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Katrina Fischer Kuh

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ENVIRONMENTAL PRIVACY

Katrina Fischer Kuh*

I. INTRODUCTION

Policymakers and scholars recognize that individuals are an important source of environmental harm.¹ Individuals' decisions and actions—running a washing machine, driving to work, or purchasing a pair of blue jeans²—impose direct and

* © 2015 Katrina Fischer Kuh. Professor of Law, Maurice A. Deane School of Law at Hofstra University. I am indebted to the Wallace Stegner Center at the University of Utah S.J. Quinney College of Law for providing me with the opportunity to present this paper as the 2013 Young Scholar Lecture. The project was also supported by a generous research grant funded by the Maurice A. Deane School of Law at Hofstra University and by the hard work of research assistants Sarah Heba, Adam Preller, and Frank Piccininni.

¹ See, e.g., JASON J. CZARNEZKI, EVERYDAY ENVIRONMENTALISM: LAW NATURE & INDIVIDUAL BEHAVIOR 142–43 (2011) (detailing the environmental impacts of everyday behaviors); RICHARD H. THALER & CASS R. SUNSTEIN, NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS 183–96 (2008) (observing that “[i]n the United States, national emissions limitations imposed on major pollution sources have been the rule, not the exception”; criticizing this command-and-control regime; and suggesting strategies for achieving voluntary changes in individual behavior, for example, by providing feedback and information); Nathan Ostrander, *Consumer Liability for Harms Linked to Purchases*, 2 ARIZ. J. ENVTL. L. & POL’Y 111, 121–23 (2011) (proposing a consumption tort to hold individuals accountable for environmental harms); James Salzman, *Sustainable Consumption and the Law*, 27 ENVTL. L. 1243, 1250, 1255–56 (1997) (explaining the connection between consumption and environmental harm); Michael P. Vandenbergh, *From Smokestack to SUV: The Individual as Regulated Entity in the New Era of Environmental Law*, 57 VAND. L. REV. 515, 537–84 (2004) [hereinafter Vandenbergh, *From Smokestack to SUV*] (identifying types of “individual environmentally significant behavior”); Michael P. Vandenbergh et al., *Implementing the Behavioral Wedge: Designing and Adopting Effective Carbon Emissions Reduction Programs*, 40 ENVTL. L. REP. 10547, 10551–52 (2010) [hereinafter Vandenbergh et al., *Implementing the Behavioral Wedge*] (making recommendations to policymakers about how best to achieve reductions in harms from environmentally significant individual behaviors); Michael P. Vandenbergh, et al., *Individual Carbon Emissions: The Low-Hanging Fruit*, 55 UCLA L. REV. 1701, 1716–51 (2008) [hereinafter Vandenbergh et al., *Individual Carbon Emissions*] (identifying individual greenhouse gas-emitting behaviors most susceptible to change and suggesting strategies for changing them); Michael P. Vandenbergh & Anne C. Steinemann, *The Carbon-Neutral Individual*, 82 N.Y.U. L. REV. 1673, 1724 (2007) [hereinafter Vandenbergh & Steinemann, *The Carbon-Neutral Individual*] (suggesting that “a mixture of information provision and traditional regulatory measures may be needed” to “reduce carbon-emitting behaviors”).

² AGENCE DE L'ENVIRONNEMENT ET DE LA MAÎTRISE DE L'ÉNERGIE, AN ENVIRONMENTAL PRODUCT DECLARATION OF JEANS, available at http://www.ademe.fr/internet/eco-jean/EPD_en_jeans_v2.pdf, archived at <http://perma.cc/89K6-K7LS> (last visited Sept. 3, 2014) (providing a life cycle analysis of the environmental impact of purchasing and wearing blue jeans, including both indirect impacts embedded in the

indirect impacts on the environment that, while often individually *de minimis*, collectively impose significant harms.³ Environmental statutes, however, rarely target these environmentally significant individual behaviors; regulatory attention focuses primarily on industrial sources of environmental harm.⁴ And public ignorance of the connection between lifestyle and environment is pervasive—there is “a cognitive severance of environmental cause and effect”⁵ that permits individuals to “participate in environmental degradations of monumental proportions in a completely anonymous and unconscious fashion.”⁶

In the context of climate change, for example, greenhouse gas emissions attributable to the direct emissions of individuals or households are estimated to account for approximately 30% of total U.S. emissions.⁷ Notably, this estimate counts only direct emissions and thus captures primarily greenhouse gas emissions generated by private transportation and home energy use.⁸ Estimates of greenhouse gas emissions attributable to individuals are far greater when indirect emissions are included. Indirect emissions might result from the preparation (production and delivery) of a product or service before its use (such as the emissions generated during the manufacture and delivery of a car). One study that adopted a consumer lifestyle approach designed to capture both direct and indirect emissions concluded that consumer lifestyle decisions account for 85% of all energy use in the United States and that consumer consumption activities account for 102% of U.S. emissions.⁹ Although reductions in consumer energy demand offer an efficient approach for reducing a significant volume of greenhouse gas emissions,¹⁰ core regulatory approaches are directed upstream to manufacturers and energy producers

manufacturing process of jeans and direct impacts occasioned by consumers’ washing and disposal of the jeans).

³ Vandenbergh, *From Smokestack to SUV*, *supra* note 1, at 541–84 (charting the direct contributions of individuals to various environmental harms).

⁴ *Id.* at 517 (“With few exceptions, the environmental laws enacted since the 1970s have directed command and control requirements at large industrial sources of pollution.”).

⁵ RICHARD J. LAZARUS, *THE MAKING OF ENVIRONMENTAL LAW* 213 (2004); *see also* CZARNEZKI, *supra* note 1, at 142 (“It has become more difficult to appreciate the ecological consequences of our daily activities as modern society becomes further removed from our sources of food and energy, and from the natural resources that serve as raw materials.”).

⁶ Betsy Taylor & Dave Tilford, *Why Consumption Matters*, in *THE CONSUMER SOCIETY READER* 475, 482 (Juliet B. Schor & Douglas B. Holt eds., 2000); *see also* Victor B. Flatt, *Too Big to Jail or Too Abstract (or Rich?) to Care*, 72 MD. L. REV. 1345, 1347 (2013) (“[T]he impacts of environmental harm have come to seem less immediate and threatening, and therefore are seen as less of a threat to the social order.”).

⁷ Vandenbergh et al., *Implementing the Behavioral Wedge*, *supra* note 1, at 10549.

⁸ *Id.*

⁹ Shui Bin & Hadi Dowlatabadi, *Consumer Lifestyle Approach to U.S. Energy Use and the Related CO₂ Emissions*, 33 ENERGY POL’Y 197, 203–05 (2005) (explaining that the fact that the total exceeds 100% reflects emissions embodied in imported goods).

¹⁰ Vandenbergh et al., *Individual Carbon Emissions*, *supra* note 1, at 1703 (“[T]he individual and household sector represents an enormous and largely untapped source of prompt, low-cost emissions reductions.”).

and rely primarily on measures that would reduce demand indirectly, as by raising the cost of energy or mandating product efficiency.¹¹ Proposals that raise consumer energy costs struggle to find political support; product efficiency mandates are vulnerable to overall increases in demand resulting from consumer behaviors, including the rebound effect (increases in product use when the produce becomes more energy efficient and therefore less expensive to operate) or junker effects (increases in the duration of the use of older, more inefficient products when energy efficiency requirements cause new replacement products to become more expensive).¹²

Reorienting law and policy to more directly address and limit the harms arising from environmentally significant individual behaviors could thus yield significant benefits. Doing so will, however, require new regulatory approaches and better information about environmentally significant behaviors.¹³ I have previously explained in some detail how modalities for regulating environmentally significant behavior require information about that behavior and so I will not repeat that analysis here,¹⁴ but the need for information to support regulation is readily apparent. Before we can deploy norm management to encourage voluntary behavior change by educating individuals about the environmental harms occasioned by their behavior, we must understand those behaviors and their environmental effects, as well as communicate them to individuals.¹⁵ Before we can use a market approach to charge individuals for consumption of a public environmental good, we must be able to discern and track how individuals consume that good.¹⁶ To effectively impose a mandate prohibiting behavior, we must have some means to identify violations and

¹¹ John C. Dernbach, *Harnessing Individual Behavior to Address Climate Change: Options for Congress*, 26 VA. ENVTL. L.J. 107, 108 (2008) (lamenting that “the comprehensive bills currently before Congress focus primarily on large emitting entities”; exhorting Congress to “also actively engage individuals in the implementation of any climate change legislation”; and explaining that “[t]he need for individual citizen involvement is necessary for a variety of reasons, including the importance of ensuring proper implementation, the need to reduce GHG emissions as rapidly as possible, and the significant contribution that individuals make to GHG emissions”).

¹² Robert R. Nordhaus & Kyle W. Danish, *Assessing the Options for Designing a Mandatory U.S. Greenhouse Gas Reduction Program*, 32 B.C. ENVTL. AFF. L. REV. 97, 119, 148–49, 157 (2005).

¹³ Cass R. Sunstein, *Behavioral Economics, Consumption, and Environmental Protection*, in HANDBOOK ON RESEARCH IN SUSTAINABLE CONSUMPTION (Lucia Reisch & John Thøgersen eds.) (forthcoming) (manuscript at 4) (on file with *Utah Law Review*) (advocating the use of choice architecture and libertarian paternalism to achieve environmental benefits by shaping consumer behavior while preserving choice in a way that “expands the policy toolbox”).

¹⁴ Katrina Fischer Kuh, *Personal Environmental Information: The Promise and Perils of the Emerging Capacity to Identify Individual Environmental Harms*, 65 VAND. L. REV. 1565, 1575–95 (2012).

¹⁵ Vandenbergh & Steinemann, *The Carbon Neutral Individual*, *supra* note 1, at 1707 (describing how information can aid norm development).

¹⁶ Kuh, *supra* note 14, at 1585–91.

enforce the mandate.¹⁷ More generally, better information about environmentally significant individual behaviors and their impacts may be crucial for generating the personal and political will to support the adoption and implementation of policies directed to those behaviors.¹⁸

The capacity for developing information about environmentally significant individual behaviors and deploying that information in support of regulation has grown rapidly with advances in technology.¹⁹ Remote sensing, for example, is being deployed in support of environmental regulation in a number of contexts.²⁰ The

¹⁷ *Id.* at 1593–95; see also Felicity Barringer, *With Data and Resolve, Tacoma Fights Pollution*, N.Y. TIMES, June 12, 2014, at A17 (describing the use of advanced monitoring techniques to identify and track storm water discharges). In Tacoma, the “forensic work of the scientists and the city changed the ability to enforce antipollution laws.” Barringer, *supra*, at A17. Dr. Joel Baker, science director of the Center for Urban Waters in Tacoma, “talk[s] about being able to go to anyone—an individual, a house, a business—who is discharging something . . . and unambiguously trace back to them. That gets you into a whole different conversation with people about responsibilities and remedies.” *Id.*

¹⁸ Flatt, *supra* note 6, at 1371 (“Without a will, there is no way, and no funding, focus, or public pressure to stem this tide . . . [W]e should try and help people understand that environmental harms are more immediate to spur them into supporting stronger environmental policies and enforcement for themselves and for others.”); Mark S. McCaffrey & Susan M. Buhr, *Toward a Climate-Literate Society*, [2008] 38 Env’tl. L. Rep. (Env’tl. Law Inst.) 10838, 10838 (describing a study showing that knowledge about the causes of climate change often correlates with a stated intention to support mitigation policies); Paul C. Stern et al., *A Value-Belief-Norm Theory of Support for Social Movements: The Case of Environmentalism*, 6 HUM. ECOLOGY REV. 81, 83–84 (1999) (discussing the Value-Belief-Norm theory with respect to civic behaviors).

¹⁹ Kuh, *supra* note 14, at 1566–67; Gregg P. Macey, *The Architecture of Ignorance*, 2013 UTAH L. REV. 1627, 1638 (describing how technology has greatly increased the availability of environmental data and observing that “[t]he scale of data available, the practice of translating them into usable knowledge, and the participants in those efforts are each experiencing qualitative shifts. . . . Agencies must grapple with a paradigmatic change in how policy-relevant knowledge is produced, as well as with the demand for new regulatory practices that it will bring.”).

²⁰ See OFFICE OF RESEARCH & DEV., U.S. ENVTL. PROT. AGENCY, REMOTE SENSING PROGRAM FOR EPA FY 2006 PROGRAM SUMMARY 1–2 (2007) (summarizing the use of remote sensing to support EPA programs); William Boyd, *Ways of Seeing Environmental Law: How Deforestation Became an Object of Climate Governance*, 37 ECOLOGY L.Q. 843, 884–91 (2010) (describing the use of remote sensing technology in the management of forests and land use); see also Macey, *supra* note 19, at 1666–67 (describing how remote sensing and other technologies will enable “data-intensive regulation” and observing that “[a]cross geographies, data are gathered at new scales and in near real time, through nimble networks in which members of the public can serve as nodes”). See generally Erin J. Coburn, *Protecting Our Environment in a Virtual Age: How Wildlife Webcams Could Strengthen Enforcement of the Endangered Species Act*, [2013] 43 Env’tl. L. Rep. (Env’tl. Law Inst.) 11021 (arguing that an individual that views species via wildlife webcam should be recognized as having standing under the Endangered Species Act); Nicole Giffin, Note, *Privacy Issues Surrounding the Tracking and Sharing of Boat Movement Information as Part of Invasive Species Prevention Programs*, 3 ARIZ. J. ENVTL. L. & POL’Y 141 (2013)

“smart city” provides perhaps the best example of using technology, including remote sensing, to generate information about and shape environmentally significant individual behaviors. A smart city is a “place[] where information technology is combined with infrastructure, architecture, everyday objects, and even our bodies to address social, economic, and environmental problems.”²¹ Songdo, South Korea, a newly constructed smart city, is described as follows:

Songdo is the world’s largest experiment in urban automation, with millions of sensors deployed in its roads, electrical grids, water and waste systems to precisely track, respond to, and even predict the flow of people and material. . . . Plans call for cameras that detect the presence of pedestrians at night in order to save energy safely by automatically extinguishing street lighting on empty blocks. Passing automobiles with RFID-equipped license plates will be scanned . . . to create a real-time map of vehicle movements and, over time, the ability to predict future traffic patterns based on the trove of past measurements. A smart electricity grid will communicate with home appliances, perhaps anticipating the evening drawdown of juice as tens of thousands of programmable rice cookers count down to dinnertime.²²

A basic premise of smart cities is that technology will track and store data about resident behavior that can be used by the city to manage those behaviors for a variety of beneficial purposes, including reducing energy demand and achieving other environmental objectives.²³ Finally, this new data may help to “objectify[] . . . and fram[e]” the challenge of limiting environmental harms arising from environmentally significant individual behaviors, “thereby shaping the possibilities for particular legal and policy responses.”²⁴ As one scholar has noted, “particular scientific and technological knowledge practices make environmental problems into coherent objects of governance” and “[s]uch knowledge practices, or ways of seeing, are instrumental in shaping regulatory possibilities”²⁵

To summarize, individuals are increasingly recognized as an important source of environmental harm that warrants greater policy attention; designing and implementing effective policies will require information about environmentally significant individual behaviors; and technology makes it feasible to develop such information. Developing information about environmentally significant individual

(evaluating the use of electronic tracking of boats to prevent the spread of quagga and zebra mussels).

²¹ ANTHONY M. TOWNSEND, *SMART CITIES: BIG DATA, CIVIC HACKERS, AND THE QUEST FOR A NEW UTOPIA* 15 (2013).

²² *Id.* at 24 (citation omitted).

²³ *Id.* at 29 (describing the use of data in Songdo, South Korea); *id.* at 38–42 (describing the ecological benefits of the smart grid); *id.* at 205–12 (describing data-driven management).

²⁴ Boyd, *supra* note 20, at 898.

