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Animal Welfare

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Redundancy of Animal Hoarding Laws

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The Journal of Animal and Environmental Law would also like to express its gratitude for their assistance in establishing this Journal to

Craig Anthony Arnold

Boehl Chair in Property and Land Use and Professor of Law

Jim Chen

Dean and Professor of Law

As the inaugural issue of the Journal of Animal and Environmental Law, a brief introduction is appropriate.

Animal Law may seem like a specialization, but, in fact, it encompasses many areas of the law including torts, criminal law, and constitutional law. Animal Law includes both statutory and case law in which non-human animals are important. The field covers all animals: companion animals, farm animals, animals used in entertainment, those used in research, and wildlife. Animal Law is a field on the rise. Animal law courses and Student Animal Legal Defense Fund chapters are steadily increasing. Attorneys, more than ever, are either going into the field of Animal Law outright or are spending their pro-bono hours on Animal Law issues. An additional forum of discussion on these issues was needed, especially in Kentucky and the South. Kentucky has ranked last in the Animal Legal Defense Fund's survey of animal law for the last two years. Kentucky is a state in need of animal law discussion and attorneys.

Environment. We use the term broadly to refer to the physical components of our world. It encompasses both non-living things, like the oceans and gravity, and living things, like animals and microorganisms. Law. A system of rules that regulates interactions in a society. Together, environmental law is the field of law that focuses on the development and implementation of laws governing society's impact on the environment. It involves interpreting and interweaving statutes, treaties, and case law both locally and internationally.

The Louis D. Brandeis Journal of Animal and Environmental Law (JAEL) was conceived to cover the entire gambit of animal and environmental law. In that respect, the JAEL is unique in that it is currently the only law journal with a specific focus on both environmental and animal law issues. Typical environmental law journals publish articles on topics, such as resource use, chemical regulation, and international policy. The issues that affect animals affect the environment and vice versa. Better laws for one will usually result in

gains for the other. However, there are times when the interests of one come at the expense of the other. These issues are also of concern and should have a forum for discussion. As can be seen from the divergent styles of the first two paragraphs, this journal, in an effort to provide an academic forum for these emerging fields will not limit itself to the standard law review format.

A final unique aspect of this journal is that it is only available in an electronic form. The benefits of this choice have been significant. Publication delays have been reduced to allow these new ideas to be introduced. Electronic editing saved over two thousand pages of paper. Online availability allows many different communities to participate in the development of this scholarship. Besides the advancement of the topics and policies proposed, the possibility that other law journals would be able to incorporate the electronic editing encouraged the creation of this journal.

Published bi-annually by a student editorial board at the University of Louisville, Brandeis School of Law, the journal provides law schools, judges, and attorneys across the nation with cutting-edge scholarship. The Journal accepts submissions from academics, practitioners, or other writers throughout the year.

Rexéna Napier
Algeria R. Ford
Editors in Chief

An Introduction to Cap and Trade for Animal Welfare

Alan S. Nemeth*

Interest in the advancement of animal welfare has grown in the United States in recent years. This growth can be seen by the passage of stronger animal welfare laws, including the banning of gestation and veal crates in Maine in 2009, the passage of Proposition 2 in California in 2008 which banned battery cages and gestation and veal crates, and the passage of stricter puppy mill laws in Virginia, Pennsylvania, and Louisiana in 2008.

Although these are important steps, could further improvements be accomplished on a wider scale if animal welfare advocates took a page from the handbook of activists who have been even more successful of late? Specifically, the environmental advocacy community has inspired the United States and the world to combat not only pollution, but also global warming by forcing the reduction of greenhouse gases.

On June 26, 2009, the U.S. House of Representatives passed the American Clean Energy and Security Act of 2009, H.R. 2454, which includes a straightforward concept and tool intended to reduce

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pollution, that of cap and trade.¹ Thinking outside of the proverbial box, could a market-based approach such as cap and trade be successfully used to improve animal welfare throughout the United States and across the various industries that use animals?

