driving—all activities that the drafters exempted from noise regulation during daytime hours only. *See* 2:17 Md. Reg. 1191 (Aug. 6, 1975).²⁷

We note, too, that drafters of the noise regulation—and its exemption for “agricultural field machinery”—would likely have been aware of noisemaking scare devices like propane cannons, given that the State itself had supplied scare devices to farmers and that, by the late 1960s, the devices were considered “the most widely used and effective method available for preventing damage to crops” by wildlife. *See* 1967 *Report* at 12. Moreover, the capacity for such devices to produce sounds that disturbed nearby residents was well-established by 1975. In a 1966 resolution calling for the study of crop damage by wildlife in Maryland and the use of noisemaking scare devices, members of the House of Delegates recognized that “the use of explosives regularly detonated and the device colloquially referred to as a ‘carbide cannon’” was “causing the loss of use and enjoyment of the property in the vicinity of such devices.” H. Res. 93, 1966 Leg., Reg. Sess., *reprinted in* 1967 *Report* at iii; *see also* 1967 *Report* at 24 (recognizing that noisemaking scare devices caused “undue annoyance in populated areas”). Notwithstanding these facts, less than a decade later, drafters of the statewide noise regulation crafted a broadly worded exemption for “agricultural field machinery,” without limitation (other than the caveat that the machinery be “used and maintained in accordance with [the] manufacturer’s specification”). COMAR 26.02.03.02C(2)(c). This suggests that the drafters intended the exemption to encompass propane cannons, many of which are no louder than a tractor at full load.

We recognize that, unlike tractors and other farm equipment, noise is the very purpose of a propane cannon, not merely a byproduct of its use. And unlike the drone of a tractor, a cannon’s blast is intermittent and intentionally startling. As the regulation

²⁷ The current version of the regulation limits four other exemptions to certain hours of the day: exemptions for sporting and entertainment events, target shooting (in certain counties), trash collection, and marina equipment used to move boats. COMAR 26.02.03.02C(2)(j), (o), (p), (q).

itself seems to implicitly recognize, discrete tones may be more irritating than a continual drone. *See* COMAR 26.02.03.02B(1), (3) (imposing lower volume limits for “prominent discrete tones and periodic noises” than for other noise). But the regulation exempts “agricultural field machinery” broadly, without distinguishing between devices that emit a drone and those that produce “prominent discrete tones.” Moreover, because propane cannons were (and remain) common, and because the drafters nonetheless adopted such a sweeping exemption without limiting its scope to only certain *types* of agricultural field machinery, we think it more likely the drafters intended the exemption for such machinery to include propane cannons.

To be clear, we do not in any way mean to minimize the very real hardship that deer cannons may cause to some individuals, particularly military veterans with post-traumatic stress disorder (“PTSD”), for whom loud noises may “bring up trauma memories” and “intense anxiety and fear.” Matthew Moeller, *How Your Fireworks May Affect America’s Veterans*, June 27, 2022, <https://www.va.gov/hines-health-care/stories/how-your-fireworks-may-affect-americas-veterans/> (quoting psychologist Annie Tang). The General Assembly has recently enacted legislation to help veterans with PTSD and to offer more support for veterans’ mental health generally. *See* 2022 Md. Law, ch. 731 (establishing a fund to support the study of alternative therapies for PTSD and traumatic brain injuries in veterans); 2021 Md. Laws, ch. 137 (requiring the Department of Health to provide veterans “mental health first aid”). But these laws did not amend, and do not bear on our interpretation of, the exemption for “agricultural field machinery” in the statewide noise regulation, the plain language of which suggests that deer cannons are exempt from that regulation.

C. Purpose of the Noise Regulation and Authorizing Statute

We next consider whether this reading is consistent with the apparent purpose of the regulation and its authorizing statute. *See Schmerling v. Injured Workers’ Ins. Fund*, 368 Md. 434, 444 (2002) (defining a statutory term by considering, among other things, “the express and implied purpose of the statute”). In passing the Environmental Noise Act, the General Assembly found that “people of this State have a right to an environment free from noise that may jeopardize their health, general welfare, and property, or that degrades their quality of life.” Md. Ann. Code, Art. 43, § 822(a). The Legislature referenced the “substantial body of knowledge . . . concerning the adverse effects of excessive noise” and asserted that “[t]his knowledge should be used to

establish environmental noise standards which [would] protect the public health and general welfare with an adequate margin of safety.” *Id.* § 822(b), (c). But the Legislature also indicated that noise standards should restrict only “unreasonable interference with the enjoyment of life or property,” *id.* § 828(a) (emphasis added), and that regulations should take into account “the nature and source of various kinds of environmental noise,” the “nature of the area affected,” “the degree of noise reduction achievable through the application of the best available technology, and the cost of compliance.” *Id.* § 828(b)(3).