²⁵ *Id.* at 843.

behaviors can, however, occasion significant concerns about privacy. With respect to smart cities, one author remarks: “The extent to which mass urban surveillance will be tolerated in smart cities will differ around the world. Government, with varying degrees of citizen input, will need to strike a balance between the costs of intrusion and the benefits of early detection.”²⁶ Privacy concerns occasioned by the installation of smart meters have caused some communities to vote to ban their installation and have caused regulators to alter the way the technology is deployed.²⁷ Recently, false reports about the Environmental Protection Agency’s (EPA) use of drones to detect Clean Water Act (CWA) violations (which originated in complaints about the EPA’s use of small aircraft for the same purpose) generated a voluble outcry about government intrusion on privacy.²⁸ And scholars have flagged potential constitutional limits, grounded in privacy, on the use of Geographic Information Systems (GIS) technology and remote sensing in support of environmental regulation.²⁹

In light of the growing regulatory and political imperative to identify, understand, and address environmentally significant individual behaviors and the emerging technical capacity for doing so, it will become increasingly necessary for environmental policy to navigate privacy issues. This Article looks to nuisance doctrine, surveillance under environmental statutes, and Fourth Amendment cases arising in implementation of fish and game laws (the hunter enforcement cases) to better understand our experience, to date, balancing the need for environmental information with privacy. Section A analyzes common law nuisance and its relationship to individual privacy concerns and concludes that the law affords little

²⁶ TOWNSEND, *supra* note 21, at 274 (“Americans seem resigned to muddle through, leaving the courts to settle conflicts over digital surveillance and privacy on a case-by-case basis.”).

²⁷ Kuh, *supra* note 14, at 1613–22.

²⁸ David A. Fahrenthold, *Reining in the Rumor About EPA ‘Drones,’* WASH. POST (June 18, 2012), http://www.washingtonpost.com/politics/reining-in-the-rumors-about-epa-drones/2012/06/16/gJQAwWjkhV_story.html, archived at <http://perma.cc/3R9-QKQD>.

²⁹ E.g., Peter M. Flannery, Note, *How to Pry with Maps: The Fourth Amendment Privacy Implications of Governmental Wetland Geographic Information Systems (GIS)*, 29 RUTGERS COMPUTER & TECH. L.J. 447, 472 (2003) (“Under the current law . . . a wetland GIS is likely to infringe upon the Fourth Amendment privacy rights of homeowners in several factual circumstances. In light of this circumstance, federal and state governments should proceed with the utmost caution in planning and constructing such a project, or perhaps reconsider it altogether.” (citation omitted)); Giffin, *supra* note 20, at 154 (arguing that electronic tracking of boats could help to prevent the spread of quagga and zebra mussels but concluding that “the implementation of a real-time regional tracking system is not feasible for privacy, constitutional, and practical reasons” and endorsing alternate means of mussel control); Kenneth J. Markowitz, *Legal Challenges and Market Rewards to the Use and Acceptance of Remote Sensing and Digital Information as Evidence*, 12 DUKE ENVTL. L. & POL’Y F. 219, 251–52 (2002) (providing an overview of remote sensing technologies and their actual and potential use in environmental regulation and observing that “[t]he main constitutional issues facing remote sensing data are allegations of invasions of privacy and warrantless searches” (citation omitted)).

value to or protection of privacy in the context of at least one type of environmental externality—conduct that gives rise to a common law nuisance. Recognizing that most environmentally significant individual behaviors do not constitute a common law nuisance, Section B then considers how privacy values are balanced with the need for information to support the development and enforcement of environmental statutes designed to regulate (primarily industrial) conduct that often imposes harm only in the aggregate. Section C focuses on how the Fourth Amendment has been applied with respect to enforcement of a subset of environmental statutes—fish and game laws.

The hunter enforcement cases discussed in Section C provide a particularly useful analogue for thinking about privacy balancing with respect to environmentally significant behaviors. As with other environmentally significant behaviors, the conduct of an individual hunter will generally give rise to an environmental harm (for example, impacting the health of game populations) only when aggregated with the actions of others. Moreover, the hunter enforcement cases provide a context where regulation is being applied primarily to individuals, as opposed to corporate entities. The hunter enforcement cases suggest potentially useful guidance for policymakers and courts navigating privacy balancing in the context of environmentally significant behaviors. Notably, although aggregation is required for the regulated conduct to give rise to an environmental harm and although privacy intrusions are incurred by individuals, privacy balancing is nonetheless often struck in favor of regulatory enforcement in the hunter enforcement cases. This, in turn, suggests the possibility that privacy balancing might likewise favor regulation with respect to other environmentally significant behaviors, provided that the state interest in regulation can be firmly established.

II. PRIVACY AND ENVIRONMENTAL LAW

A. Nuisance

Common law nuisance is a useful starting point for exploring the intersection between environmental protection and privacy, both because common law nuisance embodies principles that are reflected in and continue to influence the application of the modern environmental statutory regime³⁰ and because, as described below, nuisance doctrine can be understood to effect a rather stark waiver of privacy.

Nuisance intersects with privacy in a myriad of ways. Nuisance doctrine seeks, in part, to protect the privacy of individuals by preventing intrusions on the use and enjoyment of property; thus, interference with use and enjoyment of property can arise from diminution of privacy.³¹ As the Restatement (Second) of Torts explains,

³⁰ CEEED v. Cal. Coastal Zone Conservation Comm'n, 118 Cal. Rptr. 315, 324 (Ct. App. 1974) ("Current legislation for environmental and ecological protection constitutes but 'a sensitizing of and refinement of nuisance law.'" (quoting CALIFORNIA ZONING PRACTICE, DONALD G. HAGMAN ET AL., 28–29 (1969 & Supp. 1973))).

³¹ Pritchett v. Bd. of Comm'rs of Knox Cnty., 85 N.E. 32, 35 (Ind. Ct. App. 1908) (observing that a county's construction of a jail caused a neighbor's "right of privacy [to]

“Freedom from discomfort and annoyance while using lands is often as important to a person as freedom from physical interruption with his use or freedom from detrimental change in the physical condition of the land itself.”³² On the flip side, alleged nuisance conduct has been defended on the ground that it was necessary to protect the alleged *nuisancer’s* privacy—in one case, for example, a court held that a neighbor’s high fence was not a nuisance, in part because “the fence served a useful purpose by protecting the [neighbor’s] privacy”³³ Some nuisance ordinances have been challenged on the grounds that they violate fundamental privacy rights. In *City of New York v. New St. Mark’s Baths*,³⁴ for example, a bathhouse permanently enjoined from maintaining a public nuisance argued that “a right to privacy prohibits regulation of gay sexual activity in private rooms on the premises”³⁵ (the court rejected the argument, citing to precedent for the proposition that the right to privacy extends only to conduct in a “noncommercial, private setting”³⁶).

However, the chief way that nuisance intersects with privacy is embedded in and flows from a core doctrinal contour of nuisance: the value of the defendant’s conduct. To evaluate whether conduct gives rise to a nuisance, courts usually consider the utility or value of the defendant’s conduct.³⁷ The Restatement (Second) of Torts, for example, provides that “[o]ne is subject to liability for a private nuisance if, but only if, his conduct is a legal cause of an invasion of another’s interest in the private use and enjoyment of land, and the invasion is . . . intentional

be[] invaded” and that “[t]his right is well recognized” and “derived from natural law”); *Begnaud v. Camel Contractors, Inc.*, 721 So. 2d 550, 554 (La. Ct. App. 1998) (“Whether an owner of property is liable to his neighbors under the Civil Code Articles of vicinage, La.Civ.Code arts. 667–669, is a determination to be made by the trier of fact based upon the reasonableness of the conduct in light of the circumstances, and such an analysis requires consideration of factors such as the character of the neighborhood, the degree of intrusion privacy and the effect of the activity on the health and safety of the neighbors.” (citation omitted)); Omar Saleem, *Killing the Proverbial Two Birds with One Stone: Using Environmental Statutes and Nuisance to Combat the Crime of Illegal Drug Trafficking*, 100 DICK. L. REV. 685, 710 (1996) (“Historically, nuisance laws have protected the individual’s zone of privacy.”).

³² RESTATEMENT (SECOND) OF TORTS § 821D cmt. b (1979).

³³ *Mickel v. Norton*, 69 So. 3d 1081, 1083 (Fla. Dist. Ct. App. 2011) (citations omitted).

³⁴ 168 A.D.2d 311 (N.Y. App. Div. 1990).

³⁵ *Id.* at 311.

³⁶ *People v. Onofre*, 415 N.E.2d 936, 941 (N.Y. 1980).

³⁷ A nuisance can sometimes also be found without considering the utility of the defendant’s conduct by looking narrowly at the gravity of the harm imposed on the plaintiff. *E.g.*, RESTATEMENT (SECOND) OF TORTS § 829A (1979) (“An intentional invasion of another’s interest in the use and enjoyment of land is unreasonable if the harm resulting from the invasion is severe and greater than the other should be required to bear without compensation.”); *see also* Jeff L. Lewin, *Boomer and the American Law of Nuisance: Past, Present, and Future*, 54 ALB. L. REV. 189, 229–35 (1990) (characterizing this approach as the “plaintiff-centered” perspective on nuisance law).

and unreasonable”³⁸ Conduct can be “unreasonable” so as to support a finding of nuisance, “if the gravity of the harm outweighs the utility of the actor’s conduct[,]”³⁹ and the utility of conduct can be assessed by considering “(a) the social value that the law attaches to the primary purpose of the conduct; (b) the suitability of the conduct to the character of the locality; and (c) the impracticability of preventing or avoiding the invasion.”⁴⁰ Although there is muddiness and variation in the precise manner in which different jurisdictions incorporate the utility or value of the defendant’s conduct into the analysis of whether the conduct gives rise to an actionable nuisance, most jurisdictions assess the value or utility of the defendant’s alleged nuisance conduct in some fashion.⁴¹

Accordingly, the legal test for determining whether conduct gives rise to a nuisance compels scrutiny of the conduct at issue. This is reflected in the application of discovery rules in nuisance actions. Model nuisance interrogatories, for example, request *inter alia* that the defendant “[d]escribe the nature of the business conducted” at the property, “[s]et forth the purpose and use of the real estate of the defendant,” and “[s]tate what caused the soot to emit from the factory.”⁴² Discovery rules also generally permit the inspection of property.⁴³ Entry onto property is most appropriate “where the current condition of property is at issue or may have evidentiary value,”⁴⁴ as is often the case in nuisance actions. Some courts appear more inclined to grant broad discovery to “enhance the fact-finding process” in cases “affecting not only the property rights of the plaintiff but environmental rights of the public.”⁴⁵

In granting discovery orders, including in nuisance actions, courts are meant to consider privacy interests. For example, in a case where an individual alleged that a neighboring residence constituted a nuisance based on the condition and maintenance of the property, a trial court granted the plaintiff’s motion to compel discovery to investigate the nuisance that would have permitted the plaintiff to

³⁸ RESTATEMENT (SECOND) OF TORTS § 822 (1979).

³⁹ *Id.* § 826(a).

⁴⁰ *Id.* § 828.

⁴¹ For an excellent overview of the development and application of utility assessments in nuisance doctrine, see Lewin, *supra* note 37, at 191–236.

⁴² 10B MARC G. PERLIN & STEVEN H. BLUM, MASSACHUSETTS PRACTICE SERIES: PROCEDURAL FORMS ANNOTATED § 79:31 (6th ed. 2009).

⁴³ FED. R. CIV. P. 34(a)(2) (“A party may serve on any other party a request within the scope of Rule 26(b) to permit entry onto designated land or other property possessed or controlled by the responding party, so that the requesting party may inspect, measure, survey, photograph, test, or sample the property or any designated object or operation on it.”); see 8B CHARLES ALAN WRIGHT & ARTHUR R. MILLER, FEDERAL PRACTICE AND PROCEDURE § 2206, (3d ed. Supp. 2014) (observing that “[t]his procedure has been fruitfully used in a number of cases”).

⁴⁴ 15A WASH. PRAC. HANDBOOK CIV. PROC. § 50.1 (2013–2014 ed.).

⁴⁵ *Versatile Metals, Inc. v. Union Corp.*, Civ. A. No. 85-4085, 1986 WL 8720, at *3 (E.D. Pa. Aug. 8, 1986) (granting discovery order for inspection and testing of PCB-contaminated property).

inspect, measure, photograph, test, and sample the neighboring property.⁴⁶ The trial court's discovery order was vacated on appeal on the ground that the trial court failed to apply the proper legal standard to the motion.⁴⁷ The reviewing court reasoned that in crafting discovery orders, trial courts "must balance the degree to which the proposed inspection would aid in the search for truth against the burdens and dangers posed by the inspection, and limit the frequency or extent of use of the discovery methods to prevent undue burden." In this case, "the record indicates that the trial court did not undertake an analysis of the burdens and risks the Gilletts' discovery request posed to Fletcher's privacy, but, instead, considered only the test for relevance"⁴⁸

However, broad discovery orders are regularly granted in nuisance actions. In *Whittle v. Weber*,⁴⁹ the plaintiff alleged that his neighbor's property gave rise to a nuisance and sought a discovery order to inspect the neighbor's property "for purposes of conducting an inspection of the items placed upon [the] land to determine whether or not hazardous substances or substances of any other nature exist[ed] that could present a threat to the neighbors surrounding [the] property and/or the ground water beneath their property."⁵⁰ The superior court granted the discovery order with the limitation that the inspection not "extend to inside any residence."⁵¹ On appeal, the Alaska Supreme Court held that the discovery order did not violate the neighbor's right to privacy because the property was directly at issue in the case, the inspection was specific about the information sought, and the order did not permit inspection of the inside of the residence.⁵²

The plaintiff in another case, *Coldani v. Hamm*,⁵³ sued a neighbor who operated a dairy farm alleging that runoff from the dairy farm was contaminating groundwater in violation of the CWA and interfering with plaintiff's use and enjoyment of his property, thereby constituting a state law public nuisance. At one point during the protracted (and ultimately unsuccessful) litigation, the court authorized an inspection of the dairy farm property under Rule 34 "for purposes of testing the soil, sediment and groundwater."⁵⁴ The need for the inspection was explained by the court as follows:

Plaintiff intends to take samples . . . to show not only that nitrates exist in the groundwater, but also in order to trace the nitrates to defendants' ranching operations. In particular, plaintiff believes that antibiotics, hormones, nutritional supplements, pesticides and fertilizers used in defendants' ranching operations will appear together with nitrates in the

⁴⁶ See *Gillett v. Conner*, 133 P.3d 960, 961 (Wash. Ct. App. 2006).

⁴⁷ *Id.*

⁴⁸ *Id.* at 961, 964.

⁴⁹ 243 P.3d 208 (Alaska 2010).

⁵⁰ *Id.* at 210.

⁵¹ *Id.*

⁵² *Id.* at 213.

⁵³ No. CIV S-07-0660 JAM EFB, 2008 WL 3992719, at *1 (E.D. Cal. Aug. 26, 2008).