This article will explore that very question by focusing on the U.S. Environmental Protection Agency's (EPA) publication, *Tools of the Trade: A Guide to Designing and Operating a Cap and Trade Program for Pollution Control (Tools of the Trade)*.² The stated purpose of *Tools of the Trade* is to serve "as a reference for policy-makers and regulators considering cap and trade as a policy tool to control pollution. It is intended to be sufficiently generic to apply to various pollutants and environmental concerns; however, it emphasizes cap and trade to control emissions produced from stationary source combustion."³ This article will make use of the generic nature of this publication to explore whether the concern for animal welfare can legitimately be substituted for the concern for the environment. Specifically, can the argument be made that cap and trade, when properly implemented, could serve to improve the lives of animals?

This article will not attempt to craft an animal welfare cap and trade bill. After all, H.R. 2454 is over 1400 pages long.⁴ What this

¹ American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong. (2009), available at http://energycommerce.house.gov/Press_111/20090701/hr2454_house.pdf.

² OFFICE OF AIR AND RADIATION, U.S. ENVTL. PROT. AGENCY, EPA430-B-03-002, TOOLS OF THE TRADE: A GUIDE TO DESIGNING AND OPERATING A CAP AND TRADE PROGRAM FOR POLLUTION CONTROL (2003), available at <http://www.epa.gov/airmarkets/resource/docs/tools.pdf>.

³ *Id.* at 1-1.

⁴ H.R. 2454.

article will do, however, is lay out the arguments and start the discussion as to whether animal welfare can be positively impacted by the implementation of an animal welfare cap and trade program.

I. THE CONCEPT OF CAP AND TRADE

The EPA describes the basic concept of a cap and trade program as follows:

In a cap and trade program, sources are allocated a fixed number of allowances. Each allowance represents an authorization to emit a specific quantity of a pollutant (e.g., one ton). The number of allowances is capped in order to reduce emissions to the desired level, and sources are required to meet stringent, comprehensive emission monitoring requirements. At the end of the compliance period, emission sources must hold sufficient allowances to cover their emissions during the period. Sources that do not have a sufficient number of allowances to cover emissions must purchase allowances from sources that have excess allowances from reducing emissions.⁵

Reworking this description to create an animal welfare cap and trade program would look something like the following:

In a cap and trade program for animal welfare, sources* are allocated a fixed number of allowances. Each allowance represents an authorization to allow a specific quantity of a negative animal welfare activity (e.g., the use of battery cages in the egg industry). The number of allowances is capped in order to reduce the use of the negative animal welfare activity to the desired level, and sources are required to meet stringent, comprehensive animal welfare monitoring requirements. At

⁵ Types of Trading,
<http://www.epa.gov/captrade/documents/tradingtypes.pdf>.

* Sources will be discussed later in this paper but may include farms, the animal agriculture and breeding industries, food processors, and retail establishments.

the end of the compliance period, sources must hold sufficient allowances to cover their negative animal welfare activities during the period. Sources that do not have a sufficient number of allowances to cover those negative activities must purchase allowances from sources that have excess allowances from reducing their negative animal welfare activities to a level below the cap.

Some may wonder why a cap and trade system should be considered for animal welfare when we do not yet know if it will be a successful system for the reduction of greenhouse gasses. Although a cap and trade system for greenhouse gasses has not yet been implemented, cap and trade systems have successfully been used in the United States for pollution since 1990.

To ensure a cleaner, healthier environment, governments are increasingly using market-based pollution control approaches, such as emission trading, to reduce harmful emissions. The theory of emission trading and the potential benefits of market-based incentives relative to more traditional environmental policy approaches are well established in economic and policy literature. . . . In 1990, the United States enacted legislation to implement a comprehensive national sulfur dioxide (SO₂) program using a form of emissions trading called “cap and trade” . . . [which] has proven to be highly effective from both an environmental and an economic standpoint. . . . Today, emission trading mechanisms are increasingly considered and used worldwide for the cost-effective management of national, regional, and global environmental problems, including acid rain, ground-level ozone, and climate change.⁶

⁶ United States Environmental Protection Agency, *supra* note 2, at 1-1.