Drafters of the statewide noise regulation similarly recognized that “noise above certain levels is harmful to the health of humans” and that “one’s well-being can be affected by noise through loss of sleep, speech interference, hearing impairment, and a variety of other psychological and physiological factors.” COMAR 26.02.03.02A(1). But the drafters also acknowledged the need to establish ambient noise standards that “provide margins of safety” while giving “due consideration to technical and economic factors.” *Id.*

It thus appears that the purpose of the Environmental Noise Act and related regulation is not to eliminate all bothersome noise. Rather, the statute and regulation aim to strike a balance between, on the one hand, protecting Marylanders from excessive noise that unreasonably interferes with their health and quality of life and, on the other hand, permitting noise that, while irritating, is a necessary part of modern life. The regulation strikes that balance by setting forth general noise limits but carving out several exemptions, including the one for the use of “agricultural field machinery.”

The Environmental Noise Act also recognizes that the standards set forth in the statewide noise regulation are merely the outer limits on noise control in Maryland; “counties retain whatever powers they ha[ve] to regulate noise,” Letter from Kathryn M. Rowe, Assistant Attorney General, to Del. Terri L. Hill, at 2 (Feb. 1, 2016) (“Hill Letter”), provided that any local ordinances or regulations are not “less stringent” than the statewide standards, EN § 3-105(a)(2); *see also* COMAR 26.02.03.00 (recognizing that the Environmental Noise Act “allows political subdivisions to adopt environmental noise standards”). To be clear, “[t]he power of political subdivisions to regulate noise does not come from the Environment Article, but from other sources,” Letter from Kathryn M. Rowe, Assistant Attorney General, to Delegates James E. Malone, Jr., and Elizabeth Bobo, at 2 (Mar. 22,

2013), such as the Express Powers Act,²⁸ or public local law, *see, e.g.*, Calvert County Code of Public Local Laws § 13-101 (2010) (“Subject to § 3-105 of the Environment Article . . . the [Calvert] County Commissioners may enact an ordinance that . . . [a]dopts environmental noise standards, sound level limits, and noise controls as necessary to protect the public health, the general welfare, and property . . .”). Although it is beyond the scope of this opinion to survey every local jurisdiction to determine whether all of them have been granted the power to adopt noise ordinances, many clearly have that authority.

The fact that the State regulation does not preempt stricter regulation by local jurisdictions is important. As some lawmakers have observed, the statewide standards “provide a degree of uniformity across Maryland,” but many conflicts surrounding noise involve matters of local concern. Floor Report, Senate Educ., Health, & Env’t Affairs Comm., H.B. 190, 2012 Leg., Reg. Sess., at 1 (noting that “noise violations are often a result of local land use decisions”).²⁹ Thus, another purpose of the statute and related noise regulation is to set forth basic statewide noise standards, while preserving whatever powers local governments have to impose more restrictive rules should local conditions call for them.³⁰

²⁸ *See* Md. Code Ann., Local Gov’t § 10-206(a) (authorizing a charter county to “pass any ordinance, resolution, or bylaw” that is “not inconsistent with State law” and “may aid in maintaining the peace, good government, health, and welfare of the county”); Hill Letter, at 2 (recognizing that this statutory authority “would be adequate to allow charter counties to set their own environmental standards, sound level limits, and noise control rules”).

²⁹ House Bill 190, among other things, specified that local governments adopting their own noise regulations should take into account the same factors that State regulators must consider (including the nature of an area affected by noise, and the nature and source of a noise). 2012 Md. Laws, ch. 360, § 1 (amending EN § 3-401).

³⁰ We note that § 5-403 of the Courts and Judicial Proceedings Article, which offers farmers some protection from nuisance actions, also does not prohibit local governments from enacting noise control laws that are more stringent than the statewide standards. Section 5-403 expressly provides that a farmer must comply “with applicable federal, State, *and local* health, environmental, zoning, and permit requirements” in order to be immune from suits for nuisance or “private action[s]” alleging that an agricultural operation “interferes . . . with the use or enjoyment of other property.” Md. Code Ann., Cts. & Jud. Proc. § 5-403(c) (emphasis added) (providing further that immunity requires the agricultural operation to have “been under way for a period of 1 year or more” and that the operation not be “conducted in a negligent manner”).