⁵⁴ *Id.* at *1.

allegedly contaminated groundwater. Plaintiff argues that the presence of such substances in the groundwater will link Lima Ranch to the alleged nitrate contamination.⁵⁵

The court also granted the plaintiff's motion to compel responses to five interrogatories that asked the owners of the dairy farm "to identify all antibiotics, hormones and nutritional supplements administered to livestock at [the dairy farm] from 1990 to present" and "to identify all fertilizers and pesticides used at [the dairy farm] from 1990 to present."⁵⁶

And, perhaps most notably, in one case involving nuisance-like facts, a potential nuisance *defendant* was authorized to inspect and test the *plaintiff's* property. In *Martin v. Reynolds Metals Corporation*,⁵⁷ the operator of an aluminum plant, fearing that a neighbor who raised cattle was going to bring suit alleging that fluoride emissions from the plant damaged his property and cattle, petitioned to examine the neighbor's real property and cattle.⁵⁸ The court upheld an order under Rule 34 of the Federal Rules of Civil Procedure authorizing the plant owner to enter and inspect the neighbor's property, including "[o]btaining specimen samples of forage, feeds, air, water, soil, vegetation and mineral supplements," "[e]xamining the pastures and supplemental feed" of the cattle, "[p]hotographing the animals, foodstuffs, pastures and facilities," and examining the cattle, including by taking urine samples.⁵⁹

The imperative to assess the utility of the defendant's conduct in nuisance actions, and balance it against the harm to the plaintiff, can thus compel an invasive fact finding process. Yet, there is little discussion of how utility assessments in nuisance inquiries affect privacy. This is, perhaps, not surprising. All litigation to some extent opens one up to potentially invasive discovery and the disclosure of private information.⁶⁰ Claims to privacy for nuisance conduct may be unlikely or weak because at least some aspects of the conduct are necessarily not private as they are manifest outside of the nuisancer's property. There is no mystery about the conduct underlying many common sources of nuisance—a smokestack bellowing smoke or a penned livestock generating a stench. The interest in privacy with respect to nuisance conduct may simply be subordinate to the interests of other property owners. Nuisancers, of course, forfeit far more than privacy with respect to their nuisance conduct; they can lose the freedom to engage in the conduct all together, or at least for free, thus rendering the loss of privacy relatively less notable. Nuisancers may even lose the possibility for compensation for a taking under the

⁵⁵ *Id.*

⁵⁶ *Id.* at *2.

⁵⁷ 297 F.2d 49 (9th Cir. 1961).

⁵⁸ *Id.* at 52.

⁵⁹ *Id.* at 53 n.1.

⁶⁰ See Daniel J. Solove, *Access and Aggregation: Public Records, Privacy and the Constitution*, 86 MINN. L. REV. 1137, 1145–49 (2002) (describing the information generated about individuals during civil and criminal proceedings and observing that "[c]ourt records are potentially the most revealing records about individuals").

“nuisance exception” to takings, which provides that there is no regulatory taking where property is deemed a nuisance under the common law, including with respect to actions taken under environmental statutes.⁶¹

Another possibility, and one that is intriguing for understanding environmental privacy, is that the indifference to privacy in the context of nuisance reflects, at least in part, a sense that claims to privacy for nuisance conduct are waived by the nuisancer’s decision to impose an environmental externality on others.⁶² This possible quid pro quo between the decision to impose an externality and privacy finds clear expression in a line of cases invoking the community caretaking doctrine pursuant to which some courts have found that government officers can enter property to abate a nuisance without a warrant.⁶³ In *United States v. Rohrig*,⁶⁴ for example, officers responding to noise complaints entered a home without a warrant and seized marijuana discovered in plain view.⁶⁵ In upholding the warrantless entry and seizure of the marijuana, the Sixth Circuit reasoned:

Just as one’s expectation of privacy diminishes as he ventures beyond his doorway, . . . Defendant here undermined his right to be left alone by projecting loud noises into the neighborhood in the wee hours of the morning, thereby significantly disrupting his neighbors’ peace. Indeed, in this case, we cannot protect Defendant’s interest in maintaining the

⁶¹ See *Lucas v. S.C. Coastal Council*, 505 U.S. 1003, 1029–32 (1992) (explaining that confiscatory regulations “must inhere in the title itself, in the restrictions that background principles of the State’s law of property and nuisance already place upon land ownership”). *Id.* at 1029. Notably, in describing the inquiry to be undertaken to assess whether the nuisance exception applies, the Supreme Court cites to the Restatement (Second) of Torts sections 826 and 827, and advises that it will “ordinarily entail[] . . . analysis of, among other things, the degree of harm to public lands and resources, or adjacent private property, posed by the claimant’s proposed activities, . . . the social value of the claimant’s activities and their suitability to the locality in question” *Id.* at 1030–31 (citations omitted).

⁶² The conduct underlying a nuisance must generally be intentional, although that term is, importantly, understood to include simply knowing that engaging in the conduct is causing or substantially certain to cause the nuisancing effect. See RESTATEMENT (SECOND) OF TORTS § 825(b) (1979).

⁶³ See *United States v. Rohrig*, 98 F.3d 1506, 1522 (6th Cir. 1996) (upholding warrantless intrusion based upon nuisance created by loud music that severely disturbed neighbors); *People v. Lanthier*, 488 P.2d 625, 628 (Cal. 1971) (upholding warrantless search of locker based on smell that led to discovery of marijuana); *Olson v. Maryland*, 56 A.3d 576, 606 – 07 (Md. Ct. Spec. App. 2012) (upholding warrantless entry to abate noise nuisance). Note that several circuits have limited the community caretaking doctrine, and reliance on it, for warrantless searches to automobiles, and some courts have noted that it may simply be a type of exigent circumstance. See, e.g., *Ray v. Township of Warren*, 626 F.3d 170, 175–77 (3rd Cir. 2010) (observing that “[t]here is some confusion among the circuits as to whether the community caretaking exception . . . applies to warrantless searches of the home” and listing cases).

⁶⁴ 98 F.3d 1506 (6th Cir. 1996).

⁶⁵ *Id.* at 1509.

privacy of his home without diminishing his neighbors' interests in maintaining the privacy of *their* homes.⁶⁶

In cases applying the community caretaking doctrine to nuisance abatement, there is no mention of privacy with respect to the action causing the nuisance—it seems to be assumed that there is no privacy in the nuisance conduct itself. These cases typically involve entry to abate the nuisance during which some evidence of contraband is discovered (drugs, guns, etc.) that is unrelated to the nuisance. The reasoning in these cases often includes reference to the fact that by engaging in the nuisance activity—that imposes an externality on others (noise, smell)—the individual has waived his or her expectation of privacy. These cases thus seem to reflect a view that there is little expectation of privacy for nuisance conduct and, moreover, that by engaging in conduct that gives rise to a nuisance, individuals can effect an even broader waiver of privacy.

Evaluating nuisance law from a privacy perspective thus suggests, broadly, that the law affords little value to or protection of privacy in conduct that imposes at least one type of environmental externality, a common law nuisance. Ultimately, however, nuisance does not provide a particularly satisfying analogue for exploring privacy with respect to environmentally significant behaviors. With respect to both nuisance and environmentally significant individual behaviors, the source of the externality can be an individual. However, the nature of the externality imposed by the individual in each context is distinct. Externalities occasioned by environmentally significant individual behaviors often produce environmental harms only in the aggregate, when combined with the behaviors of many other individuals. And often the harms produced are widespread, dispersed, distant in time, and cannot be traced back to a particular individual.⁶⁷ An individual likely could not be held liable in nuisance (or for another tort) for this type of aggregated harm occasioned by an environmentally significant individual behavior.⁶⁸ Tethered as it is to traditional understandings of duty, proximate cause, and causation, nuisance is “most useful for addressing conflicts between a single source of pollution

⁶⁶ *Id.* at 1522.

⁶⁷ See Vandenberg, *From Smokestack to SUV*, *supra* note 1, at 589–90.

⁶⁸ Imagine, for example, a public nuisance suit premised on the theory that the tailpipe emissions from an individual's car contributed to climate change. It is hard to imagine how the requirements of standing could be satisfied—let alone duty, causation, proximate cause, and breach—or the requirement to show “an unreasonable interference with a right common to the general public.” RESTATEMENT (SECOND) OF TORTS § 821B (1979); see David A. Grossman, *Warming Up to a Not-So-Radical Idea: Tort-Based Climate Change Litigation*, 28 COLUM. J. ENVTL. L. 1, 28 (2003) (observing that “individual consumers such as drivers and users of electricity do not contribute ‘substantially’ to climate change; as such, their small individual contributions would not meet the standards for legal causation”). For an excellent discussion of the difficulties of applying existing tort doctrine in the context of climate change, and with respect to small contributors to large problems more generally, see Douglas A. Kysar, *What Climate Change Can Do About Tort Law*, 41 ENVTL. L. 1, 54 (2011).

and a few neighbors.”⁶⁹ The difficulties using nuisance to address modern environmental problems involving “numerous and diverse pollutants emanating from widely dispersed sources affect[ing] large populations . . .”⁷⁰ spurred the creation of modern environmental statutes, which, as discussed next, also intersect with privacy in interesting ways.

B. Environmental Laws

Common law nuisance has, of course, evolved into a diverse panoply of environmental laws that require significant information for their implementation, thereby intersecting with interests in privacy.⁷¹ The discussion that follows identifies some of the ways that environmental laws demand information, the privacy issues that this can raise, and the accommodation struck between the regulatory need for information and privacy interests. The present survey is not complete—it does not claim to represent a categorical review of all environmental laws from all jurisdictions—but employs representative examples to illustrate some of the common privacy issues that arise with respect to the collection and use of information in support of environmental regulations that are most relevant to thinking about privacy in the context of environmentally significant individual behaviors. At the outset, it is useful to distinguish between an environmental regulator requesting the submission of information (interrogation) (for example, requiring the submission of information to obtain a permit) and a regulator taking information, usually in the context of enforcement (surveillance) (for example, conducting searches or inspections to enforce an environmental statute).⁷² Examples

⁶⁹ ROBERT V. PERCIVAL ET AL., ENVIRONMENTAL REGULATION: LAW, SCIENCE, AND POLICY 75 (6th ed. 2009).

⁷⁰ *Id.*

⁷¹ This includes both the provision of information to regulators and the public. Pursuant to the citizen suit provisions of the Emergency Planning and Community Right-to-Know Act (EPCRA), for example, individuals alleging a violation of the reporting required under the statute can use traditional discovery mechanisms to obtain detailed information about the release of covered chemicals by an EPCRA-covered entity. Model interrogatories, for example, suggest that the citizen suit plaintiff should request that the defendant “state every fact that supports” the defendant’s assertions regarding whether it is subject to and has complied with EPCRA reporting requirements. 55 AM. JUR. 3D PROOF OF FACTS § 43 (2013) (“Do you contend that you have completed and submitted a toxic chemical release form for each toxic chemical released during the preceding calendar year? If your answer to the preceding interrogatory is yes, please state every fact that supports your contention.”). Similarly, pursuant to the citizen suit provisions of CERCLA, individuals alleging a violation of the statute can use traditional discovery mechanisms to obtain detailed information about the release of CERCLA hazardous substances by a facility, including, for example, an interrogatory request to “identify the hazardous substances and/or the extremely hazardous substances that have been or are being released from your facility into the environment.” *Id.*

⁷² I borrow the conceptual distinction between interrogation and surveillance from Professor Daniel J. Solove. Daniel J. Solove, *A Taxonomy of Privacy*, 154 U. PA. L. REV. 477, 490–505 (2006). Professor Solove describes the distinction as: “[s]urveillance is the

drawn from the context of environmentally significant individual behaviors could include, with respect to interrogation, requirements that individuals reveal to regulators the content of their vehicle's tailpipe emissions by undergoing an emissions check⁷³ and, with respect to surveillance, a regulator's inspection of an individual's private property to ascertain the presence of a jurisdictional wetland under the CWA.⁷⁴ This Section proceeds by providing an overview of the legal treatment of interrogation and then focuses on the legal treatment of environmental surveillance—specifically on the application of the Fourth Amendment to surveillance conducted in support of environmental statutes.

1. Interrogation

Attempts to increase interrogation by creating new requirements that individuals provide information about environmental behaviors—such as a requirement that, like annual taxes, individuals submit annual greenhouse gas reporting forms—may be an important tool as policymakers seek to better address individuals as sources of environmental harm,⁷⁵ but it would likely engender privacy objections.⁷⁶ The present analysis does not, however, focus on privacy in the context of government requests for information from individuals, largely because there is presently little relevant law to explore. As discussed below, the existence and scope of constitutional, privacy-based limits on the government's power to require information from individuals remains uncertain and, while there is intense interest in developing protections for information privacy,⁷⁷ existing statutes have only

watching, listening to, or recording of an individual's activities. [And] [i]nterrogation consists of various forms of questioning or probing for information." *Id.* at 490. Further, "[t]o some degree, surveillance resembles interrogation, for both involve the involuntary gathering of information. Interrogation, however, occurs with the conscious awareness of the subject; surveillance can be clandestine." *Id.* at 500.

⁷³ See 42 U.S.C. §§ 7511a, 7512a (2006); 40 C.F.R. § 51.350 (2013).

⁷⁴ For a description of CWA inspections, see *supra* notes 28, 53–56 and accompanying text.

⁷⁵ See CZARNEZKI, *supra* note 1, at 61 (proposing a national environmental census requiring an individual self-assessment of household environmental impact, including activities that give rise to GHG emissions); Vandenberg et al., *Individual Carbon Emissions*, *supra* note 1, at 1729–31 (proposing an Individual Carbon Release Inventory).

⁷⁶ See Solove, *supra* note 72, at 499 (describing privacy objections to census questions and observing that "[i]n the late nineteenth century, there was a loud public outcry when the U.S. census began including more and more questions relating to personal affairs, such as marital status, literacy, property ownership, health, and finances.").

⁷⁷ See e.g., Paul M. Schwartz & Daniel J. Solove, *The PII Problem: Privacy and a New Concept of Personally Identifiable Information*, 86 N.Y.U. L. REV. 1814, 1815–16 (2011) ("Information privacy law has reached a turning point. The current debate about the topic is vigorous Moreover, the Executive Branch, independent agencies, and Congress are all considering different paths to revitalize information privacy.").

limited relevance for the submission of information in support of environmental regulation.⁷⁸

In *Whalen v. Roe*,⁷⁹ the Supreme Court recognized a constitutional right to information privacy grounded in an “individual interest in avoiding disclosure of personal matters.”⁸⁰ *Whalen* involved a challenge to a New York statute requiring the submission of a form to the New York State Department of Health that included the patient’s name when certain drugs were prescribed. The Court recognized that “[t]he mere existence in readily available form of the information about patients’ use of Schedule II drugs creates a genuine concern that the information will become publicly known . . .”; however, the court upheld the law, finding that the threat of public disclosure was not “sufficiently grievous” to give rise to a constitutional infirmity.⁸¹

Notably, the Court was careful to distinguish the collection of individual information by a government agency (interrogation) from searches subject to Fourth Amendment protections (surveillance) that it characterized as “involv[ing]

⁷⁸ For example, although applicable to federal agencies, including those implementing environmental statutes, the Privacy Act of 1974 provides only broad guidelines regarding the collection of information by a federal agency. It requires that federal agencies that maintain a system of records “maintain in [their] records only such information about an individual as is relevant and necessary to accomplish a purpose of the agency required to be accomplished by statute or by executive order of the President.” 5 U.S.C. § 552a(e)(1) (2012). The Privacy Act further requires that an agency

inform each individual whom it asks to supply information . . . (A) the authority . . . which authorizes the solicitation of the information and whether disclosure of such information is mandatory or voluntary; (B) the principal purpose or purposes for which the information is intended to be used; (C) the routine uses which may be made of the information, as published pursuant to paragraph (4)(D) of this subsection; and (D) the effects on him, if any, of not providing all or any part of the requested information.

Id. § 552a(e)(3); accord 1 C.F.R. § 304.32 (2014). Notably, these Privacy Act provisions are subject to exceptions. *E.g.*, 40 C.F.R. § 16.11(e) (2013) (exempting the collection of information in support of EPA criminal enforcement). A number of environmental statutes contain mechanisms that allow entities to protect confidential business information or trade secrets, but this has little relevance as applied to individuals. *See, e.g.*, 18 U.S.C. § 1905 (2012) (setting forth protections for confidential information under CERCLA, which is defined to mean information that “concerns or relates to the trade secrets, processes, operations, style of work, or apparatus, or to the identity, confidential statistical data, amount or source of any income, profits, losses, or expenditures of any person, firm, partnership, corporation, or association; or . . . income return or copy thereof or any book containing any abstract or particulars”); 33 U.S.C. § 1318(b) (2012) (providing that confidential information provided to regulators under the CWA should not be publicly disclosed); 42 U.S.C. § 9604(e) (2012); 40 C.F.R. § 2.203(b) (2013).

⁷⁹ 429 U.S. 589 (1977).

⁸⁰ *Id.* at 599.

