

April 9, 2019

Representative Brad Witt, Chair House Committee on Natural Resources 900 Court St. NE Salem, Oregon 97301

RE: Please support S.B. 580 - Legislation to prohibit use of M-44 cyanide devices to control wildlife

Dear Chairman Witt and Members of the Committee,

On behalf of the undersigned conservation and animal welfare organizations, we would like to ask your support for S.B. 580, which would prohibit the use of cyanide devices to control wildlife. The government's ongoing use of deadly M-44 sodium cyanide devices for predator control is a critical public safety issue in Oregon and beyond. It also defies sound science and common sense.

As you will read below, M-44s cannot be safely deployed and are not helping resolve problems with predators-regardless of what you may hear from USDA Wildlife Services. We urge Oregon to lead the way in banning these indiscriminate and unnecessary menaces to public safety, pets, and wildlife.

The clamor for a ban has been growing in all states where M-44s are used. Last fall in Oregon close to 100 affected individuals and organizations signed an Administrative Procedures Act (APA) petition to regional Wildlife Services directors calling for a statewide ban. Wildlife Services denied the petition based on faulty reasoning. They refused to acknowledge the reality of M-44 devices, which boils down to this:

There is no safe place or way to use M-44s, as young children, pets, and wild animals do not understand warning signs. And there is virtually no place in the great outdoors that people and animals do not go. And it is only a matter of time before an M-44 kills a child. Meanwhile, science increasingly shows that lethal predator control is unnecessary and counter-productive.

The APA petition was supported by both Oregonians and residents of other states where tragedy has struck, including M-44 victims/survivors, physicians, veterinarians, scientists, law enforcement, and other affected parties. You will find their names reprinted at the end of this letter. All strongly believe our government needs to act to eliminate M-44s. Below you will find details on why.

M-44s Have a Devastating and Deadly Impact on People and Pets

In recent decades countless pets have been killed and people injured by M-44 "cyanide bombs." Two long lists of known victims and death statistics are included in Appendices A and B, which we encourage you to review. NOTE: While we know USDA Wildlife Services objects to the use of the word "bomb," members of the public started calling M-44s cyanide bombs because they act as such per common dictionary definitions, which boil down to containers filled with a destructive substance designed to explode on impact or when detonated. As you know, M-44s are filled with powdery sodium cyanide poison. Their spring-activated ejectors spew the poison into the air in a cloud. The ejectors' force can spray the cyanide up to five feet. They are deadly devices, and to the public the definition of bomb fits.

Ongoing M-44 incidents came to a head with the nationally publicized 2017 injury of a Pocatello, Idaho teen and the death of his dog. Fourteen-year-old Canyon Mansfield accidentally triggered an illegally set, unmarked M-44 while walking on a hill behind his house with his three-year-old yellow Labrador retriever. Canyon thought the device was a sprinkler head and reached down to examine it. It exploded in a powdery cloud and within minutes he watched his dog die an agonizing death in front of him. It appears Canyon was only spared death because of wind direction. He was hospitalized with severe side effects and continued to suffer long after the incident. The Pocatello tragedy dramatically showed how indiscriminate M-44s are in their lethal effects and the substantial risk they pose to humans and domestic animals.

In Oregon, numerous M-44 incidents have harmed humans and killed pets and native wildlife. In 1994, Amanda Wood Kingsley's dog was poisoned by an M-44 near Harrisburg, Oregon, and Kingsley suffered secondary poisoning from inhalation. In January 2000, an M-44 killed a German shepherd in Estacada, Oregon after Wildlife Services planted six of the devices on a tree farm frequented by local children. In February 2002, Danielle Clair of Philomath, Oregon lost her family dog to an M-44. Contrary to Wildlife Services' claims that M-44 victims always die quickly, Clair's dog did not. It died after eight agonizing hours in an emergency vet clinic. Another Oregon incident occurred In March 2017, when a collared wolf known as OR-48 was killed in Wallowa County by an M-44 on land designated as an Area of Known Wolf Activity.

Yet another older M-44 incident in another state resurfaced in the news in 2018. Dennis Slaugh of Vernal, Utah was poisoned by an M-44 in 2003, sustaining injuries of sufficient severity that he was permanently disabled. On February 24, 2018, Mr. Slaugh died. His death certificate listed cyanide poisoning from this M-44 incident as a contributing cause of death (see Attachment 1).