A standard cap and trade program seeks to limit pollution, a negative externality, via a market-based approach.⁷ A negative externality, in economic terms, is “a cost, not reflected in a price, that is associated with the use of resources.”⁸ For example, a negative externality, or external cost, can be seen where the by-products of a manufacturing process are dumped into a river. That dumping has a negative effect on the environment and that cost to society is not reflected in the price of the goods manufactured. Essentially, the manufacturer is dumping waste for free and in turn is polluting the environment.⁹ The purpose of a cap and trade system is to internalize this negative externality¹⁰ and make the manufacturer account for its

⁷ See generally John P McInerney, *Animal Welfare, Economics and Policy*, 165 J. ROYAL AGRIC. SOC'Y ENG. (2004), http://www.rase.org.uk/activities/publications/RASE_journal/2004/10-55711886.pdf; see generally JOHN MCINERNEY, *ANIMAL WELFARE, ECONOMICS, AND POLICY* (2004), <https://statistics.defra.gov.uk/esg/REPORTS/animalwelfare.pdf>.

⁸ DAVID N. HYMAN, *ECONOMICS* 339 (Richard D. Irwin, a Times Mirror Higher Education Group company, 4th ed. 1997).

⁹ See generally HYMAN, *supra* note 8, at 342.

¹⁰ United States Environmental Protection Agency, *supra* note 2, at A-1 (“According to economic theory, excessive levels of pollution occur due to so-called ‘market failures,’ such as the public goods, nature of environmental quality, imperfect information, and other factors. Hence, according to economic theory, governments should intervene to provide the correct incentives for pollution control. Determining the optimal level of pollution control requires an analysis of the level of the environmental externality that is being generated as a result of an economic activity. An externality is defined as a cost or a benefit that is not being properly accounted for by either the producers or the consumers of the activity. For example, consider the case of a firm

use of the resources—in this case the free dumping of waste into the river. However, by creating a market-based cap and trade system, the manufacturer is not merely being charged a fee or a tax to dump, but the industry is given incentives¹¹ to meet the emissions or pollution limits by developing a market whereby more efficient, less-polluting manufacturers are able to reduce their output beyond the limits imposed by the cap and be rewarded for it. Those companies under the cap limits can create revenue by selling their unused rights to pollute to the non-conforming, higher-polluting companies. The ability to trade pollution rights gives all companies a market-based, monetary incentive to lower their pollution output.

Another benefit of a cap and trade program is that the reductions in emissions can be achieved at an overall lower cost than they would have otherwise under more common standard regulatory limits. This same analysis would apply to an animal welfare cap and trade program.

The new market-based approach to emissions reduction is an improvement over older command-and-control regulations that

located upstream that is emitting pollution into a nearby stream. As a result, ecosystems downstream may be adversely affected (e.g., fish population decline, decline in recreational fishing and swimming, adverse health effects from contaminated drinking water). These are all examples of negative externalities (i.e., costs). If these effects are not reflected in the firm's production costs, and hence in the market price of the economic activity, the firm will emit a level of pollution that is above the social optimum. Generally, two conditions need to prevail for an external cost to exist: (1) an activity by one party causes a loss of welfare to another party; and (2) the loss of welfare is uncompensated.").

¹¹ Hyman, *supra* note 8, at 349–56.