⁸¹ *Id.* at 600.

affirmative, unannounced, narrowly focused intrusions into individual privacy.”⁸² The Court endorsed a scholar’s observation that there are three “facets” to the constitutional right of privacy:

The first is the right of the individual to be free in his private affairs from governmental surveillance and intrusion. The second is the right of an individual not to have his private affairs made public by the government. The third is the right of an individual to be free in action, thought, experience, and belief from governmental compulsion.⁸³

The Court declared that “[t]he first of the facets . . . is directly protected by the Fourth Amendment” and was not implicated in the present case, which involved only the latter two facets of the constitutional right to privacy.⁸⁴ *Whalen* thus distinguished between information privacy and those privacy interests protected by the Fourth Amendment. The constitutional right to information privacy articulated in *Whalen* has not been much explored or developed since.⁸⁵ Moreover, *Whalen* speaks most directly to a government duty “to protect privacy when it collects personal data”⁸⁶ and less to its ability to collect that information in the first instance. Indeed, in *Whalen* the Court seemed resigned to government collection of copious information about individuals:

Even without public disclosure, it is, of course, true that private information must be disclosed to the authorized employees of the New York Department of Health. Such disclosures, however, are not . . . meaningfully distinguishable from a host of other unpleasant invasions of privacy that are associated with many facets of health care. . . . [D]isclosures of private medical information to doctors, to hospital personnel, to insurance companies, and to public health agencies are often an essential part of modern medical practice even when the disclosure may reflect unfavorably on the character of the patient.⁸⁷

⁸² *Id.* at 604 n.32.

⁸³ *Id.* at 599 n.24 (quoting Philip B. Kurland, *The Private I*, U. OF CHI. MAG., Autumn 1976, at 7).

⁸⁴ *Id.*

⁸⁵ Solove, *supra* note 60, at 1205–06 n.413 (observing that “the Court has done little to develop the right of information privacy” and that its contours remain unclear); *see also* Solove, *supra* note 72, at 504 (detailing the lack of legal protection in the context of interrogation and concluding that “[p]rivacy law’s theory of interrogation is not only incoherent, it is nearly nonexistent. Despite recognizing the harms and problems of interrogation—compulsion, divulgence of private information, and forced betrayal—the law only addresses them in limited situations”).

⁸⁶ Solove, *supra* note 60, at 1204.

⁸⁷ *Whalen*, 429 U.S. at 602.

Ultimately, if environmental regulation seeks more information from individuals, that information collection may be contested using theories of information privacy. In one interesting case, for example, a district court in New Mexico dismissed an action against a member of the Isleta Pueblo for knowing possession of parts of a golden eagle without a permit in violation of the Bald and Golden Eagle Protection Act in part because the court deemed the procedures for obtaining a permit under the Act to be too invasive of privacy.⁸⁸ The court reasoned:

[T]he intricate application procedure, as it currently operates, is itself unnecessarily intrusive and hostile to religious privacy when viewed in light of the conservation goals it seeks to achieve. The applicant must certify that he is an Indian and will use the feathers or parts for religious purposes. He must identify religious leaders and ceremonies to federal officials so that the government may gauge the religious character of the proposed use. These procedures invade the private, even secret, province of Indian religious conviction and offend the ancient tradition of pueblo religious independence. . . . The evidence at trial established that the federal administrative apparatus erected to accommodate Indian religious needs is utterly offensive and ultimately ineffectual. The application process is cumbersome, intrusive and demonstrates a palpable insensitivity to Indian religious beliefs.⁸⁹

However, at present there are so few instances where government requests for information in support of environmental regulation (interrogation) have been challenged on grounds of information privacy that the present analysis looks primarily to the resolution of disputes about environmental surveillance grounded in the Fourth Amendment.

2. Surveillance

Environmental regulators also frequently obtain information through environmental surveillance.⁹⁰ U.S. Army Corps of Engineers ("Corps") regulations

⁸⁸ *United States v. Abeyta*, 632 F. Supp. 1301, 1304, 1307 (D.N.M. 1986). For another example, see *Brown v. Department of Inland Fisheries and Wildlife*, 577 A.2d 1184 (Me. 1990), where the court held that a requirement that noncommercial river rafters file a registration statement prior to river rafting did not violate the right to privacy, the Fourth Amendment, or the Fifth Amendment. *Id.* at 1186.

⁸⁹ *Abeyta*, 632 F. Supp. at 1304, 1307.

⁹⁰ Notably, private individuals may also obtain significant information through discovery in the context of citizen suits, although that is not the focus of the present discussion. Model interrogatories suggested for a person or entity alleged to have taken a species in violation of the Endangered Species Act demonstrate the broad scope of information that may be sought. 27 AM. JUR. PROOF OF FACTS 3D 421 § 6 (1994) ("Set forth with particularity all activities, actions, or work done by the DEFENDANT on [site of alleged takings] since [date]. . . . Set forth with particularity all planned activities, actions, or

implementing the CWA, for example, advocate surveillance by the Corps to “detect unauthorized activities requiring permits” and encourage district engineers to “consider developing joint surveillance procedures with Federal, state, or local agencies.”⁹¹ Courts have upheld administrative searches aimed at ascertaining whether a property contains a jurisdictional wetland.⁹² Unlike interrogation, however, environmental surveillance generates significant legal scrutiny.⁹³ This Section provides an overview of environmental surveillance and its legal treatment under the Fourth Amendment both to offer a general overview of how existing environmental statutes balance implementation and privacy and to provide background for a close analysis of environmental surveillance in the specific context of the enforcement of fish and game laws (the hunter enforcement cases).

Most environmental statutes grant regulators the authority to conduct administrative searches.⁹⁴ Statutes granting this authority include *inter alia* core

work to be done by the DEFENDANT on [site of alleged takings]. . . . State with specificity any and all remedial measures and any changes whatsoever to the manufacturing processes, project, development, or any other activity of the DEFENDANT that have been undertaken to minimize or mitigate impacts on any endangered or THREATENED SPECIES and/or its habitat.”).

⁹¹ 33 C.F.R. § 326.3(a) (2013).

⁹² *Palmieri v. Lynch*, 392 F.3d 73, 81 (2d Cir. 2004) (applying “the special needs doctrine to analyze the environmental regulatory scheme that provides for warrantless inspections pursuant to tidal-wetlands permit applications”); *In re Alameda Cnty. Assessor’s Parcel Nos. 537-801-2-4 and 537-850-9*, 672 F. Supp. 1278, 1287 (N.D. Cal. 1987) (upholding EPA access to farm property and concluding that “[t]he EPA is justified under the present circumstances in conducting a jurisdictional determination of the wetland status of petitioners’ farm pursuant to an administrative search warrant granted under § 308”).

⁹³ Joseph G. Block & Judson W. Starr, “*Knock, Knock.*” “*Who’s There?*” “*EPA Criminal Agents That’s Who.*” 55 ROCKY MOUNTAIN MIN. L. INST.12-1, § 12.02 (2009) (“Should the government attempt a warrantless entry, search, or seizure, the authors recommend that the company voice its objection for the record, to begin laying the groundwork for a legal challenge to any evidence the government seizes.”).

⁹⁴ For an overview of EPA inspection and evaluation authority, see <http://www.epa.gov/compliance/monitoring/inspections/archived> at <http://perma.cc/FJ9D-4VT3> (last visited Mar. 7, 2014). The precise contours of an administrative search are not clear: “Most experts agree that government searches that are conducted pursuant to a neutral policy aimed at a non-law enforcement purpose are administrative searches, but they also recognize that many searches that do not fall within this definition are administrative as well.” Eve Brensike Primus, *Disentangling Administrative Searches*, 111 COLUM. L. REV. 254, 257 n.15 (2011). Although it is common for environmental statutes to authorize administrative searches, the practice does occasion objection on privacy grounds. *E.g.*, H.R. 3875, 103d Cong. §§ 3(a), 4(a) (1994); S. 1915, 103d Cong. (1994) (proposing legislation to require federal agencies to comply with applicable state and tribal laws relating to private property rights and privacy and prohibiting federal agencies that are implementing the Endangered Species Act or wetlands regulations from entering private property for the purpose of gathering information without written consent from the owner.); *see also* S. 605, 104th Cong. §§ 503(a), 504(a) (1995) (proposing owner consent requirements for agency entry to private property).

environmental statutes such as the CWA;⁹⁵ Resource Conservation and Recovery Act (RCRA);⁹⁶ Clean Air Act (CAA);⁹⁷ Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA);⁹⁸ Toxic Substances Control Act (TSCA);⁹⁹ and Endangered Species Act (ESA).¹⁰⁰ Generally speaking, the Fourth Amendment has been interpreted to require a warrant for an administrative search involving a private individual¹⁰¹ or commercial entity.¹⁰² There are, however, a

⁹⁵ 33 U.S.C. § 1318(a)(B) (2012) (“[T]he Administrator or his authorized representative . . . shall have a right of entry to, upon, or through any premises in which an effluent source is located or in which any records required to be maintained under clause (A) of this subsection are located, and . . . may at reasonable times have access to and copy any records, inspect any monitoring equipment or method required under clause (A), and sample any effluents which the owner or operator of such source is required to sample under such clause.”).

⁹⁶ 42 U.S.C. § 6927(a) (2012) (“For the purposes of developing or assisting in the development of any regulation or enforcing the provisions of this chapter, . . . such officers, employees or representatives are authorized—(1) to enter at reasonable times any establishment or other place where hazardous wastes are or have been generated, stored, treated, disposed of, or transported from; (2) to inspect and obtain samples from any person of any such wastes and samples of any containers or labeling for such wastes.”).

⁹⁷ 42 U.S.C. § 7414(a)(2) (2012) (“[T]he Administrator or his authorized representative, upon presentation of his credentials—(A) shall have a right of entry to, upon, or through any premises of such person or in which any records required to be maintained under paragraph (1) of this section are located, and (B) may at reasonable times have access to and copy any records, inspect any monitoring equipment or method required under paragraph (1), and sample any emissions which such person is required to sample under paragraph (1).”).

⁹⁸ 42 U.S.C. § 9604(e)(3) (2012) (“Any officer, employee, or representative described in paragraph (1) is authorized to enter at reasonable times any of the following: (A) Any vessel, facility, establishment, or other place or property where any hazardous substance or pollutant or contaminant may be or has been generated, stored, treated, disposed of, or transported from. (B) Any vessel, facility, establishment, or other place or property from which or to which a hazardous substance or pollutant or contaminant has been or may have been released. (C) Any vessel, facility, establishment, or other place or property where such release is or may be threatened. (D) Any vessel, facility, establishment, or other place or property where entry is needed to determine the need for response or the appropriate response or to effectuate a response action under this subchapter.”).

⁹⁹ 15 U.S.C. § 2610(a) (2012) (“For purposes of administering this chapter, the Administrator, and any duly designated representative of the Administrator, may inspect any establishment, facility, or other premises in which chemical substances, mixtures, or products subject to subchapter IV of this chapter are manufactured, processed, stored, or held . . .”).

¹⁰⁰ 16 U.S.C. § 1540(e)(1)–(3) (2012) (granting agencies the authority to enforce its provisions, including by “execut[ing] and serv[ing] any . . . search warrant” and “search[ing] and seiz[ing], with or without a warrant, as authorized by law,” as well as authorizing district courts to issue warrants in support of agency enforcement).

¹⁰¹ *Camara v. Mun. Court*, 387 U.S. 523, 528 (1967).

¹⁰² See *v. City of Seattle*, 387 U.S. 541, 544–45 (1967) (holding that “warrants are a necessary and a tolerable limitation on the right to enter upon and inspect commercial premises,” but observing that “[t]he agency’s particular demand for access will of course be measured, in terms of probable cause to issue a warrant, against a flexible standard of

number of caveats and exceptions. Those caveats and exceptions of particular relevance in the environmental context are discussed in greater detail below.

Under the “open fields” doctrine, the Supreme Court holds that there is no expectation of privacy, and thus no Fourth Amendment protection, for “activities conducted out of doors in fields, except in the area immediately surrounding the home.”¹⁰³ It is not unusual for environmental administrative searches to involve inspections of outdoor areas and numerous cases have upheld warrantless administrative searches by environmental regulators under the open fields doctrine.¹⁰⁴ The Supreme Court, for example, has held that warrantless entry by a state environmental official on commercial premises for purposes of observing the quality of smoke emitted from a facility did not violate the Fourth Amendment as it fell within the open fields exception.¹⁰⁵ The Court further held that the EPA did not conduct a search for purposes of the Fourth Amendment when it took aerial photographs of an industrial plant complex as part of a site inspection under the Clean Air Act.¹⁰⁶ Notably, however, the court found it important that the entity observed was a commercial entity and not a private residence.¹⁰⁷

The open fields doctrine does, of course, have limitations. In *Reeves Brothers, Inc. v. EPA*,¹⁰⁸ a district court in Virginia held that EPA agents violated the Fourth Amendment by entering plaintiff’s property without consent and removing water and soil samples.¹⁰⁹ In that case, the agency, while investigating the possible presence of hazardous substances pursuant to CERCLA, failed to follow the procedures for access set out in section 104(e) of CERCLA. The court reasoned that the agency’s access to the property likely did not require a warrant pursuant to the open fields exception, but that the taking of water and soil samples did not fall within the open fields exception.¹¹⁰ The court, considering whether the plaintiff had

reasonableness that takes into account the public need for effective enforcement of the particular regulation involved”).

¹⁰³ *Oliver v. United States*, 466 U.S. 170, 173, 178 (1984); *see also* *Dow Chem. Co. v. United States*, 476 U.S. 227, 239 (1986) (upholding warrantless aerial inspection under the CAA); *Air Pollution Variance Bd v. W. Alfalfa Corp.*, 416 U.S. 861, 865 (1974) (upholding warrantless EPA inspection of smoke plume).

¹⁰⁴ *E.g.*, *United States v. Acquest Wehrle, LLC*, No. 09-CV-637C(F), 2010 WL 1708528, at *2 (W.D.N.Y. Apr. 27, 2010) (holding that entry onto private property to enforce the CWA fell within the open fields exception); *State v. Paxton*, 615 N.E.2d 1086, 1092 (Ohio Ct. App. 1992) (upholding warrantless inspection of commercial property improperly used for solid waste disposal).

¹⁰⁵ *Air Pollution Variance Bd.*, 416 U.S. at 864–65.

¹⁰⁶ *Dow Chem. Co.*, 476 U.S. at 232.

¹⁰⁷ *Id.* at 237 n.4 (“We find it important that this is *not* an area immediately adjacent to a private home, where privacy expectations are most heightened.”).

¹⁰⁸ 956 F. Supp. 665 (W.D. Va. 1995).

¹⁰⁹ *Id.* at 670; *see also* *Hardesty v. Sacramento Metro. Air Quality Mgmt. Dist.*, 935 F. Supp. 2d 968, 987–88 (E.D. Cal. 2013) (declining to dismiss action challenging the warrantless search of a mine by an official from California’s Department of Fish and Game under the open fields or closely regulated industry doctrine).

¹¹⁰ *Reeves Brothers, Inc.*, 956 F. Supp. at 669.

exhibited an actual expectation of privacy and whether the expectation was one society recognizes as reasonable, found that the plaintiff had a reasonable expectation of privacy to the soil beneath the surface of the open field where the rubber materials in question had been purposefully buried and surrounded by a fence with “No Trespassing” signs.¹¹¹ The Supreme Court has similarly held that there is no expectation of privacy in (and hence no Fourth Amendment protection for) garbage.¹¹² For this reason, environmental regulators’ warrantless collection and testing of wastes and effluent has been upheld.¹¹³

Other relevant exceptions with respect to environmental administrative searches are searches conducted with consent and searches involving a closely regulated entity. When an individual or entity consents to a search, regulators need not obtain a warrant.¹¹⁴ Many administrative searches in the environmental realm constitute inspections of regulated entities operating pursuant to required permits. Often, environmental permits provide for inspections by regulators. Regulations implementing the National Pollution Discharge Elimination System (NPDES) under the CWA, for example, provide that NPDES permits “shall allow the Director, or an authorized representative . . . to . . . [e]nter upon the permittee’s premises where a regulated facility or activity is located or conducted.”¹¹⁵ Courts have upheld warrantless searches under some environmental statutes on the ground that an entity possessing a permit thereby consents to warrantless administrative searches.¹¹⁶ And,

¹¹¹ *Id.* at 670.