M-44s Kill Non-Target Wildlife Indiscriminately and Deaths Are Gravely Under-Reported

In addition to harming humans and pets, M-44s are also indiscriminate in killing non-target wildlife, such as hawks, eagles, wolverines, lynx, and other native species.¹ Unsurprisingly, since 2000 Wildlife Services has killed countless animals representing more than 150 non-target species, including federally protected and/or state-protected animals such as Mexican gray wolves, grizzly bears, kangaroo rats, eagles, falcons, California condors, red-tailed hawks, great horned owls, and others.² In fact, Wildlife Services reported 246,985 animals killed by M-44s from 2000 through 2016, including at least 1,182 dogs.³ In Oregon alone, APHIS reported 4,621 animals killed by M-44s during that time.⁴ The number of non-target animals that have been killed by WS' M-44s is completely unacceptable given the ineffectiveness of this form of predator control, the availability of alternatives, and the ecological harm associated with haphazardly killing wildlife.

¹ Marks, C.A., and R. Wilson. 2005. Predicting mammalian target-specificity of the M-44 ejector in south- eastern Australia. Wildl. Res. 32: 151-156.

² Tom Knudson, *Suggestions in Changing Wildlife Services Range from New Practices to Outright Bans,* SACRAMENTO BEE (May 6, 2012).

³ USDA, Animal and Plant Health Inspection Service, "Wildlife Damage, Program Data Reports,"

https://www.aphis.usda.gov/aphis/ourfocus/wildlifedamage/SA_Reports/SA_PDRs.

⁴ USDA, Animal and Plant Health Inspection Service. 2000 to 2016. Wildlife Damage, Program Data Report G. https://www.aphis.usda.gov/aphis/ourfocus/wildlifedamage/SA_Reports/SA_PDRs.

These incidents, though shocking, only reveal part of the problem. APHIS reports are often incomplete, notably missing data concerning deaths of domestic animals, pets and livestock known to have occurred during the reporting period. For example, while at least 1,200 pet dogs were killed by M-44s between 2000 and 2012,⁵ APHIS program data reports reflect no such deaths during those years. Moreover, the U.S. Fish and Wildlife Service (FWS) has noted that bird deaths are underreported because birds leave the vicinity of an M-44 device within a few seconds of triggering the ejector.⁶ APHIS also failed to report that, since 1987, at least 18 employees and several private citizens have been injured by M-44s.⁷

The Horrifying Effects of Sodium Cyanide, a Deadly Category 1 Toxin

Pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), the Environmental Protection Agency (EPA) issued a Reregistration Eligibility Decision (RED) document for sodium cyanide in 1994 (case No. 3086). Their toxicity assessment identified sodium cyanide as "highly toxic to warm-blooded animals" and placed sodium cyanide in Toxicity Category I, indicating the greatest degree of acute toxicity, for oral, dermal and inhalation effects.⁸ In describing the effects on humans of short-term exposure to sodium cyanide, the Centers for Disease Control and Prevention states:

Early symptoms of cyanide poisoning include lightheadedness, giddiness, rapid breathing, nausea, vomiting (emesis), feeling of neck constriction and suffocation, confusion, restlessness, and anxiety. Accumulation of fluid in the lungs (pulmonary edema) may complicate severe intoxications. Rapid breathing is soon followed by respiratory depression/respiratory arrest (cessation of breathing). Severe cyanide poisonings progress to stupor, coma, muscle spasms (in which head, neck, and spine are arched backwards), convulsions (seizures), fixed and dilated pupils, and death.⁹

In the RED, the only registered use of sodium cyanide is a "single dose poison used in M-44 ejector devices on pastures, range and forest land."¹⁰ To arm an M-44 ejector device, which has been described as resembling a sprinkler head,¹¹ a certified applicator loads a sodium cyanide capsule into a capsule holder, which is then screwed onto the ejector mechanism.¹² "Any animal that is able to activate the trigger of the cyanide ejector device will get a dose of sodium cyanide in the mouth and die."¹³ Thus, the EPA identifies M-44 devices as a "high acute risk pesticide for terrestrial vertebrates, including nontarget and endangered birds."¹⁴

M-44 Use Is Counterproductive and Pesticide Use Restrictions Are Often Not Followed

In addition to being indiscriminate, Wildlife Services' (WS) predator killing program is potentially counterproductive. Nonselective, lethal "tools" like M-44s have not been shown to reduce losses of domestic

⁵ Todd Wilkinson, *Dog's Death Spotlights Use of Cyanide Bombs' to Kill Predators*, NATIONAL GEOGRAPHIC (Apr. 20, 2017), *available at* http://news.nationalgeographic.com/2017/04/wildlife-watch-wildlife-services-cyanide-idaho-predator-control/.

⁶ U.S. Department of Interior - Fish Wildlife Service. 1993. Biological Opinion: Effects of 16 Vertebrate Control Agents on Threatened and Endangered Species.

⁷ Tom Knudson, *Wildlife Services' methods leave a trail of animal death*, SACRAMENTO BEE (Apr. 30, 2012), *available at* http://www.idahostatesman.com/news/local/environment/article40733442.html.

⁸ RED at 2.