Ultimately, we think that construing the “agricultural field machinery” exemption to encompass propane cannons is consistent with these purposes of the statewide noise regulation and its authorizing statute. Although the noise from propane cannons can undoubtedly be “unexpected and annoying,” *Cumers Report*, farmers have long used auditory scare devices in agriculture, *see supra* Part I.A, and neither the statute nor the regulation aims to eliminate all disruptive noises. Moreover, the use of propane cannons seems most likely to lead to conflict in more populated areas. *See, e.g., Deer Damage Management Techniques* (advising against using noisemaking scare devices “in suburban or residential areas out of consideration for neighbors”); Oesco, Inc., *Mark 4 Propane Cannon*, <https://www.oescoinc.com/mark-4-propane-cannon.html> (indicating that one propane cannon “will protect approximately 1 to 5 acres”). It thus makes sense that drafters of the regulation would generally allow farmers to use propane cannons, knowing that local regulators could potentially curb the cannons’ use if they were unreasonably interfering with residents’ quality of life in specific parts of the State. *See, e.g., Deer Damage Management Techniques* (noting that the use of auditory scare devices may violate local noise ordinances). Indeed, one county has already enacted an ordinance that imposed stricter limits on deer cannons than the default State regulation. *See* Baltimore County Code §§ 1A01.5, 1A03.8, 1A05.6, 1A08.7, 1A09.8 (banning, during the hours from 10 p.m. to sunrise, the use of “an air cannon or similar device that releases a loud shotgun-like blast within 500 feet of an adjacent residential dwelling”).³¹ Calvert County, which has express statutory authority to enact its own noise ordinance, *see* Calvert County Code of Public Local Laws § 13-101 (2010), could follow suit, if it so chooses.³²

³¹ These ordinances, enacted in 2017, automatically expired two years later. *Id.* §§ 1A01.5, 1A03.8, 1A05.6, 1A08.7, 1A09.8 (editor’s notes). As far as we can tell, then, they are no longer in effect.

³² In the memorandum submitted along with your opinion request, the County Attorney for Calvert County noted that local governments have the option of enforcing statewide noise standards (a task that the Department of the Environment no longer performs) and that, in his view, the agricultural field machinery exemption is “mandatory.” Norris Memorandum at 1 n.8; *see also* 2012 Md. Laws, ch. 360 (amending EN § 3-403 to delete language requiring the Department of the Environment to enforce noise standards and to add language providing that “[a] political subdivision may enforce” them). We agree that a political subdivision, exercising its option to enforce the statewide standards as written, must enforce all related exemptions, including the one for agricultural field machinery. But a political subdivision exercising its

III Conclusion

For the reasons set forth above, it is our opinion that a farmer’s operation of a propane cannon, when “used and maintained in accordance with [the] manufacturer’s specifications” to frighten wildlife away from crops, is exempt from the statewide noise regulations under the exemption for “agricultural field machinery.” COMAR 26.02.03.02C(2)(c). We think this construction is most consistent with the plain language of the regulation and the history and apparent purpose of the regulation and its authorizing statute. The “agricultural field machinery” exemption does not, however, preclude a county or municipality that is otherwise authorized to regulate noise from enacting its own, stricter noise control ordinance or regulation to address concerns about the noise from propane cannons.

Anthony G. Brown
Attorney General of Maryland

Rachel A. Simmons
Assistant Attorney General

Michael S. Steadman, Jr.
Assistant Attorney General

Patrick B. Hughes
Chief Counsel, Opinions and Advice

authority to adopt and enforce its own noise control law need not adopt and enforce that exemption; the only relevant restriction is that a local government may not enact more lenient noise control standards than those imposed by the State. *See* EN § 3-105(a) (making clear that State law “does not limit the power of a political subdivision to adopt noise control ordinances, rules, or regulations,” provided that any local law is not “*less stringent* than the [statewide] environmental noise standards, sound level limits, and noise control rules and regulations” (emphasis added)). Although the public local law authorizing Calvert County to regulate noise provides that the County’s power to adopt noise regulations is “subject to” § 3-105 of the Environment Article, that just means that the County cannot enact standards more lenient than those adopted under State law, as the State law itself provides that it does not preclude local jurisdictions with authority from adopting more stringent requirements.