¹¹² *California v. Greenwood*, 486 U.S. 35, 40–41 (1988).

¹¹³ *E.g.*, *Riverdale Mills Corp. v. Pimpare*, 392 F.3d 55, 64 (1st Cir. 2004) (holding a business had no reasonable expectation of privacy in wastewater flowing irretrievably into a public sewer system) (citing *California v. Greenwood*, 486 U.S. 35, 40–41 (1988)).

¹¹⁴ *E.g.*, *Schneckloth v. Bustamonte*, 412 U.S. 218, 219 (1973) (“It is . . . well settled that one of the specifically established exceptions to the requirements of both a warrant and probable cause is a search that is conducted pursuant to consent.”). Of course, the consent must be deemed effective by the court. WAYNE R. LAFAVE, *SEARCH AND SEIZURE: A TREATISE ON THE FOURTH AMENDMENT* § 10.2(b), at 51–53 (David C. Baum ed., 5th ed. 2012) (discussing the application of the voluntariness test for Fourth Amendment consent in the context of administrative searches).

¹¹⁵ 40 C.F.R. § 122.41(i) (2007).

¹¹⁶ *E.g.*, *Mobil Oil Corp. v. EPA*, 716 F.2d 1187, 1190 (7th Cir.1983) (upholding inspections to assess permit violations under the CWA with only an administrative warrant); *United States v. Hajduk*, 396 F. Supp. 2d 1216, 1227–28 (D. Colo. 2005) (upholding warrantless search conducted pursuant to NPDES permit and observing that “[i]n return for the privilege of discharging waste, Defendants necessarily consented to application of the City Code and Permit requirements as a matter of law under the Fourth Amendment”). *But see* *People v. Hedges*, 447 N.Y.S.2d 1007, 1011 (Dist. Ct. Suffolk Cnty. 1982) (declining to sanction warrantless search of a shellfish establishment on the basis of a permit, observing that “it is not persuasive to argue that this section establishes that the search was consented to because acquiescence to the search was a condition of the permit,” and concluding that “[n]o state may require, as a condition of doing business, a blanket submission to warrantless searches at any time and for any purpose” (quoting *Finn’s Liquor Shop, Inc. v.*

practically speaking, most environmental agencies seeking to obtain access to property adopt a policy of first requesting consent, and this consent is often granted.¹¹⁷ Thus, a significant number of environmental administrative searches proceed with consent and no warrant.

Warrantless administrative searches have also been upheld under an exception relating to longstanding or pervasive government regulation (often referred to as the closely regulated business exception). The rationales for the exception include that warrantless searches are necessary for implementation of a regulatory scheme; expectations of privacy are lower with respect to commercial or business premises than residences; business owners have lower expectations of privacy where government regulation is pervasive or longstanding (because the long history of government regulation provides notice and consent can thus be assumed); and relevant regulations governing the searches provide adequate constitutional safeguards.¹¹⁸ As explained by the Supreme Court,

A warrant may not be constitutionally required when Congress has reasonably determined that warrantless searches are necessary to further a regulatory scheme, and the federal regulatory presence is sufficiently comprehensive and defined that the owner of commercial property cannot help but be aware that his property will be subject to periodic inspections undertaken for specific purposes.¹¹⁹

For the exception to apply, three circumstances must be present. First, there must be a substantial government interest that the warrantless inspection furthers.¹²⁰ Second, warrantless inspections must be necessary for the regulatory scheme.¹²¹ Finally, the regulatory statute must provide notice that inspections may occur and limits on the conduct of those inspections.¹²² In applying the exception, the Court has emphasized

State Liquor Authority, 249 N.E.2d 440, 445)); LAFAVE, *supra* note 114, § 10.2(c) (rejecting and condemning the conditional privilege theory).

¹¹⁷ See, e.g., Memorandum from Thomas L. Adams, Jr., Assistant Adm'r, to Reg'l Adm'rs and Reg'l Counsels (June 5, 1987), available at <http://www2.epa.gov/sites/product/2013-09/documents/cont-access-mem.pdf>, archived at <http://perma.cc/J5VS-ZEU6>.

¹¹⁸ E.g., *New York v. Burger*, 482 U.S. 691, 712–16 (1987) (upholding warrantless search of vehicle dismantling businesses); *Donovan v. Dewey*, 452 U.S. 594, 593–94, 598–99 (1981) (upholding inspections under the Federal Mine Safety and Health Act and finding that “[t]he greater latitude to conduct warrantless inspections of commercial property reflects the fact that the expectation of privacy that the owner of commercial property enjoys in such property differs significantly from the sanctity accorded an individual’s home, and that this privacy interest may, in certain circumstances, be adequately protected by regulatory schemes authorizing warrantless inspections”); *United States v. Biswell*, 406 U.S. 311, 317 (1972) (upholding warrantless search of gun dealer).

¹¹⁹ *Donovan*, 452 U.S. at 600.

¹²⁰ *Burger*, 482 U.S. at 702–03.

¹²¹ *Id.*

¹²² *Id.*

the business owner's choice to enter a highly regulated industry—"when an entrepreneur embarks upon such a [highly regulated] business, he has voluntarily chosen to subject himself to a full arsenal of governmental regulation"¹²³ and "in effect consents to the restrictions placed upon him."¹²⁴ In *United States v. Biswell*,¹²⁵ for example, the court reasoned that "inspections for compliance with the Gun Control Act pose only limited threats to the dealer's justifiable expectations of privacy" because "[w]hen a dealer chooses to engage in this pervasively regulated business and to accept a federal license, he does so with the knowledge that his business records, firearms, and ammunition will be subject to effective inspection."¹²⁶

Courts have relied on the pervasively regulated business exception to uphold warrantless administrative searches under a variety of environmental statutes.¹²⁷ In *State v. Bonaccorso*,¹²⁸ for example, a New Jersey state court blessed warrantless entry on the property of a commercial slaughterhouse by an inspector from the New Jersey Department of Environmental Protection (NJDEP) under both the open fields exception and the closely regulated business exception.¹²⁹ The inspector witnessed

¹²³ *Marshall v. Barlow's, Inc.*, 436 U.S. 307, 313 (1978) ("The element that distinguishes these enterprises from ordinary businesses is a long tradition of close government supervision, of which any person who chooses to enter such a business must already be aware.").

¹²⁴ *Almeida-Sanchez v. United States*, 413 U.S. 266, 271 (1973).

¹²⁵ 406 U.S. 311 (1972).

¹²⁶ *Id.* at 316.

¹²⁷ See *United States v. V-1 Oil Co.*, 63 F.3d 909, 912 (9th Cir. 1995) (upholding unannounced warrantless searches under the Hazardous Materials Transportation Act); *Balelo v. Baldrige*, 724 F.2d 753, 755 (9th Cir. 1984) (upholding regulation requiring vessel owners to consent to the placement of observers as a condition of obtaining a commercial fishing permit under the Marine Mammal Protection Act of 1972 pursuant to the closely regulated industry exception); *United States v. Kaiyo Maru No. 53*, 699 F.2d 989, 995 (9th Cir. 1983) (upholding warrantless inspections authorized by the Fishery Conservation and Management Act); *United States v. Raub*, 637 F.2d 1205, 1211 (9th Cir. 1980) (adverting to historical and pervasive regulation of the salmon-fishing industry to uphold a warrantless boarding of a vessel to enforce Sockeye Salmon or Pink Salmon Fishing Act); *Gulf of Me. Trawlers v. United States*, 674 F. Supp. 927, 932-33 (D. Me. 1987) ("The Magnuson Act provides for warrantless searches of vessels reasonably believed to be in violation of the provisions of the Act and for the seizure of fish therein, 16 U.S.C. § 1861(b)(1)(A), and the reasonableness of these warrantless searches has been expressly upheld in prior cases."); *United States v. Tsuda Maru*, 470 F. Supp. 1223, 1228 (D. Alaska 1979) (applying *Barlow's* to uphold a warrantless search under the Fishery Conservation and Management Act); *In re Mullins & Pritchard, Inc.*, 549 So.2d 872, 876 (La. Ct. App. 1989) (upholding warrantless administrative search of oil and gas production facility under Louisiana environmental statute); *State v. Bonaccorso*, 545 A.2d 853, 857 (N.J. Super. Ct. Law Div. 1988) (upholding warrantless inspection under the New Jersey Water Pollution Control Act); *Commonwealth Dep't of Env'tl. Res. v. Blosenski Disposal Serv.*, 566 A.2d 845, 848-50 (Pa. 1989) (upholding warrantless inspection under the Pennsylvania Solid Waste Management Act).

¹²⁸ 545 A.2d 853 (N.J. Super. Ct. Law Div. 1988).

¹²⁹ *Id.* at 857-58, 860.

unpermitted discharges to water that violated the Water Pollution Control Act.¹³⁰ The court found that the right of entry granted to the NJDEP in the Water Pollution Control Act was “constitutionally sufficient” because “[t]he State has enunciated a substantial government interest and has enacted a legislative scheme in response which attempts to alleviate the problem in a manner which is reasonable in its time, place and manner.”¹³¹ But the inquiry regarding the applicability of the closely regulated business exception is specific to the statute and industry involved, and the Supreme Court has limited the scope of the exception. In *Marshall v. Barlow’s, Inc.*,¹³² the Court declined to permit the secretary of labor to invoke the exception to permit warrantless inspections of business premises under section 8(a) of the Occupational Safety and Health Act.¹³³ Notably, courts have since held that the exception does not apply to some core environmental statutes, including the CWA;¹³⁴ *Barlow’s* likely precludes, or at least casts significant doubt upon, application of the closely regulated business exception under many environmental statutes.

Even when a warrant must be obtained to conduct an administrative (environmental) search, the showing required to obtain a warrant may be relaxed. With respect to the showing required to obtain an administrative search warrant, probable cause to support an administrative search “may be based not only on specific evidence of an existing violation but also on a showing that ‘reasonable legislative or administrative standards for conducting an . . . inspection are satisfied with respect to a particular [establishment].’”¹³⁵ The agency need not show probable cause of a specific statutory violation; it may be enough to demonstrate that the inspection is part of a larger regulatory program.¹³⁶

¹³⁰ *Id.* at 855.

¹³¹ *Id.* at 857.

¹³² 436 U.S. 307 (1978).

¹³³ *Id.* at 309.

¹³⁴ *E.g.*, *United States v. Hajduk*, 396 F. Supp. 2d 1216, 1234 (D. Colo. 2005) (holding that the closely regulated business exception did not apply to an electroplating company regulated under the CWA and observing that the exception does not extend to “general purpose environmental law applied to industrial companies”). *See generally* *United States v. Tarkowski*, 248 F.3d 596, 599 (7th Cir. 2001) (observing “[t]hat such [CERCLA access] orders must comply with the Fourth Amendment is apparent from *Marshall v. Barlow’s, Inc.* . . .”); *Commonwealth v. Johnson*, 39 Va. Cir. 353, 358 (Va. Cir. Ct. 1996) (“[R]egarding fishing for striped bass, there is no regulatory scheme under Virginia law or regulations which would allow the so-called administrative searches exception, permitting warrantless inspections or searches of closely regulated industries.”).

¹³⁵ *Marshall*, 436 U.S. at 320 (quoting *Camara v. Mun. Court*, 387 U.S. 523, 538 (1967)).

¹³⁶ *Id.* at 321 (“A warrant showing that a specific business has been chosen for an OSHA search on the basis of a general administrative plan for the enforcement of the Act derived from neutral sources such as, for example, dispersion of employees in various types of industries across a given area, and the desired frequency of searches in any of the lesser divisions of the area, would protect an employer’s Fourth Amendment rights.”). Some courts considering challenges to warrants issued to enforce the CWA, however, have closely

In *Camara v. San Francisco*,¹³⁷ a municipality sought entry to a private residence to conduct a warrantless administrative inspection to identify possible violations of the housing code; the resident refused entry and was arrested and released on bail.¹³⁸ The Supreme Court held that the Fourth Amendment requires a warrant based on probable cause to conduct such administrative inspections, but observed that in some circumstances the warrant requirement could be satisfied in the context of area code-enforcement inspections, observing that “because the inspections are neither personal in nature nor aimed at the discovery of evidence of crime, they involve a relatively limited invasion of the urban citizen’s privacy.”¹³⁹ The Court also noted that area code-enforcement inspections “have a long history of judicial and public acceptance” and that “it is doubtful that any other canvassing technique would achieve acceptable results.”¹⁴⁰ The government could thus obtain a warrant to enter a residence by showing that “reasonable legislative or administrative standards for conducting an area inspection are satisfied with respect to a particular dwelling” and need not “depend upon specific knowledge of the condition of the particular dwelling.”¹⁴¹ Standards might include “the passage of time, the nature of the building (e.g., a multifamily apartment house), or the condition of the entire area.”¹⁴² Notably, the *Camara* standard has been applied to evaluate warrants issued in support of administrative searches conducted pursuant to environmental statutes.¹⁴³

Additionally, even when courts do not expressly invoke the relaxed *Camara* standard, agency warrant applications are regularly upheld and the showing required by courts readily satisfied.¹⁴⁴ Many agencies have adopted procedures for

examined whether the “allegations are sufficient to support a finding that there was probable cause to believe the creek fell within the definition of ‘waters of the United States’” *United States v. Evans*, No. 3:05 CR 159 J 32HTS, 2006 WL 2221629, at *15–22 (M.D. Fla. Aug. 2, 2006).

¹³⁷ 387 U.S. 523 (1967).

¹³⁸ *Id.* at 526–28. The housing code was contained in a city ordinance and provided that “employees of the City departments or City agencies, so far as may be necessary for the performance of their duties, shall, upon presentation of proper credentials, have the right to enter, at reasonable times, any building, structure, or premises in the City to perform any duty imposed upon them by the Municipal Code.” *Id.* at 526.

¹³⁹ *Id.* at 537.

¹⁴⁰ *Id.*

¹⁴¹ *Id.* at 538.

¹⁴² *Id.*

¹⁴³ See, e.g., *In re Search Warrant*, No. MISC.NO.04-00079-MPT, 2004 WL 1368848, at *3 (D. Del. 2004) (invoking the *Camara* standard in upholding a search warrant issued pursuant to the CWA).

¹⁴⁴ E.g., *Pub. Serv. Co. of Ind., Inc. v. EPA*, 509 F. Supp. 720, 724 (S.D. Ind. 1981) (upholding two warrants issued under the CAA, observing that allegations in the warrant application that the facility had exceeded certain CAA standards were “clearly sufficient on their face as a basis for issuance of an administrative inspection warrant,” and concluding that “[a] warrant application need not be accompanied by actual documentation of alleged past violations . . .”); *Adams, supra* note 117. But see *Ohio v. Denune*, 612 N.E.2d 768, 773–

conducting administrative searches and the conduct of searches pursuant to these procedures is rather routinized.¹⁴⁵

CERCLA's access procedures provide an example.¹⁴⁶ CERCLA authorizes entry to property for "determining the need for response, or choosing or taking any response action under this subchapter, or otherwise enforcing the provisions of this subchapter."¹⁴⁷ Generally, an agency will request access, which is often "voluntarily" granted—the statute authorizes fines of up to \$25,000 per day if property owners unreasonably deny access.¹⁴⁸ Recognizing that "threat of penalties of this magnitude could obviously have a chilling effect on the landowner's exercise of his property rights" and that "the right of a landowner to refuse entry to his property is clearly one of the civil rights protected by the Constitution," courts have developed standards for evaluating whether a landowner was reasonable in denying access and for reviewing the assessment and amount of civil fines.¹⁴⁹ The threat of substantial fines nonetheless creates a strong incentive for property owners to grant access when it is requested.