⁹ Centers for Disease Control and Prevention,

https://www.cdc.gov/niosh/ershdb/emergencyresponsecard_29750036.html (last visited May 20, 2018). ¹⁰ Environmental Protection Agency -Office of Prevention - Pesticides - and Toxic Substances. 1994. R.E.D. Facts: Sodium Cyanide, 1. (hereinafter "RED").

¹¹ Christina Corbin, USDA Must Rethink Cyanide Bombs that Injured Boy, Killed Pets, Lawmaker Says, Fox News USA (March 21, 20017), http://www.foxnews.com/us/2017/03/21/usda-must-rethink-cyanide-bombs-that-injured-boy-killed-pets-lawmaker-says.html.

¹² RED at 1.

¹³ RED at 3.

¹⁴ Id.

sheep to predators, despite WS' frequent reliance on such depredation as a justification for M-44 use.¹⁵ In some cases, predator killing programs actually result in *increased* livestock losses.¹⁶ Nor has any agency provided a rigorous cost-benefit analysis evaluating the cost of predator-killing programs—which is borne largely by taxpayers—relative to the value of livestock lost to predators occupying those carnivores' native habitats.

These broad, programmatic challenges are compounded by the fact that M-44 applicators in Oregon are not required to report the location of the devices to the Oregon Department of Agriculture (ODA) or the public.¹⁷ This adds to the risks faced by people and their pets. Members of the public are unable to obtain current information about where M-44s are located because the ODA does not receive a report on the number of devices, locations, dates of placement, discharges of the devices, species killed, or accidental injuries and deaths to humans and domestic animals without requesting a "periodic report."¹⁸ In those reports, applicators are not required to identify M-44s' locations using GPS coordinates, making the devices difficult to track.¹⁹

Even more problematic is the fact that, despite the EPA's publication of M-44 use restrictions, Wildlife Services often fails to comply with restricted use mandates, as demonstrated by the killings and injuries described throughout this petition.²⁰ EPA's pesticide use restrictions for M-44 cyanide capsules, include, but are not limited to:

- The M-44 device shall not be used: (1) In areas within national forests or other Federal lands set aside for recreational use, (2) areas where exposure to the public and family and pets is probable, (3) in prairie dog towns, (4) except for the protection of federally designated threatened or endangered species, in National and State Parks; National or State Monuments; federally designated wilderness areas and wildlife refuge areas.
- 9. The M-44 device shall not be used in areas where federally listed or threatened or endangered animal species might be adversely affected.
- 23. Bilingual warning signs in English and Spanish *shall be used in all areas* containing M-44 devices.

Source: EPA Reg. No. 56228-15, Nov. 18, 1992 (emphasis added)

Wildlife Services regularly violates these restrictions. In addition to repeatedly placing M-44s in areas where exposure to the public is probable, APHIS has been fined for illegally placing M-44 devices in national forests. Further, a U.S. District Court judge ordered Wildlife Services to stop using M-44 devices along the Green, Colorado, and San Juan Rivers because of the potential harm to California Condors, an endangered species, and the documented killing of a condor by an M-44 device.²¹

Yet, unbeknownst to the public, Wildlife Services continues to place a number of these cyanide bombs on both public and private lands across the state of Oregon, risking injury and death to local residents, domestic pets, and wildlife.

¹⁵ Berger, K.M. 2006. Carnivore-livestock conflicts: Effects of subsidized predator control and economic correlates on the sheep industry. Conserv. Biol. 20: 751-761; Mitchell, B.R., M.M. Jaeger, and R.H. Barrett. 2004. Coyote depredation management: Current methods and research needs. Wildl. Soc. Bull. 32: 1209-1218.

¹⁶ Wielgus, R.B., and K.A. Peebles. 2014. Effects of wolf mortality on livestock depredations. PLOSone,

http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0113505; Peebles, K.A., R.B. Wielgus, B.T. Maletzke, and M.E. Swanson. 2013. Effects of remedial sport hunting on cougar complaints and livestock depredations. PLOSone. http://dx.doi.org/10.1371/journal.pone.0079713.

¹⁷ OAR 603-057-0350(1) ("Public pesticide applicators using sodium cyanide and the M-44 device shall not be required to keep records as specified in ORS 634.146 or OAR 603-057-0130").

¹⁸ OAR 603-057-0350(2).

¹⁹ See OAR 603-057-0360(1).

²⁰ See also Appendix A and B.

²¹ See San Juan Audubon Society v. Veneman, 153 F. Supp. 2d 1 (D.D.C. 2001).

To Ensure Safety for the Public, Pets and Wildlife, M-44s Need to Be Eliminated in Oregon

Given the hazards M-44s pose to people, pets, and native wildlife, the strong public sentiment against them, and the questionable economic and scientific benefits of such programs, we believe that Wildlife Services' use of M-44s in Oregon is unjustifiable and runs counter to the public interest.