required all firms to reduce emissions by the same percentage and often dictated the technology for doing so. The greater flexibility possible from trading rights to emit results in the same amount of emissions reduction and environmental improvement but at a lower cost. To see why this is so, suppose that under earlier rules the EPA commanded each power company in the country to reduce sulfur dioxide emissions by 1 ton per year. One power company might find that it cost \$1000 to meet the new standard; another power company might be able to meet the standard at a cost of only \$100. The total cost of a 2-ton reduction in emissions for these two companies is therefore \$1,100. However, the same reduction could be obtained at a cost of only \$200 if the second power company did all of the emissions reduction. Now suppose the price of a pollution permit for 1 ton of sulfur dioxide is \$500. Under the tradable permit approach, it would be in the interest of the first company to pay the second company \$500 to buy one of its permits to emit. The first company would add \$500 to its profit by doing so because it could meet the emissions standard with the \$500 right instead of paying \$1000 to reduce emissions. The second company incurs an extra \$100 cost to eliminate more emissions than the EPA requires but is paid \$500 by the first firm for doing so. The net marginal cost of the 2-ton reduction is now only \$200.¹²

The Environmental Defense Fund (EDF) has evaluated market-based environmental protections and has found them to be efficient and effective tools to control pollution. On their website, the EDF states:

Markets provide greater environmental effectiveness than command-and-control regulation because they turn pollution reductions into marketable assets. In doing so, this system creates tangible financial rewards for environmental performance.

¹² *Id.* at 354–355.

[Furthermore, because cap-and-trade gives pollution reductions a value in the marketplace, the system prompts technological and process innovations that reduce pollution down to or beyond required levels. This point is not theoretical; experience has shown these results.¹³

Similar results would be expected in an animal welfare cap and trade program.

The elements of a well-designed cap and trade program according to the EDF are listed below in bold, followed by the author's corollaries as to how these elements would apply to a cap and trade program for animal welfare.

- **A mandatory emissions "cap." This is a limit on the total tons of emissions that can be emitted. It provides the standard by which environmental progress is measured, and it gives tons traded on the pollution market value; if the tons didn't result in real reductions to the atmosphere, they don't have any market value.**¹⁴

The limits for animal welfare purposes would differ depending upon the industry being addressed. For example, there could be cap and trade limits on the number of battery cages, veal crates, or gestation crates in use. There could be a cap on the number of eggs from battery cage production that could be used by the food processing industry or a cap on the number of animals per square foot. These, and others, are real, measurable numbers.

¹³ The Environmental Defense Fund, *The Cap and Trade Success Story*, <http://www.edf.org/page.cfm?tagID=1085> (last visited Oct. 20, 2009).

¹⁴ *Id.*

- **A fixed number of allowances for each polluting entity. Each allowance gives the owner the right to emit one ton of pollution at any time. Allocation of allowances can occur via a number of different formulas.¹⁵**

Each source targeted for animal welfare improvement would have access to a fixed number of allowances for the negative animal welfare behavior. For example, an egg producer might get allowances for a certain amount of battery cages in use.

- **Banking and trading. A source that reduces its emissions below its allowance level may sell the extra allowances to another source. A source that finds it more expensive to reduce emissions below allowable levels may purchase allowances from another source. Buyers and sellers may “bank” any unused allowances for future use.¹⁶**

Companies that reduce their use of negative animal welfare activities below the capped amount would be able to sell their excess allowances for a profit.

- **Clear performance criteria. At the end of the compliance period (e.g., one year, five years, etc.), each source must hold a number of allowances equal to its tons of emissions for that period, and must have measured its emissions accurately and reported them transparently.¹⁷**

At the end of a compliance period, companies would need to hold allowances equal to the amount of negative animal welfare activity that it engaged in. As above, there needs to be strict reporting requirements.

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ *Id.*

- **Flexibility. Sources have flexibility to decide when, where and how to reduce emissions.**¹⁸

Since cap and trade seeks to effect industry-wide change, individual companies have the flexibility to decide how to adhere to the cap. Cap and trade for animal welfare, just like for environmental matters, does not prescribe the method to be used to meet the cap. As long as the animal welfare standards are met, companies in the animal production industries can develop new methods and processes in a time frame more suitable to them.