If a property owner declines to provide the EPA with access, the agency can seek a judicial warrant, obtain an administrative order of entry, and then proceed to federal district court in an enforcement proceeding to obtain compliance with that order,¹⁵⁰ or it can proceed directly to federal district court to obtain an original court

77 (Ohio Ct. App. 1992) (finding that a warrant was required for an Ohio Environmental Protection Agency search of a tractor-trailer parked in a salvage yard and that no probable cause existed based on an anonymous phone tip that the tractor-trailer contained hazardous substances and had been relocated to avoid inspection and independent observation of barrels).

¹⁴⁵ Notably, however, access accompanied by drilling wells and other physical occupations associated with entry have been deemed takings in some circumstances. Roger D. Schwenke, *Regulatory Access to Contaminated Sites: Some New Twists to an Old Tale*, 26 WM. & MARY ENVTL. L. & POL'Y REV. 749, 788–92 (2002) (reviewing cases); see also *Hendler v. United States*, 952 F.2d 1364, 1375–78 (Fed. Cir. 1991) (finding installation of groundwater monitoring wells gave rise to a taking).

¹⁴⁶ Although CERCLA's access procedures do not require application for a warrant, they do require the agency to obtain a court order, which would likely be deemed the "functional equivalent of a warrant" sufficient to satisfy the Fourth Amendment. *Marshall v. Barlow's, Inc.*, 436 U.S. 307, 325 n.23 (1987).

¹⁴⁷ 42 U.S.C. § 9604(e)(1) (2012). For a comprehensive overview of CERCLA site access issues, see Schwenke, *supra* note 145, at 753 ("It would be perhaps an epitome of understatement to suggest that this grant of entry authority is quite broad."). For an example of a state statute authorizing access see the access provisions of Michigan's Environmental Response Act. MICH. COMP. LAWS § 324.20117 (2011).

¹⁴⁸ 42 U.S.C. § 9604(e)(5)(B)(ii).

¹⁴⁹ *United States v. Taylor*, 8 F.3d 1074, 1077 (6th Cir. 1993) (reviewing an assessment of civil fines under the Michigan Environmental Response Act); see also *United States v. M. Genzale Plating, Inc.*, 807 F. Supp. 937 (E.D.N.Y.1992) (evaluating the imposition of fines under CERCLA's access provisions).

¹⁵⁰ 42 U.S.C. § 9604(e)(5)(A) to (B).

order enjoining interference with an authorized request for entry.¹⁵¹ Access is warranted where the agency has “a reasonable basis to believe there may be a release or threat of a release of a hazardous substance or pollutant or contaminant,”¹⁵² which can be “established either by presenting specific evidence relating to the facility to be entered or by demonstrating that the entry is part of a neutral administrative inspection plan.”¹⁵³ Access may be granted to properties that are not the site of the release,¹⁵⁴ including adjoining properties.¹⁵⁵ Courts have permitted access by nonagency, private entities¹⁵⁶ and granted access to residential properties.¹⁵⁷ The statute instructs that courts should not order access where “under the circumstances of the case the demand for entry or inspection is arbitrary and capricious, an abuse of discretion, or otherwise not in accordance with law.”¹⁵⁸

This standard is quite deferential to agencies. However, in *United States v. Tarkowski*,¹⁵⁹ the Seventh Circuit found that the EPA abused its discretion, and declined to grant the agency an access order, where the EPA sought access to private property with little evidence of contamination and the order sought access to conduct remediation in addition to access to investigate.¹⁶⁰ *Tarkowski* presented unusual facts. The property involved was the primary residence of an elderly man and was located in an area that had developed and become more upscale.¹⁶¹ The neighbors regarded the property as an eyesore and complained about the property to the EPA, and otherwise “harass[ed]” Tarkowski.¹⁶² However, although the property was cluttered and run down, prior testing had shown no pollution levels of concern.¹⁶³ While the Seventh Circuit remarked in its decision that it did “not know whether Tarkowski’s angry neighbors exert a malign influence over the local office of the

¹⁵¹ *United States v. Charles George Trucking Co.*, 682 F. Supp. 1260, 1266–70 (D. Mass. 1988).

¹⁵² 42 U.S.C. § 9604(e)(5)(B); *see also* N.J. Dep’t of Env’tl. Prot. v. Briar Lake Dev. Corp., 736 F. Supp. 62, 66 (D.N.J. 1990) (holding that CERCLA’s statutory standard displaces the usual equitable standard for obtaining an injunction).

¹⁵³ *Adams*, *supra* note 117, at 8.

¹⁵⁴ *United States v. Fisher*, 864 F.2d 434, 437 (7th Cir. 1988) (“The release (actual or threatened) need not be on that property; the statute authorizes the EPA to enter any place where entry is necessary to determine the need for response or the appropriate response, and any place adjacent to such a place.”).

¹⁵⁵ *Id.*; *Charles George Trucking Co.*, 682 F. Supp. at 1273–74.

¹⁵⁶ *B.F. Goodrich Co. v. Murtha*, 697 F. Supp. 89, 93–97 (D. Conn. 1988) (upholding access by private party generator who had entered into a consent decree with the EPA to implement a remedy under § 9606(a)).

¹⁵⁷ *United States v. Mountaineer Refining Co.*, 886 F. Supp. 824, 826 (D. Wyo. 1995) (granting access under section 104 to “residential property that includes about 40 acres and contains [the] family home and garage” that was adjacent to the contaminated site).

¹⁵⁸ 42 U.S.C. § 9604(e)(5)(B)(i).

¹⁵⁹ 248 F.3d 596 (7th Cir. 2001).

¹⁶⁰ *Id.* at 599–600.

¹⁶¹ *Id.* at 597–98.

¹⁶² *Id.* at 598.

¹⁶³ *Id.*

EPA,” the court was clearly doubtful that the property presented an environmental threat and was suspect of the agency’s motives.¹⁶⁴ Additionally, the fact that the EPA sought access for both investigation and remediation proved to be important. The Seventh Circuit focused on the dangers of authorizing the agency to undertake unspecified remedial action¹⁶⁵ and expressly noted that it “need not consider whether, if only [access for investigative purposes was] sought, the EPA has made a sufficient showing to justify such an order.”¹⁶⁶

The foregoing overview reveals that agencies regularly conduct environment surveillance to implement environmental statutes and illustrates how the Fourth Amendment applies in that context. Often, this simply entails applying settled Fourth Amendment doctrine, although some aspects of the environmental context render certain Fourth Amendment doctrines particularly salient. For example, the open fields doctrine and the closely regulated business exception are often potentially available as a result of the nature of the conduct and entities being regulated.

Ultimately, however, the Fourth Amendment cases flowing from environmental surveillance are not particularly helpful for thinking about privacy with respect to environmentally significant behaviors because they overwhelmingly involve surveillance of commercial entities as opposed to individuals. This is because most statutory environmental law does not apply to individuals.¹⁶⁷ Although the warrant requirement for administrative searches clearly extends to commercial entities, searches of commercial entities and private persons pose distinct privacy considerations.¹⁶⁸ Thus, privacy vis-à-vis nuisance provides an unsatisfying basis for comparison to privacy vis-à-vis environmentally significant individual behavior because often actions giving rise to a nuisance do not need to be widely aggregated

¹⁶⁴ *Id.* at 600.

¹⁶⁵ *Id.* (“It is unreasonable for the EPA to insist on judicial carte blanche to embark on drastic remedial action in advance of obtaining any rational basis for believing that there is any danger to the environment that would warrant such action.”).

¹⁶⁶ *Id.* at 598.

¹⁶⁷ Vandenberg, *From Smokestack to SUV*, *supra* note 1, at 517–18.

¹⁶⁸ *Dow Chem. Co. v. United States*, 476 U.S. 227, 237 n.4 (1986) (upholding warrantless aerial inspection of a commercial facility under the CAA but distinguishing a search of the curtilage of a private home); See *v. City of Seattle*, 387 U.S. 541, 545–46 (1967) (“We do not in any way imply that business premises may not reasonably be inspected in many more situations than private homes. . . .”); *N.J. Dept. Env’tl. Prot. v. Huber*, 63 A.3d 197, 211 (N.J. 2013) (declining to apply the closely regulated industry exception to wetlands regulation on residential property, observing that “[t]he factual setting and historical perspective to the exception for pervasively or closely regulated businesses noted in *Burger* fail to provide support for a general extrapolation of *Burger’s* holding permitting a limited area of warrantless administrative searches to the more heightened privacy interests that are associated with a private, residential property,” and concluding that “*Burger* arose in a commercial business setting and its emphasis on the lesser privacy interest in such settings, particularly when highly regulated work is performed, does not encourage *Burger’s* extension outside of the commercial setting of a closely regulated industry” (citing *New York v. Burger*, 482 U.S. 691, 693–96, 702 (1987))).

to impose environmental harms. And, similarly, most Fourth Amendment environmental surveillance cases arising under environmental statutes provide an unsatisfying basis for comparison because they involve commercial entities as opposed to individuals. There is, however, a subset of Fourth Amendment environmental surveillance cases that provide a better basis for insight into privacy in environmentally significant individual behaviors because they involve both aggregation and individuals—cases involving the application of fish and game laws to individuals (or the “hunter enforcement” cases).¹⁶⁹

C. Hunter Enforcement Cases

Fish and game officers are often conferred broad statutory authority to investigate and enforce fish and game laws,¹⁷⁰ including entering property,¹⁷¹

¹⁶⁹ This is not to suggest that the hunter enforcement cases provide a perfect analogue. Although privacy balancing in the hunter enforcement cases provides a closer analogy to privacy balancing with respect to the collection and use of information about environmentally significant individual behaviors than nuisance or environmental statutes directed to commercial entities, even the hunter enforcement cases present significant distinctions. Fish and game stops of hunters to request identification and search a game bag intrude on privacy in a qualitatively different way than the generation, storage, and use of data about individuals' everyday behaviors by smart cities.

¹⁷⁰ I use the term “fish and game officers” and “fish and game laws” loosely to encompass generally laws governing hunting and fishing and those charged with implementing such laws.

¹⁷¹ *E.g.*, OHIO REV. CODE ANN. § 1531.13 (2012) (“Any regularly employed salaried wildlife officer may enter any private lands or waters if the wildlife officer has good cause to believe and does believe that a law is being violated.”); *id.* § 1531.14 (“Any person regularly employed by the division of wildlife for the purpose of conducting research and investigation of game or fish or their habitat conditions . . . or in the enforcement of laws or division rules relating to game or fish, . . . while in the normal, lawful, and peaceful pursuit of such investigation, work, or enforcement may enter upon, cross over, be upon, and remain upon privately owned lands for such purposes and shall not be subject to arrest for trespass while so engaged or for such cause thereafter.”); *see also* *State v. Coburn*, 903 N.E.2d 1204, 1207 (Ohio 2009) (“This provision [RC 1531.14] is . . . clear and unambiguous; it plainly permits wildlife officers to enter upon private land while in the normal, lawful, and peaceful pursuit of enforcing laws relating to game and fish.”).

conducting various types of searches,¹⁷² and operating fish and game checkpoints.¹⁷³ There are hundreds of cases examining whether and how the Fourth Amendment applies with respect to the enforcement of fish and game laws.¹⁷⁴ These cases may

¹⁷² E.g., N.J. STAT. ANN. § 23:10-20, at 565-66 (2006) (“A member of the Fish and Game Council and any conservation officer may, without warrant search and examine any boat, conveyance, vehicle, fish box, fish basket, game bag, game coat or other receptacle for game and fish, when he has reason to believe that a provision of this Title, or any law supplementary thereto, or the State Fish and Game Code has been violated A court, upon receiving proof of probable cause for believing in the concealment of a bird, animal or fish so unlawfully caught, taken, killed, had in possession or under control, shipped or about to be shipped, shall issue a search warrant and cause a search to be made in any place, and to that end, may, after demand and refusal, cause any building, inclosure or car to be entered, and any apartment, chest, box, locker, crate, basket or package to be broken open and its contents examined by a member of the Fish and Game Council or any conservation officer.”); OHIO REV. CODE ANN. § 1531.13 (“They may inspect any container or package at any time except when within a building and the owner or person in charge of the building objects. The inspection shall be only for bag limits of wild animals taken in open season or for wild animals taken during the closed season, or for any kind or species of those wild animals. . . . A wildlife officer . . . may search any place which the officer has good reason to believe contains a wild animal or any part of a wild animal taken or had in possession contrary to law If the owner or person in charge of the place to be searched refuses to permit the search, upon filing an affidavit in accordance with law with a court having jurisdiction of the offense and upon receiving a search warrant issued, the officer forcibly may search the place described”); see also *State v. Putzke*, 218 N.E.2d 627, 629 (Ohio Ct. App. 1966) (upholding warrantless search of fishing boat and observing that “[e]nforcement of the Wildlife Laws without a search warrant, where the officer has reason to believe that evidence of violation of such laws may be found . . . is consistent with the spirit and purpose of the Ohio Wildlife Laws”). But see *Washington Cnty. v. Althiser*, No. 97CA14, 1998 WL 2514, at *2 (Ohio Ct. App. Jan. 6, 1998) (“We reiterate our prior warning. A wildlife officer, just like any state actor, must have probable cause *and* either a warrant to search or the situation must fit a recognized exception to the warrant requirement.”); *State v. Hopkins*, No. 94 CA 05, 1995 WL 34786, at *4 (Ohio Ct. App. Jan. 26, 1995) (observing that “[w]ildlife officers are as much bound by constitutional limits as any other police officer” and equating the “has good reason to believe” standard to probable cause).

¹⁷³ “[A] roadblock, sometimes called a checkpoint, check station, or the like, is an officially required stopping or slowing of the motor vehicles that pass a designated point on a road, street, or highway in order to inspect or search the vehicles or to question the drivers or other occupants.” Jeffery F. Ghent, Annotation, *Validity of Roadblocks by State or Local Officials for Purpose of Enforcing Fish or Game Laws*, 87 A.L.R. 981, 982 n.1 (1991); e.g., IDAHO CODE ANN. § 36-1201(b) (2011) (providing statutory authority for fish and game checkpoints); *State v. Thurman*, 996 P.2d 309, 315-16 (Idaho Ct. App. 1999) (upholding fish and game checkpoint and listing cases); *State v. Tourtillott*, 618 P.2d 423, 427-30 (Or. 1980) (upholding, under both the state and federal constitutions, a state police roadblock designed to enforce game laws); *State v. Halverson*, 277 N.W.2d 723, 724-25 (S.D. 1979) (upholding stop of vehicles at a checkpoint for the purpose of checking wild game).

¹⁷⁴ Numerous law review articles, primarily student notes, discuss the intersection between the Fourth Amendment and hunter enforcement. See generally, e.g., Edwin J. Butterfoss & Joseph L. Daly, *State v. Colosimo: Minnesota Anglers' Freedom From*

prove to be particularly helpful for generating insights into privacy vis-à-vis environmentally significant individual behaviors because (1) the conduct regulated by the fish and game laws is typically of a type that is relatively insignificant in isolation (taking a single deer out of season) but potentially harmful when aggregated with the conduct of others (wholesale poaching could, for example, impact deer populations); (2) these cases usually involve individuals (hunters) as opposed to commercial entities; and (3) the Fourth Amendment analysis in these cases often involves an express balancing of privacy and state interest.

A review of hunter enforcement cases permits a few observations that may be helpful for thinking about privacy with respect to environmentally significant individual behaviors. In weighing privacy harms against state interest, the fact that the hunter's conduct would require aggregation to produce environmental harm does not appear to diminish the weight afforded to the state interest. Indeed, the state interest in enforcing fish and game laws is generally recognized to be significant. Additionally, the fact that fish and game laws are directed primarily to individuals as opposed to commercial entities plays out in an interesting fashion in the Fourth Amendment analysis. On the one hand, privacy intrusions are clearly recognized to be more significant with respect to individuals, and one mechanism that is employed to justify intrusion on hunter privacy is to liken hunters to a regulated business. On the other hand, the enforcement challenges presented by applying fish and game laws to individuals provide strong rationales for justifying less protective practices as reasonable under the Fourth Amendment. Finally, overall, hunter enforcement appears to present a context where legislatures and courts balancing privacy and enforcement have generally privileged enforcement, suggesting the twin facts—that the privacy intrusions accrue to individuals and the conduct being regulated requires aggregation to produce significant harm—do not dictate that privacy interests will trump (environmental) regulatory interests.