Surely you can agree that too many deaths have already occurred and M-44s must be eliminated before a child is killed. It is long past time for action. Our government must stop turning lands—public or private—into potentially deadly minefields for humans and wildlife, starting in Oregon.

We hereby request that the Oregon Senate Committee on Environment and Natural Resources support S.B. 580, which prohibits the use of M-44 cyanide devices to control wildlife.

We thank you in advance for your attention to this vital public safety issue.

Respectfully,

Brooks Fahv

Executive Director Predator Defense

LETTER CO-SIGNERS

Stephen Wells Executive Director Animal Legal Defense Fund

Bob Sallinger Conservation Director Audubon Society of Portland

Noah Greenwald, M.S. Endangered Species Director Center for Biological Diversity

Brian Posewitz Administrator/Board Member Humane Voters Oregon

Carson Barylak Campaigns Manager International Fund for Animal Welfare

Lynn Cullens Executive Director Mountain Lion Foundation

Wally Sykes Co-Founder Northeast Oregon Ecosystems Danielle Moser Wildlife Program Coordinator Oregon Wild

Camilla Fox Executive Director **Project Coyote**

Rhett Lawrence Conservation Director Sierra Club, Oregon Chapter

Kelly Peterson Oregon Senior State Director The Humane Society of the United States

John Mellgrem Attorney, Wildlife Coordinator Western Environmental Law Center

Erik Molvar Executive Director Western Watersheds Project

Taylor Jones Endangered Species Advocate WildEarth Guardians

ATTACHMENTS, APPENDICES & TESTIMONIALS

The Attachments and Appendices listed below are contained within this letter. They are also available on the Predator Defense website as noted.

- Attachment 1 Death Certificate for Dennis Slaugh, M-44 Poisoning Victim, www.predatordefense.org/docs/m44 death certificate Dennis Slaugh.pdf
- Attachment 2 Diagram Showing M-44 Sodium Cyanide Ejection Device, www.predatordefense.org/docs/m44_diagram.pdf
- Appendix A Featured Incidents of Pet Killings and Human Poisonings Caused by M-44s, www.predatordefense.org/docs/m44 incidents pet killings human poisonings.pdf
- Appendix B USDA Wildlife Services Yearly Summary Statistics of Domestic Dog Killings by M-44s, www.predatordefense.org/docs/m44_WS_dog_killings_yearly_statistics.pdf
- **Testimonials** Oral and written testimony from victims and experts will be posted after the Senate Committee hearing at <u>www.predatordefense.org/m44s.htm</u>

LIST OF SUPPORTERS OF 2018 APA PETITION TO BAN M-44s IN OREGON

Below you can read the list of people and organizations that signed on in support of our September 2018 Administrative Procedures Act (APA) petition to regional Wildlife Services directors requesting a ban on M-44 cyanide devices in Oregon. All who signed know from personal experience and/or training that these devices pose an unacceptable threat to public safety and run contrary to sound science and sane wildlife policy.

M-44 Victims/Survivors

Sharyn & Tony Aguiar Fillmore, Utah

Danielle Clair Philomath, Oregon

Amanda Wood Kingsley Port Townsend, Washington Canyon Mansfield & Family Pocatello, Idaho

Dorothy Slaugh Vernal, Utah

Angel & JD Walker Bangs, Texas

Physicians & Residents of Pocatello, Idaho

NOTE: Pocatello, Idaho is where M-44 are made and a high-profile dog death and poisoning of a teen occurred in March 2017 (see pg. 2 and Appendix A).

Cristina Abuchaibe Leon, MD, Pocatello, ID Jorge Amorim de Filho, MD, Pocatello, ID Jordan Bailey, MD, Pocatello, ID Michael Barker, MD, Pocatello, ID Cynthia Barron, NP, Pocatello, ID Gus Blad, NP, Pocatello, ID Benjamin Blair, MD, Pocatello, ID Martha Buitrago, MD, Pocatello, ID Hannah E Caulfield, MD, Pocatello, ID Colleen Champlin, NP, Pocatello, ID Charles Clair, MD, Pocatello, ID Dan Dallon, MD, Pocatello, ID Jacob DeLaRosa, MD, Pocatello, ID David Donaldson, MD, Pocatello, ID Jennifer Edwards, MD, Pocatello, ID John Fenstermaker, MD, Pocatello, ID Katie Fritz, MD, Pocatello, ID Elizabeth Gerard, MD, Pocatello, ID Michael Haderlie, MD, Pocatello, ID Stephen M. Hansen, MD, Pocatello, ID Juan Leon, MD, Pocatello, ID Steve Maloff, MD, Pocatello, ID

LIST OF SUPPORTERS OF 2018 APA PETITION TO BAN M-44s IN OREGON (cont.)