II. APPLYING THE *TOOLS OF THE TRADE* TO ANIMAL WELFARE

Tools of the Trade further expands the definition of a cap and trade program:

Cap and trade is a market-based policy tool for environmental protection. A cap and trade program establishes an aggregate emission cap that specifies the maximum quantity of emissions authorized from sources included in the program. The regulating authority of a cap and trade program creates individual authorizations (“allowances”) to emit a specific quantity (e.g., 1 ton) of a pollutant. The total number of allowances equals the level of the cap. To be in compliance, each emission source must surrender allowances equal to its actual emissions. It may buy or sell (trade) them with other emissions sources or market participants. Each emission source can design its own compliance strategy—emission reductions and allowance purchases or sales—to minimize its compliance cost. And it can adjust its compliance strategy in response to changes in technology or market conditions without requiring government review and approval.¹⁹

¹⁸ *Id.*

¹⁹ United States Environmental Protection Agency, *supra* note 2, at 1-2.

As it currently stands, improvements in animal welfare depend primarily on regulation. While regulation can set the requirements for animal welfare, the enforcement of those limits falls solely on government regulators, who are often underfunded and/or lax. So, other than passing inspections, there is no incentive or pressure for companies to change their animal welfare policies.

The institution of a cruelty or animal welfare improvement tax could be helpful in regulating unwanted behavior, just as pollution taxes have been used to internalize the negative externality of a polluting activity. All companies that fail to implement the prescribed animal welfare standards would be subject to a tax that the companies can simply accept and work into their pricing structures. The main problem with simply instituting a tax is that, although it internalizes the negative externality and might affect company revenues or costs to consumers, there is no guarantee that animal welfare would improve.²⁰ True, with higher prices, demand might drop. But the drop in demand does not necessarily result in animal welfare improvements. Even though the companies may sell less product, the animals used in the industry may still face the same poor conditions. Furthermore, instead of fostering better animal welfare, companies may search for ways to reduce costs to account for the tax and to improve their bottom lines.

²⁰ See generally Yale Environment 360, *Putting a Price on Carbon: An Emissions Cap or a Tax?* (May 7, 2009), <http://e360.yale.edu/content/feature.msp?id=2148> (last visited Oct. 20, 2009). This is an online discussion from numerous experts as to the benefits of a cap and trade program versus a tax. For purposes of an animal welfare program, the importance of certain limits trumps the simplicity of a tax.

These cost reducing measures could lead to worsening conditions for the animals as companies cut costs at the expense of the animals. Essentially, the government would be giving the companies a choice of paying the tax, improving animal welfare, or cutting costs to account for the tax—leaving it up to the companies to make a business decision that is most cost effective to them. Two of the three options do not improve the welfare of animals.

Cap and trade has benefits for not only the companies under the cap and trade program, but it also promotes the achievement of the program's goals. The main benefits to the companies involved have already been touched upon—monetary benefits to the companies instituting policies bringing them under the caps and the flexibility of time and manner in which the companies comply with the limits. From a policy standpoint, cap and trade is preferred over a tax program in that cap and trade provides a level of certainty that the limits will be met.²¹ Taxing companies does not set a goal that certain improvements to animal welfare be met. It merely presents the company with a choice to meet the requirements, pay the tax, or reduce costs. With cap and trade, a cap is set for the particular industry to meet, which will have to be met, guaranteeing an industry-wide improvement in animal welfare.

Under cap and trade, some companies may choose not to abide by the limits, and those companies will purchase credits. But there will only be so many credits available industry-wide. Therefore, when a cap and trade program begins, the administrators of the program know

²¹ United States Environmental Protection Agency, *supra* note 2, at 2-6.

that, by the time a particular compliance period ends, animal welfare throughout the industry will have improved to the level set by the administrators. Of course, inspection and oversight will be an important part of a cap and trade program, just as with simple regulatory requirements. But, cap and trade provides additional market-based incentives to adopt higher animal welfare standards—market-based incentives that include the sale of credits and the increasing market for products that are derived from animals raised with higher animal welfare standards. Across the board regulations do not provide any market-based trading incentive.