Unreasonable Searches and Seizures Becomes "The One That Got Away," 31 WM. MITCHELL L. REV. 527 (2004); Donald C. Douglas, Jr., Comment, *A Comment On Louisiana Wildlife Agents and Probable Cause: Are Random Game Checks Constitutional?*, 53 LA. L. REV. 525 (1992); Giffin, *supra* note 20; Bryan M. Mull, Comment, *The Hidden Cost of Rod and Rifle: Why State Fish and Game Laws Must Be Amended in Order to Protect Against Unreasonable Search and Seizure in the Great Outdoors*, 42 U. BALT. L. REV. 801 (2013); Karie A. Price, *State v. Larsen: The Catch of the Day Is a Violation of Your Fourth Amendment Protections Against Unreasonable Searches and Seizures*, 8 GREAT PLAINS NAT. RESOURCES J. 78 (2003); Malin J. Stearns, Note, *It's Good to Be the Game Warden: State v. Boyer and the Erosion of Privacy Protection for Montana Sportsmen*, 65 MONT. L. REV. 187 (2004); Scott Witty, *It's a Keeper: Preserving Minnesota's Recreational Fishing by Allowing Effective Regulatory Enforcement*, 26 HAMLINE J. PUB. L. & POL'Y 151 (2004).

1. Aggregation

Fourth Amendment analysis can require courts to balance the state interest advanced by a challenged practice and the privacy intrusion that it occasions.¹⁷⁵ The hunter enforcement cases often engage in this type of balancing¹⁷⁶ and routinely identify a very strong government interest in enforcement of fish and game laws. Importantly, the fact that many hunters' actions must generally be aggregated to produce the environmental harm sought to be avoided (depletion of fish and game populations) does not appear to diminish the perceived state interest in the hunter enforcement cases.

The Idaho Supreme Court, in evaluating a game checkpoint under the Fourth Amendment, observed that "[t]he State has a compelling interest in the management and conservation of its natural resources, including wildlife"; the court looked to the broad statutory authority granted to fish and game wardens as a signal of the "legislature's perception that fish and game violations are matters of grave public concern which justify minimal intrusion into the public's right of privacy."¹⁷⁷ En route to holding that officers' warrantless entry to property to enforce hunting law was permitted under the open fields doctrine, a New Jersey court reasoned that hunting is "a dangerous activity which subjects people and domestic animals to possible injury"; the court concluded that "it would appear that there is strong public interest in the enforcement of laws pertaining to the regulation and control of the taking of wildlife in New Jersey . . ."¹⁷⁸ These cases illustrate a common refrain in hunter enforcement cases. As the Supreme Court of North Dakota summarized in a

¹⁷⁵ E.g., *Chandler v. Miller*, 520 U.S. 305, 314 (1997) ("When . . . 'special needs'—concerns other than crime detection—are alleged in justification of a Fourth Amendment intrusion, courts must undertake a context-specific inquiry, examining closely the competing private and public interests advanced by the parties."); *Camara v. Mun. Court*, 387 U.S. 523, 536–37 (1967) (setting forth a reasonableness balancing test for administrative searches and observing that "[u]nfortunately, there can be no ready test for determining reasonableness other than by balancing the need to search against the invasion which the search entails").

¹⁷⁶ E.g., *State v. Jackson*, 764 So.2d 64, 72 (La. 2000) (observing that "[i]n all cases addressing the constitutionality of the checkpoints, the intrusion on the individual's liberty interest has been weighed against the legitimate governmental interest involved"); Jamie Esser, *The Validity of Warrantless Administrative Searches During Fishing Regulation Enforcement*, DCBA BRIEF, Feb. 2011, at 34, 39 (reviewing recreational fishing search cases and concluding that "[t]he courts in many of the stated cases are balancing the needs of the individual against the governmental interest"). Although it can be difficult to discern when balancing is appropriate and the Supreme Court's view has evolved—see generally Fabio Arcila, Jr., *Special Needs and Special Deference: Suspicionless Civil Searches in the Modern Regulatory State*, 56 ADMIN. L. REV. 1223, 1226–34 (2004) (describing balancing in application of the special needs test)—for present purposes it is sufficient to note that many courts have engaged in such balancing in hunter enforcement cases at different times and in different contexts.

¹⁷⁷ *State v. Medley*, 898 P.2d 1093, 1097 (Idaho 1995) (striking down a fish and game checkpoint used as a drag net to identify myriad unrelated violations).

¹⁷⁸ *State v. Gates*, 703 A.2d 696, 700 (N.J. Super. Ct. Law Div. 1997).

case upholding a fish and game checkpoint, “As precedents elsewhere have recognized, the State has a compelling interest in managing and preserving its wildlife.”¹⁷⁹ This articulation of state interest offered by the California Supreme Court in 2011 in upholding a suspicionless vehicle stop by a fish and game officer is particularly thorough:

Here, the state interest at issue is the state’s interest in protecting and preserving the fish and game resources of the state for the benefit of all of the public and for future generations. The legitimacy and importance of this state interest are reflected in a number of provisions embodied in the California Constitution in numerous statutory provisions and in many judicial decisions rendered throughout our state’s history. Past cases have described the state interest in preserving and managing its natural resources, including its wildlife, as great and compelling and have stressed that the state has an obligation and duty to exercise supervision over such resources for the benefit of the public generally. Although many of the prior California decisions, drawing upon the common law, speak of the state’s “title” or “ownership” of the wild fish and animals within its borders—a characterization that a number of United States Supreme Court decisions have described as a legal fiction—all of the pertinent decisions, including all of the federal decisions that have addressed the state ownership of wildlife language, confirm the legitimate and, indeed, vital nature of a state’s interest in protecting its natural resources, including the wildlife within the state, from depletion and potential unavailability for future generations.¹⁸⁰

The strength of the identified interest in the enforcement of fish and game laws likely arises, in part, from the nature of the government’s relationship to wildlife. Both the doctrine of public ownership and public trust doctrine, for example, under which governments are understood to own wildlife and/or have the responsibility to manage wildlife for the benefit of the public, have been cited in Fourth Amendment cases evaluating the government’s interest in enforcing fish and game laws.¹⁸¹ For

¹⁷⁹ *State v. Albaugh*, 571 N.W.2d 345, 347–48 (N.D. 1997) (citations omitted); *see also* *Betchart v. Cal. State Dep’t of Fish & Game*, 205 Cal. Rptr. 135, 138 (Cal. Ct. App. 1984) (observing that “[t]he entries by the wardens are for the purpose of regulating and managing a state-owned resource”).

¹⁸⁰ *People v. Maikho*, 253 P.3d 247, 260–61 (Cal. 2011) (citations omitted).

¹⁸¹ *See State v. McHugh*, 630 So.2d 1259, 1265–67 (La. 1994) (citing to public trust doctrine in upholding “suspicionless [hunting] license check stops”); *State v. Boyer*, 42 P.3d 771, 776 (Mont. 2002) (“In this capacity, game wardens are acting not only as law enforcement officers, but as public trustees protecting and conserving Montana’s wildlife and habitat for all of its citizens.”); *State v. Halverson*, 277 N.W.2d 723, 724 (S.D. 1979) (upholding fish and game checkpoint and weighing the state interest involved, reasoning both that “[w]ild animals in this state are the property of the state” and that “[t]he citizens of this state have an interest in the management of wildlife so that it can be effectively

present purposes, however, what is interesting about the characterization of the government interest in the hunter enforcement cases is that the weight afforded to the environmental goal does not appear to be diminished by the fact that the actions subject to regulation must be aggregated to impose meaningful environmental harm. The individuals to whom fish and game laws are applied are, independently, merely *de minimis* contributors; even when they violate fish and game laws, individually they impose no appreciable harm to larger conservation goals. Courts did not minimize the state interest involved by reasoning that the harm imposed by an individual hunter's violation of the fish and game laws was slight.¹⁸² The overall conservation benefits of implementing fish and game laws writ large defined the state interest.

That the need for aggregation does not diminish state interest is true of Fourth Amendment analysis in other contexts.¹⁸³ However, it is especially useful to observe that the need for aggregation does not diminish state interest in the hunter enforcement cases because, like other environmentally significant individual behaviors, these cases involve individuals as contributors to an environmental problem.

2. Individual

That hunters are a class of regulated individuals, as opposed to commercial entities, bears on Fourth Amendment analysis in the hunter enforcement cases in an interesting fashion. With respect to evaluating the state interest involved, the challenge of enforcing fish and game laws against numerous individuals, particularly in light of the often expansive geography of hunting and fishing, provides strong arguments that aggressive enforcement measures are necessary for fish and game regulation to function effectively. However, the fact that these enforcement measures will be directed to individuals, as opposed to commercial entities, generally causes (or would typically cause) the ensuing intrusion to be

conserved.") (citation omitted); John D. Echeverria & Julie Lurman, "*Perfectly Astounding*" *Public Rights: Wildlife Protection and the Takings Clause*, 16 TUL. ENVTL. L.J. 331, 350 n.93 (2003) (exploring the legal implications of the doctrine of public ownership of wildlife and observing that "the doctrine of public ownership of wildlife also has been invoked to justify warrantless searches and seizures in conjunction with the enforcement of wildlife laws"); Dale D. Goble, Symposium, *Three Cases/Four Tales: Commons, Capture, the Public Trust, and Property in Land*, 35 ENVTL. L. 807, 851 n.219 (2005) (describing how State's public interest in wildlife impacts Fourth Amendment analysis).

¹⁸² *Boyer*, 42 P.3d at 777 (observing that an angler's "claim that he had a legitimate expectation of privacy in his catch as he enjoyed the peace and tranquility of the Missouri River reeks of irony as his peaceful and tranquil poaching threatened the river's resources for future generations").

¹⁸³ William J. Stuntz, *Privacy's Problem and the Law of Criminal Procedure*, 93 MICH. L. REV. 1016, 1032 (1995) ("The government's 'need' argument in these typical regulatory settings is not the need to engage in *this particular search*. Rather, the relevant government interest is the interest in *having the regulatory regime*.").

weighted more heavily. Courts in hunter enforcement cases, however, particularly those approving relaxed Fourth Amendment procedures, have often characterized hunters as akin to commercial entities in various respects and reasoned that the intrusion is therefore minimized when fish and game laws are applied to hunters.

As noted above, the enforcement challenges presented by regulating hunters, in large part because they are numerous and geographically dispersed individuals, are often referenced as a significant factor in evaluating the need for a particular fish and game enforcement practice. The Oregon Supreme Court forcefully made this point in *State v. Tourtillot*,¹⁸⁴ where the court cited to the following information in upholding warrantless game checkpoint stops:

In 1977, 412,100 hunting licenses were sold in Oregon, which then contained about 2.4 million people. Recreational hunting and fishing licenses sold in Oregon in 1977 totaled 1,043,158. Over one-half of Oregon's 96,981 square miles is publicly owned. These statistics highlight the task which faces game law enforcement personnel in carrying out the wildlife policy of this state. The broad expanse of territory in Oregon, much of which is virtually uninhabited, makes law enforcement difficult. The checkpoint was established on the first weekend of hunting season. It was placed on an isolated road where hunting activity was to be expected. Thus, the method chosen would be one of the most effective ones to meet its goals.¹⁸⁵

Courts in many other hunter enforcement cases have been similarly sympathetic to the enforcement challenges posed by the regulation of hunters.¹⁸⁶ Indeed, Justice Blackmun, in his concurrence in *Delaware v. Prouse*,¹⁸⁷ (which held that roving vehicle stops for license and registration checks violate the Fourth Amendment) stated,

I would not regard the present case as a precedent that throws any constitutional shadow upon the necessarily somewhat individualized and perhaps largely random examinations by game wardens in the performance of their duties. In a situation of that type, it seems to me, the

¹⁸⁴ 618 P.2d 423 (Or. 1980).

¹⁸⁵ *Id.* at 430 (citations omitted).

¹⁸⁶ *E.g.*, *People v. Maikhio*, 253 P.3d 247, 262 (Cal. 2011); *State v. Gates*, 703 A.2d 696, 701 (N.J. Super. Ct. Law Div. 1997) ("The nature of hunting, involving as it does vast expanses of undeveloped land, and the mobility of its participants on foot and by use of motor vehicles make it an elusive activity, requiring immediate response when violations of the law are suspected."); *State v. Albaugh*, 571 N.W.2d 345, 348 (N.D. 1997) ("Game wardens surely face a daunting task when attempting to enforce the game laws in a rural region like North Dakota. In assessing the need for checkpoints to do so, courts have stressed the limited manpower available to game officials, the vast and remote areas where hunting usually occurs, and the difficulty in detecting game violations without suspicionless stops.").

¹⁸⁷ 440 U.S. 648 (1979).

Court's balancing process, and the value factors under consideration, would be quite different.¹⁸⁸

More generally, the challenges of enforcing broad regulatory schemes are recognized as a rationale for relaxing Fourth Amendment requirements in other contexts;¹⁸⁹ in endorsing area code-enforcement inspections in *Camara*, for example, the Supreme Court recognized that regulatory enforcement realities were appropriate to consider in assessing reasonableness.¹⁹⁰ Thus, at least for this purpose (assessing state interest and need), the fact that hunters constitute a class of difficult-to-regulate individuals clearly increases tolerance for privacy intrusions.

Generally speaking in Fourth Amendment analysis, however, it is clear that privacy intrusions experienced by individuals are weighed more heavily than intrusions experienced by commercial entities.¹⁹¹ Thus, the intrusions experienced by hunters should be weighed more heavily than similar intrusions borne by commercial entities in the application of environmental laws directed primarily to commercial entities. The hunter enforcement cases underscore the particular concern reserved for privacy intrusions experienced by individuals, albeit in a somewhat contradictory fashion. Some courts characterize intrusions experienced by hunters as intrusions experienced by individuals and value the intrusions accordingly. Other courts distinguish hunters, as a class, from individuals writ large and on that basis *diminish* the intrusions experienced by hunters.¹⁹²

¹⁸⁸ *Id.* at 664 (Blackmun, J., concurring).

¹⁸⁹ *Arcila*, *supra* note 176, at 1240 (“[I]t is clear that we have moved from a limited government with a commensurately limited civil search power, to an expansive government whose effectiveness calls for a Fourth Amendment jurisprudence that accommodates suspicionless civil searches.”).

¹⁹⁰ *Camara v. Mun. Court*, 387 U.S. 523, 535–36 (1967) (reasoning that “[i]n determining whether a particular inspection is reasonable—and thus in determining whether there is probable cause to issue a warrant for that inspection—the need for the inspection must be weighed in terms of these reasonable goals of code enforcement,” and observing that “[t]here is unanimous agreement among those most familiar with this field that the only effective way to seek universal compliance with the minimum standards required by municipal codes is through routine periodic inspections of all structures”).

¹⁹¹ *Dow Chem. Co. v. United States*, 476 U.S. 227, 237 n.4 (1986) (“We find it important that this is *not* an area immediately adjacent to a private home, where privacy expectations are most heightened.”); *Donovan v. Dewey*, 452 U.S. 594, 598–99 (1981) (“The greater latitude to conduct warrantless inspections of commercial property reflects the fact that the expectation of privacy that the owner of commercial property enjoys in such property differs significantly from the sanctity accorded an individual’s home, and that this privacy interest may, in certain circumstances, be adequately protected by regulatory schemes authorizing warrantless inspections.”); See *v. City of Seattle*, 387 U.S. 541, 545–46 (1967) (“We do not in any way imply that business premises may not reasonably be inspected in many more situations than private homes . . .”).