Physicians & Residents of Pocatello, Idaho (cont.)

Mark Mansfield, MD, Pocatello, ID Richard Maynard, DO, Pocatello, ID KC McGee, MD, Pocatello, ID Drew McRoberts, MD, Pocatello, ID Blaine Olsen, DO, Pocatello, ID Nancy Olsen, FNP, Pocatello, ID David Parry, MD, Pocatello, ID Terry Rager, MD, Pocatello, ID Fahim Rahim, MD, Pocatello, ID Naeem Rahim, MD, Pocatello, ID Kenneth Ryan, MD, Pocatello, ID Carole Shelley, MD Pocatello, ID David Shelley, MD, Pocatello, ID Boe Simmons, PA, Pocatello, ID Earl R. Stoddard, MD, Pocatello, ID Jim Taylor, MD, Pocatello, ID Andy Thayne, MD, Pocatello, ID Richard Wathne, MD, Pocatello, ID Matt Williamson, MD, Pocatello, ID Gentry Yost, MD, Pocatello, ID

Karen McGee, Former Pocatello City Council, Pocatello, ID Shleace Shiosaki, Medical Staff Coordinator, Portneuf Medical Center, Pocatello, ID

Physicians – Other States

Donald A. Molde, MD	Patrick Nicholson, MD	Sander Orent, MD
Incline Village, Nevada	Salt Lake City, Utah	Boulder, Colorado

Veterinarians

Roberta L. Boyden, DVM Coburg, Oregon

Sue A. Dougherty, DVM, MA, Diplomate, A.C.V.I.M. Bend Veterinary Specialty & Emergency Center Bend, Oregon

Donna Harris, DVM Bend, Oregon

Byron S. Maas, DVM BA Zoology, Doctor of Veterinary Medicine Bend Veterinary Clinic, Inc Bend, Oregon

Wendy Merideth, BS, DVM Sunriver Veterinary Clinic Sunriver, Oregon

Mark B. Parchman, DVM, CCRT, Diplomate A.C.V.S. Bend Veterinary Specialty & Emergency Center Bend, Oregon Ann G. Samsel, DVM Eugene, Oregon

Scott D. Shaw, DVM Westside Pet Hospital Bend, Oregon

Sandra K. Smalley, DVM Eugene, Oregon

Jay Tischendorf, DVM Founder & Director American Ecological Research Institute Great Falls, Montana & Conroe, Texas

Terri Sue Wright, DVM Eugene, Oregon

LIST OF SUPPORTERS OF 2018 APA PETITION TO BAN M-44s IN OREGON (cont.)

Scientists

Marc Bekoff, Ph.D. Professor Emeritus Ecology & Evolutionary Biology University of Colorado Boulder, Colorado

Gay A. Bradshaw, Ph.D., Ph.D. The Kerulos Center Jacksonville, Oregon

Rick Hopkins, Ph.D. Senior Conservation Biologist Live Oak Associates, Inc. San Jose, California

John Laundré, Ph.D. Large Mammal Ecologist Corvallis, Oregon

William Lynn, Ph.D. Research Scientist Marsh Institute at Clark University Worcester, Massachusetts

Law Enforcement

Peter Fahy Former Chief Deputy District Attorney Lincoln County, Oregon Carter Niemeyer, M.S. Retired District Supervisor Wildlife Services, Montana Boise, Idaho

Jonathan Way, Ph.D. Founder, Eastern Coyote/Coywolf Research Osterville, Massachusetts

Robert Wielgus, Ph.D. Former Professor & Director (ret). Large Carnivore Conservation Lab Washington State University Moscow, Idaho

George Wuerthner, M.S. Ecologist Public Lands Media Bend, Oregon

Doug McKenna Former Special Agent U.S. Fish & Wildlife Services Sandia Park, New Mexico

M-44 Spring Manufacturer (former)

NOTE: This company is the long-time manufacturer of the spring used in M-44s. The company president did not know how the product he was making was being used until FOX News contacted him for an interview on M-44s in 2017. He then ceased production of the spring and took a stand against M-44 devices.

Jim Robertson, President, Lewis Spring & Mfg. Company, Niles, IL

Other Interested Parties

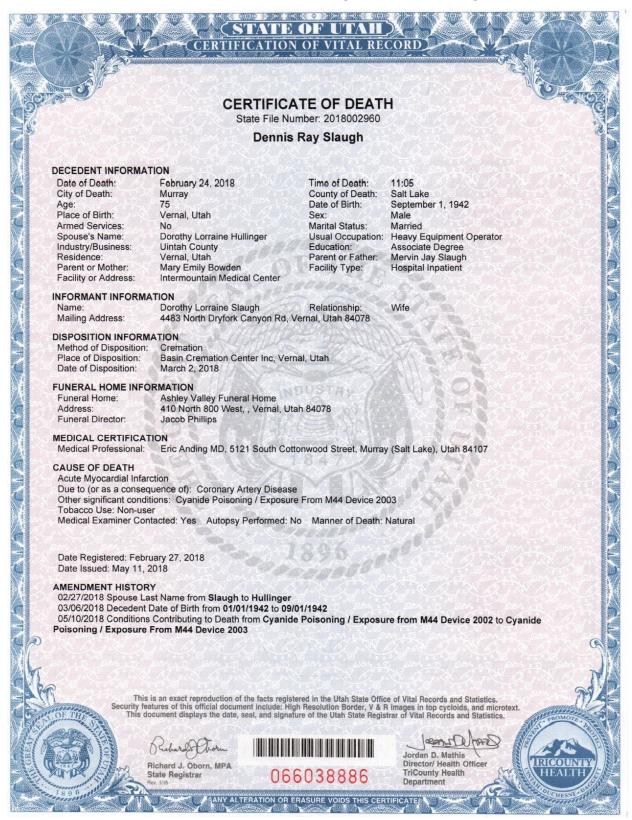
Stephen Capra Executive Director Bold Visions Conservation Albuquerque, New Mexico

Danielle Moser Wildlife Program Coordinator Oregon Wild Portland, Oregon Bob Sallinger Conservation Director Audubon Society of Portland Portland, Oregon

Wally Sykes Northeast Oregon Ecosystems Joseph, Oregon

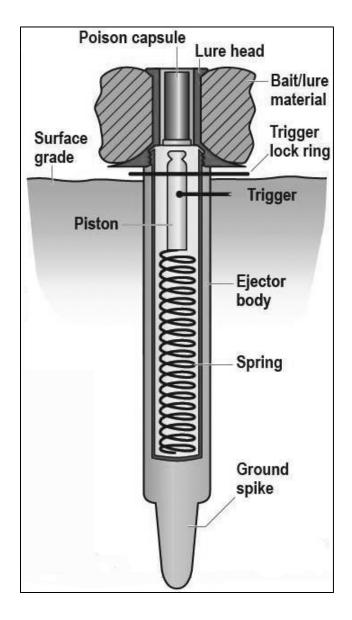
ATTACHMENT 1

Death Certificate for Dennis Slaugh, M-44 Poisoning Victim



ATTACHMENT 2

Diagram Showing M-44 Sodium Cyanide Ejection Device



APPENDIX A

Featured Incidents of Pet Killings and Human Poisonings Caused by M-44s

The list below highlights just a few of the documented incidents of people and domestic animals injured or killed by the M-44 cyanide devices used by USDA Wildlife Services. It was compiled from agency documents, news reports, and various other sources. The real M-44 body count is in the thousands, and far exceeds the numbers officially reported by Wildlife Services. See explanatory note on official counts in Appendix B, which shows Wildlife Services' yearly summary statistics on domestic dog killings.

February 2018: Dennis Slaugh of Vernal, Utah, dies. Slaugh was poisoned by an M-44 in 2003, and his death certificate listed cyanide poisoning from M-44 as a contributing cause (see Attachment 1).

March 2017: A dog and a 14-year-old boy triggered an M-44 in Idaho. The boy, along with several emergency personnel, were exposed to cyanide. The boy suffered long-term, adverse health effects. His dog died in front of him. Were it not for wind direction, the boy might also have have died. No warning signs were posted.ⁱ

March 2017: Two dogs were killed in Wyoming by an M-44 during a walk with their family.ⁱⁱ

February 2011: An M-44 was placed 918 from a residence without the family's knowledge, killing their dog and violating three EPA use restrictions.^{iii,iv}

February 2010: A dog was killed in Nebraska by an M-44 set by Wildlife Services on the dog owner's rangeland/pasture.^v

April 2010: A dog wearing collar and tags was killed in W. Virginia by an M-44 set on neighboring land. The Wildlife Services agent buried her without notifying the family.^{vi}

January 2008: A dog was killed by an M-44 in N. Dakota.vii

January 2008: A man in Texas was injured by an M-44 placed without his knowledge on grazing land.