¹⁹² In one interesting case, the Ninth Circuit held that a stop undertaken by a roving patrol that was stopping all vehicles in a national park to check for possible game violations violated the Fourth Amendment. The court assessed the expectation of privacy not of hunters,

In *State v. Larsen*,¹⁹³ the Supreme Court of Minnesota declined to extend the closely regulated business exception to a game warden's search of a fish house.¹⁹⁴ The court viewed that line of cases as extending to "industries" in a "narrow field of commercial activity" where enforcement of the regulation at issue involved "serious personal safety concerns or felony level criminal conduct."¹⁹⁵ The court found that the fishing regulations were "no more pervasive or comprehensive than the state's traffic rules and regulations" and that traffic stops require reasonable suspicion to conduct a stop.¹⁹⁶

The court in *Tallman v. Department of Natural Resources*¹⁹⁷ similarly drew a sharp distinction between industry and individuals with respect to invocation of the closely regulated business exception.¹⁹⁸ *Tallman* upheld a warrantless search of a commercial fishing vessel pursuant to a Michigan law governing commercial fishing.¹⁹⁹ In doing so, the *Tallman* court drew a distinction between commercial and recreational entities.²⁰⁰ In a prior case, *State Conservation Department v. Seaman*,²⁰¹ the Michigan Supreme Court held that the warrantless search and seizure of a moored vessel conducted under the state's fish and game laws, authorizing warrantless searches based on probable cause to believe that a violation of the state's fish and game laws had occurred, violated the Fourth Amendment.²⁰² Distinguishing its case from *Seaman*, the *Tallman* court noted,

Seaman authorized searches for the purpose of enforcing regulations regarding wild animals, wild birds, and fish against commercial and recreational violators alike. The statute at issue in the cases presently before the Court . . . applies *only* to those licensed by the state to harvest the state's fishery resources for personal profit. The fact that the statute at issue here is exclusively applicable to commercial fishers is especially relevant, because the DNR has raised a question of first impression not touched upon in *Seaman* or in any other decision of this Court: the legality

but of individuals who visit national parks and expressly declined to apply the closely regulated business exception, observing that "Congress established national parks in part to preserve for people a setting for respite and reflection" such that "federal regulations governing the use and management of the parks . . ." do not diminish expectations of privacy in those visiting national parks. *United States v. Munoz*, 701 F.2d 1293, 1298 (9th Cir. 1983).

¹⁹³ 650 N.W.2d 144 (Minn. 2002).

¹⁹⁴ *Id.* at 153.

¹⁹⁵ *Id.*

¹⁹⁶ *Id.*

¹⁹⁷ 365 N.W.2d 724 (Mich. 1984).

¹⁹⁸ *Id.* at 726.

¹⁹⁹ *Id.* at 746.

²⁰⁰ *Id.*

²⁰¹ 240 N.W.2d 206 (Mich. 1976).

²⁰² *Id.* at 213.

of a warrantless search of commercial premises for the purpose of enforcing a pervasive regulatory scheme.²⁰³

Later in its decision, the *Tallman* court again emphasized that the holding adopting and applying the closely regulated business exception was limited to commercial fishermen. Distinguishing a prior case that had struck down a requirement that persons hunting, fishing, or trapping allow conservation officers to “inspect, count, and examine” all wildlife, hunting, or fishing equipment in their possession as violating the search and seizure provision of Michigan’s Constitution, the *Tallman* court noted,

That case [*People ex rel. Attorney General v. Lansing Municipal Judge*]²⁰⁴ might prove apposite to the cases presently before this Court, but for the crucial fact that the party accused of violating the state’s conservation laws in that case took the state’s wildlife for pleasure rather than for profit. Because we deal here with parties engaged in a pervasively regulated *commercial* endeavor, *Lansing Municipal Judge* is inapposite. We do not pass here on the question whether the DNR may make warrantless searches, absent probable cause and exigent circumstances, of the persons or property of *recreational* fishers for the purpose of enforcing regulations which limit their activities.²⁰⁵

In other hunter enforcement cases, courts have either expressly applied the closely regulated business exception to hunters²⁰⁶ or employed rationales similar to those used to justify the closely regulated business exception (consent, privilege, and notice) to characterize hunters as having lower expectations of privacy in the relevant context. In *Betchart v. California State Department of Fish and Game*,²⁰⁷ for example, a California state court relied on the closely regulated business exception in upholding warrantless entry by Fish and Game personnel on private property where game is present to enforce wild game regulations.²⁰⁸ The court found that the property in question was agricultural and, under federal law, was an open field to which the property owner did not have a reasonable expectation of privacy.²⁰⁹ However, the plaintiff based his claim on the warrant requirement of the

²⁰³ *Tallman*, 365 N.W.2d at 741.

²⁰⁴ 42 N.W.2d 120 (Mich. 1950).

²⁰⁵ *Tallman*, 365 N.W.2d at 741.

²⁰⁶ In addition to the discussed cases, see, for example, *Hamilton v. Myers*, 281 F.3d 520, 532 (6th Cir. 2002), finding that “[e]veryone who participates in the privilege of hunting has a duty to permit inspections to determine whether they are complying with applicable laws. Hunting and fishing are regulated activities under both state and federal law. The Supreme Court has found that a warrantless search of a regulated industry or business is reasonable.” *Id.* (citing *New York v. Burger*, 482 U.S. 691 (1987)).

²⁰⁷ 205 Cal. Rptr. 135 (Cal. Ct. App. 1984).

²⁰⁸ *Id.* at 137–39.

²⁰⁹ *Id.* at 137.

California Constitution, which applies a balancing test to open fields—whether a person has exhibited a reasonable expectation of privacy and, if so, whether that expectation has been violated by unreasonable governmental intrusion.²¹⁰ The court reasoned that “[t]he fact that *Biswell* dealt with a business is not the sole factor to be considered” and observed that—by analogizing hunters to closely regulated businesses—“[h]unters are required to be licensed,” and “[b]y choosing to engage in this highly regulated activity, there is a fundamental premise that there is an implied consent to effective supervision and inspection as directed by statute.”²¹¹

Similarly, in *People v. Maikho*,²¹² the California Supreme Court reasoned that “the intrusion upon privacy engendered by a game warden’s stop of an angler or hunter to demand the display of his or her catch or take is relatively minor,” in part because hunters “have voluntarily chosen to engage in an activity that is heavily regulated in order to assure the continued existence of the wildlife of this state for the benefit not only of future generations but for the benefit of current anglers and hunters themselves.”²¹³ The court went on to reject the idea that the rationales for the closely regulated business exception might not apply to hunters as individuals, commenting that “[c]ontrary to defendant’s contention, numerous cases establish that the existence of pervasive regulation can diminish the reasonable expectation of individuals as well as businesses.”²¹⁴

Still, in other hunter enforcement cases, while not relying expressly upon the closely regulated business exception, courts have endeavored to distinguish hunters as a class from the public writ large, citing to factors such as consent, privilege, and notice or knowledge. In *State v. Boyer*,²¹⁵ for example, the Supreme Court of Montana held that a game warden’s request for inspection of catch was not a search because the fisherman had no expectation of privacy that society was prepared to honor in the fishing catch contained in a closed live well.²¹⁶ The court found that anglers were on notice of the inspection requirements (“[i]n complying with the well established license requirements, anglers acknowledge the prospect of at least some governmental intrusion into their activities”) and that by “engaging in this highly regulated activity, anglers must assume the burdens of the sport as well as its benefits.”²¹⁷ In *People v. Layton*,²¹⁸ an Illinois appellate court upheld the warrantless search of a hunter’s game bag and held that “probable cause to search[] arises from indicia that the person in question is a hunter, immediately or very recently engaged in hunting.”²¹⁹ The court rejected application of the exigent circumstances or closely regulated business exceptions on the grounds that the present search was not an

²¹⁰ *Id.* at 136–37.

²¹¹ *Id.* at 138.

²¹² 253 P.3d 247 (Cal. 2011).

²¹³ *Id.* at 262.

²¹⁴ *Id.* at 262 n.14.

²¹⁵ 42 P.3d 771 (Mont. 2002).

²¹⁶ *Id.* at 776.

²¹⁷ *Id.*

²¹⁸ 552 N.E.2d 1280 (Ill. App. Ct. 1990).

²¹⁹ *Id.* at 1287.

administrative search.²²⁰ The court instead reasoned that hunting “is a privilege, not a right” and is “highly regulated” such that hunters “may be deemed [to] consent to some intrusions”; the court ultimately characterized hunting as “an exception because of necessity.”²²¹ Other courts have offered similar rationales for distinguishing hunters as a class.²²²

3. *Balancing*

Regardless of the specific rationales employed, the hunter enforcement cases as a whole reveal that, overall, both the statutory grants of authority to fish and game officers and the scrutiny of the actions of fish and game officers implementing those statutes under the Fourth Amendment tend to strike a balance between enforcement and privacy that favors enforcement. Fish and game checkpoints are regularly upheld;²²³ suspicionless stops have likewise occasionally received court approval.²²⁴ As described by the Maine Supreme Judicial Court, in a case upholding a warden’s suspicionless stop of an ATV rider, “We, along with courts in other states, have also recognized the limitations of the Fourth Amendment’s reach regarding wardens and other officers whose duties include patrolling and protecting vast territories, such as waterways and wooded areas.”²²⁵ One commentator observed that “[s]tate statutes granting to wildlife officers the authority to make warrantless searches have usually

²²⁰ *Id.* at 1286–87.

²²¹ *Id.* at 1287.

²²² See also, e.g., *Elzey v. State*, 519 S.E.2d 751, 754 (Ga. Ct. App. 1999) (upholding game wardens’ approach and questioning of hunters that revealed drugs in part because “the peculiar nature of hunting leads to a diminished expectation of privacy on the part of hunters”); *State v. McHugh*, 630 So.2d 1259, 1266 (La. 1994) (“[H]unters entering game habitats during open seasons are not taken by surprise because they know or should know of their exposure to license and game checks.”); *State v. Colosimo*, 669 N.W.2d 1, 5 (Minn. 2003) (“Recreational fishing is a highly regulated and licensed privilege. Those who choose to apply for this privilege accept the conditions imposed, unique to the sport of game fishing.”).

²²³ E.g., *United States v. Fraire*, 575 F.3d 929, 930 (9th Cir. 2009) (upholding checkpoint instituted by park rangers to detect illegal poaching); *State v. Thurman*, 996 P.2d 309, 315 (Idaho Ct. App. 1999) (upholding fish and game checkpoint and listing cases); *State v. Tourtillott*, 618 P.2d 423, 430 (Or. 1980) (upholding, under both the state and federal constitutions, a state police roadblock designed to enforce game laws); *State v. Halverson*, 277 N.W.2d 723 (S.D. 1979) (upholding stop of vehicles at a checkpoint for the purpose of checking wild game).

²²⁴ *People v. Maikhio*, 253 P.3d 247, 263 (Cal. 2011) (holding that it does not violate the Fourth Amendment when a game warden, without reasonable suspicion that a fish and game regulation has been violated, stops a vehicle whose occupant is or has recently been fishing or hunting to demand the occupant display all fish or game taken; observing that “the great majority of out-of-state decisions that have addressed the question of the validity of suspicionless stops of anglers and hunters by game wardens have found such stops constitutionally permissible”; and listing cases).

²²⁵ *State v. McKeen*, 977 A.2d 382, 386 (Me. 2009).

been upheld, whether they permitted warrantless searches by patrolling officers, at fixed checkpoints, or business premises of commercial enterprises.”²²⁶ Another commentator criticized courts’ willingness to authorize game violation inspections, observing that “allowing game wardens to make random stops would give rise to the ‘grave danger of abuse of discretion’ about which the Court in *Prouse* was rightly concerned”²²⁷ As noted above, the Supreme Court characterized the implementation of fish and game law as an area appropriately afforded special solicitude in Fourth Amendment analysis when Justice Blackmun referred in his concurrence in *Delaware v. Prouse* to “the necessarily somewhat individualized and perhaps largely random examinations by game wardens in the performance of their duties.”²²⁸ In 2000, the Supreme Court of Louisiana, en route to adopting a new standard for evaluating checkpoints, lamented that its precedents (upholding hunting license checkpoints but not checkpoints directed to drunk driving) “create the anomaly that preservation of the state’s wildlife is a more compelling governmental interest than the protection of human life from drunken drivers on our public roadways.”²²⁹ Although the Supreme Court of Louisiana went on to rectify the “anomaly” by adopting a new standard for evaluating checkpoints, the fact that the anomaly existed at all attests to the solicitude afforded to fish and game enforcement.

This should not be taken to suggest that courts do not use the Fourth Amendment to limit fish and game enforcement authority; there are numerous examples of courts construing fish and game statutes narrowly to avoid constitutional problems, striking down those statutes as inconsistent with Fourth Amendment requirements or holding more narrowly that a particular search or seizure violated the Fourth Amendment.²³⁰ Overall, however, legislatures and courts, while recognizing privacy concerns, have tended to strike a balance relatively favorable to regulation in the hunter enforcement context.

²²⁶ Dale Joseph Gilsinger, *Validity, Construction, and Application of State Wildlife Possession Laws*, 50 A.L.R. 724, 728 (1997) (citations omitted).

²²⁷ LAFAVE, *supra* note 114, § 10.8(e).

²²⁸ 440 U.S. 648, 664 (1979) (Blackmun, J., concurring).

²²⁹ *State v. Jackson*, 764 So.2d 64, 69 (La. 2000).

²³⁰ *E.g.*, *State v. Legg*, 536 S.E.2d 110, 116 (W.Va. 2000) (suppressing evidence obtained during conservation officers’ random stop to conduct game-kills survey and holding that officer must have articulable reasonable suspicion of offense to constitutionally stop vehicle to conduct game-kill survey); *People v. Coca*, 829 P.2d 385, 388 (Colo. 1992) (en banc) (suppressing evidence obtained during investigatory stop by wildlife officer); *Amison v. State*, 5 So.3d 798, 801 (Fla. Dist. Ct. App. 2009) (interpreting conservation statutes to require reasonable suspicion for vehicle stops); *Commonwealth v. Ickes*, 873 A.2d 698, 703 (Pa. 2005) (striking down Pennsylvania statute authorizing game officers to stop and demand identification and observing that “[n]one of these threshold requirements [reasonable suspicion, probable cause, Miranda warnings] are enumerated in the statute that authorizes Game Officers to stop and search, but they are required if officers are to avoid constitutional impropriety”); *People v. Hedges*, 447 N.Y.S.2d 1007, 1012–13 (Dist. Ct. Suffolk Cnty. 1982) (holding that statutes authorizing warrantless search of business premises based on “cause to believe” that there was a violation of the Environmental Conservation Law were unconstitutional); Gilsinger, *supra* note 226, at 793–94, 797, 804–07.

III. CONCLUSION

The purpose of this Article is not to anticipate whether or how the Fourth Amendment might apply to specific efforts to collect information about environmentally significant individual behaviors. The purpose is to discern the considerations that have proven salient in balancing environmental regulation and privacy to date that may likewise be relevant to navigating privacy concerns that arise with respect to policy directed to environmentally significant individual behaviors.

In this regard, the Article's survey suggests that neither the fact that environmentally significant individual behaviors must be aggregated to produce environmental harm nor the fact that individuals, as opposed to commercial entities, experience the privacy intrusions involved dictates that privacy concerns will override the needs of regulation. As evidenced by nuisance law, that individuals impose an environmental externality can be a strong basis for minimizing privacy interests. As evidenced by the hunter enforcement cases, even where aggregation is required and individuals are the subject of regulation, privacy balancing can favor regulation. Notably, however, the articulation of state interest in the hunter enforcement cases is clear and strong. Those contemplating, crafting, and implementing policies addressed to environmentally significant individual behaviors should take care to articulate the strongest case possible that the information sought furthers an important state interest. Privacy concerns need not derail the development of sophisticated policies aimed at reducing harms arising from environmentally significant individual behaviors, but a concerted effort will be required to demonstrate the environmental value of limiting harms from environmentally significant individual behaviors. A concerted effort will also be required to demonstrate that information about environmentally significant individual behaviors is important to effect policies directed to those behaviors and that privacy balancing should therefore favor disclosure to enable regulation.