February 2008: A beagle was killed by an M-44 in Virginia.viii

February 2008: A dog was killed by an M-44 in New Mexico.^{ix}

April 2008: A dog in N. Dakota was killed by an M-44 set on rangeland/pasture.^x

June 2008: A pit bull was killed in Virginia by an M-44 in a livestock pasture/hayfield.xi

January 2007: A dog was killed by an M-44 in North Dakota. XII SEE

March 2007: A Border collie was killed by an M-44 in Virginia.xiii

April 2007: A Border collie puppy was killed by an M-44 in Virginia.^{xiv,xv}

May 2007: A worker in Texas accidentally triggered an M-44. The cyanide was ejected into the man's eyes and he subsequently experienced burning and irritated eyes as well as disorientation.^{xvi, xvii}

June 2007: A Great Pyrenees was killed by an M-44 in New Mexico. xviii

January 2006: A Golden retriever was killed by an M-44 in Virginia.xix,xx

February 2006: A Labrador retriever was killed in Utah when she triggered an M-44 set a foot from a road.xxi

April 2006: A young German shepherd was killed when he triggered an M-44 on public land in Utah.xxii,xxiii

March 2005: An Australian Shepherd was killed in New Mexico by an M-44 set by Wildlife Services on rangeland.^{xxiv}

March 2005: A dog was killed in New Mexico by an M-44 set by Wildlife Services on ranch land.xxv

April 2005: A Border collie in New Mexico was killed by an M-44 set on the owner's ranch property. xxvii, xxvii

December 2005: A certified therapy dog who worked with at-risk youth was killed in front of a girl's group by an M-44 set 10 feet from a public road.^{xxviii,xxix}

January 2004: A dog was killed by an M-44 set by Wildlife Services in New Mexico on the ranch of the dog owner's relative.^{xxx}

February 2004: An Irish setter was likely killed by an M-44 in Virginia.xxxi

March 2004: A dog in Idaho was found dead within 200 yards of an M-44 set by Wildlife Services in a nearby sheep pasture.^{xoxii, xoxiii}

March 2004: A German shepherd was killed by an M-44 in New Mexico.xxxiv

May 2003: Dennis Slaugh was poisoned and permanently disabled when he triggered an M-44 on public land in Utah. He was forced to retire from his job.^{xxxv}

January 2002: A rancher in Nebraska was injured by the accidental discharge of an M-44 that had been set by Wildlife Services on his property.^{xxxvi}

February 2002: A dog was killed by an M-44 set by Wildlife Services. xxxvii

February 2002: A Labrador retriever was killed in Virginia by an M-44 set by Wildlife Services on a neighbor's cattle pasture.^{xxxviii}

February 2002: A dog was killed in New Mexico by an M-44 set by Wildlife Services on rangeland/pasture.xxiix

February 2002: A dog triggered an M-44 in Oregon placed on a neighboring ranch by Wildlife Services.^{xl}

February 2002: A dog was killed by an M-44 set by Wildlife Services.xii

February 2002: A dog was killed by an M-44 set by Wildlife Services on the farm of the dog owner's relative.xlii

February 2002: A dog in Oregon took 8 hours to die after exposure to an M-44 set on property next door to her home and without her knowledge. During a subsequent investigation WS requested that Oregon authorities "consider the info provided during the investigation be confidential *and not disclosed as public record* [emphasis added]." WS also refused to release a copy of the incident report to the dog's owner.^{xliii,xliv,xlv}

April 2002: A dog was killed by an M-44 set by Wildlife Services on a neighboring farm in Virginia.^{xivi}

June 2002: A black Angus cow was killed in West Virginia by an M-44 set by Wildlife Services in a pasture. Xivii

November 2002: A woman was injured after trying to remove an M-44 set by Wildlife Services on her neighbor's property. ^{xiviii}

May 2001: A dog in Colorado was killed by an M-44 set by Wildlife Services on a neighboring ranch "outside the provisions authorized by state law".^{xlix}

April 2001: A dog in Nebraska was killed by an M-44 set by Wildlife Services on rangeland/pasture.¹

January 2000: A dog in Oregon was killed after triggering an M-44 set 100 yards from the owner's home. The device was one of six that had been planted in a tree farm frequented by local children.^{11,111,1111}

February 2000: A dog in New Mexico activated an M-44 set on rangeland/pasture by Wildlife Services. liv

March 2000: A dog in Colorado was killed by an M-44 set on private property without the knowledge of the owners. The family, including a three-year-old girl, watched as the dog suffered and died. A state investigation found that Wildlife Services had not only trespassed, but broken a suite of federal rules regulating M-44s.¹

May 2000: A Border collie in West Virginia was killed by an M-44 set by Wildlife Services in a sheep pasture.^{Wi}

September 2000: A county surveyor in Utah discharged an M-44 after mistaking it for a survey marker. Wii

March 1999: A man and his three-year old daughter were walking with their dog on their property in Colorado when it triggered an M-44 and later died. A WS staffer had placed two traps on their land, trespassing and breaking a suite of federal rules. ^{Iviii}

April 1999: A dog was killed in Virginia when he triggered an M-44 set by Wildlife Services on a neighboring farm. The owner also found another dog's body at the device. A third dog also encountered an M-44 and returned home with red and swollen eyes as well as a swollen mouth and a peculiar odor. The owner himself likely experienced secondary poisoning.^{IIX, IX}

August 1999: An individual helping a Wildlife Services employee look for and remove M-44s accidentally fired one of the devices.^{bi}

September 1999: A hunting dog was killed in Virginia by anM-44 set by Wildlife Services. M-44s were not permitted for use in that state from September 1 to January 7, but the Wildlife Services employee had failed to remove them.^{1xii}

September 1999: A dog was killed in Oregon by an M-44 set by Wildlife Services. kill

October 1999: A Wildlife Services employee in Texas accidentally discharged an M- 44 as he was setting it. He had to be airlifted to a facility for treatment.^{lxiv}

October 1999: A dog was killed in Utah by an M-44 set by Wildlife Services. kv

December 1999: Two dogs were killed by M-44s during a hunting trip in New Mexico on state lands. ^{lxvi}

December 1999: A citizen in Nebraska accidentally discharged an M-44 as he attempted to move it with a pair of pliers while he was repairing fence wire.^{lxvii}

February 1998: A dog in Utah was killed by anM-44set by Wildlife Services on BLM land that adjoined the owner's private yard. No one was notified about Wildlife Services' activities.^{hxviii,hxx}

November 1998: A man in Texas, working on private land, was injured when he grabbed what he thought was a rusted metal rod to pull it from the ground and an M- 44 exploded in his hand.^{lxxi}

December 1998: A dog was killed in Oregon by an M-44 set by Wildlife Services. Ixxii

April 1995: A hunter in Idaho accidentally discharged an M-44 that had been set by Wildlife Services. bxiii

Fall 1994: A dog in Oregon was walking with its family when it triggered an M-44 set on the property without their knowledge. The owner, not knowing why her dog was in respiratory distress, attempted to help it and suffered secondary cyanide poisoning from inhalation. The dog suffered for 15 minutes before dying.^{lxxiv}

August 1993: Two bow hunters in Utah pulled M-44s set by Wildlife Services.^{bxv}

April 1990: A dog in New Mexico accompanying a ranch hand triggered an M-44. After attempting mouth-tomouth resuscitation on the dog, who died within a few minutes, the man quickly experienced loss of breath, a swollen tongue, a fast heart rate, numb lips, and curling fingers on one hand. He was transported to a hospital where he was treated and placed in intensive care.^{Ixxvi}

APPENDIX B

USDA Wildlife Services Yearly Summary Statistics of Domestic Dog Killings by M-44s

NOTE: The yearly totals reported below by USDA Wildlife Services do not reflect the total number of domestic dogs killed by M-44 cyanide devices. Whistleblowers from Wildlife Services have consistently stated that many dogs just go missing and families are left to wonder what happened to them. Additionally, unless someone other than a federal agent is there to witness the poisoning, the agents often do not record them. So countless dog deaths go unreported and will never be known.

FY 2016: 22 dogs loxvii and 7 "domestic animals (pets or livestock)" unintentionally killed by M-44s. loxviii

FY 2015: 17 dogs and 6 "domestic animals (pets or livestock)" unintentionally killed by M-44s. ^{Ixxix}

FY 2014: 17 dogs and 7 "domestic animals (pets or livestock)" unintentionally killed by M-44s. box

FY 2013: 44 dogs and 2 "domestic animals (pets or livestock)" unintentionally killed by M-44s. bxxi

FY 2012: 27 dogs unintentionally killed by M-44s. KILL SEP

FY 2011: 32 dogs unintentionally killed by M-44s. KXXIII LEP

FY 2010: 40 dogs unintentionally killed by M-44s. ^{lxxxiv}

FY 2009: 32 dogs unintentionally killed by M-44s. ^{Ixxxv}

FY 2008: 32 dogs unintentionally killed by M-44s. https://www.

FY 2007: 50 dogs unintentionally killed by M-44s. ^{lxxxvii}

FY 2006: 63 dogs unintentionally killed by M-44s. bxxviii

FY 2005: 92 dogs killed by M-44s (not broken out by intentional/unintentional). ^{luxxix}

FY 2004: 117 dogs were killed by M-44s (not broken out by intentional/unintentional).^{xc}

FY 2003: 108 dogs killed by M-44s (not broken out by intentional/unintentional). xci

FY 2002: 120 dogs killed by M-44s (not broken out by intentional/unintentional). xcii

2001: 169 dogs killed by M-44s (not broken out by intentional/unintentional).xciii

2000: 178 dogs killed by M-44s (not broken out by intentional/unintentional). xciv [1]

1999: 228 dogs killed by M-44s (not broken out by intentional/unintentional). XCV [1]

1998: 267 dogs killed byM44s (not broken out by intentional/unintentional).^{xcvi}

1997: 237 dogs killed by M-44s (not broken out by intentional/unintentional).^{xcvii}

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