Cap and trade programs offer a number of advantages over more traditional approaches to environmental regulation. First and foremost, cap and trade programs can provide a greater level of environmental certainty than other environmental policy options. The cap, which is set by policymakers, the regulating authority, or another governing body, represents a maximum amount of allowable emissions that sources can emit. Penalties that exceed the costs of compliance and consistent, effective enforcement deter sources from emitting beyond the cap level. In contrast, traditional policy approaches such as command-and-control regulation generally do not establish absolute limits on allowable emissions but rather rely on emission rates that can allow emissions to rise as utilization rises.

A cap and trade program may also encourage sources to pursue earlier reductions of emissions than would have otherwise occurred, which can result in the earlier achievement of environmental and human health benefits. This is a result of two primary drivers: first, the cap and associated allowance market creates a monetary value for allowances, providing sources with a tangible incentive to decrease emissions.

Another environmental advantage of cap and trade is improved accountability. Participating sources must fully account for every ton of emissions by following protocols to ensure completeness, accuracy, and consistency of emission measurement.²²

III. IS CAP AND TRADE THE RIGHT TOOL?

Tools of the Trade identifies six criteria to consider in the decision-making process for the possible implementation of a cap and trade program. In this section, the article will look at each criterion and apply it to the use of cap and trade for animal welfare.

1. IS FLEXIBILITY APPROPRIATE?

Cap and trade is premised on the notion that regulators do not need to direct the type or location of specific emission reductions within a region.

In general, the more a pollutant is uniformly dispersed over a larger geographic area, the more appropriate it is for the use of cap and trade.²³

Flexibility is appropriate for an animal welfare cap and trade program. Regulators would not need to direct the type or location of specific animal welfare reductions within a region. The participants in the animal welfare cap and trade program are dispersed throughout the country and the overall goal of such a program would be the improvement of animal welfare industry-wide. Therefore, the focus on particular regions or the location of the animal welfare improvements is not critical to the success of the animal welfare cap and trade.

²² United States Environmental Protection Agency, *supra* note 2, at 1-2.

²³ *Id.* at 2-2.

2. DO SOURCES HAVE DIFFERENT CONTROL COSTS?

Cap and trade programs make the most sense when emission sources have different costs for reducing emissions. These cost differences may result from the age of the facilities, availability of technology, location, fuel use, and other factors.²⁴

Improvement costs for animal welfare will vary from company to company. Factors contributing to the varying of costs include region of the country in which the business is located, labor costs, age of the current plant to be altered or replaced (including the depreciation of the assets), technology in use, processes in use, farm/company size, and so on. The key point here is that the various sources that would be included under an animal welfare cap and trade program would have different control costs, thus making the various animal-use industries viable for a cap and trade program.

3. ARE THERE SUFFICIENT SOURCES?

In general, cap and trade programs should include enough sources to create an active market for allowances.²⁵

There are more than sufficient sources to create an active market for allowances. Even with the rise of large corporate farms, there are still thousands of farms that could participate in a farm animal cap and trade program. Likewise, there are more than enough food retailers and food processors to participate if they are included in a cap and trade program.

²⁴ *Id.*

²⁵ *Id.*

4. IS THERE ADEQUATE AUTHORITY?

Another important question government officials must consider is whether the relevant government entity has sufficient jurisdiction over the geographic area where they would implement the cap and trade program.²⁶

Just as the authority exists for the federal government to enact a national cap and trade program for greenhouse gases, the federal government would have jurisdiction to implement a national cap and trade program for animal welfare. Additionally, individual states could consider organizing a consortium of states to establish a regional cap and trade for animal welfare system.

5. ARE THERE ADEQUATE POLITICAL AND MARKET INSTITUTIONS?

For the trading component of a cap and trade program to work, a country must have some of the same institutions and incentives in place as those required for any type of market to function. These include:

- A developed system of private contracts and property rights.
- A private sector that makes business decisions based on the desire to lower costs and raise profits.
- A government culture that will allow private businesses to make decisions about “how” to achieve objectives with a minimum of intervention.²⁷

This criterion was mainly included for countries that may not have the same market-based and governmental systems in place that we employ. This is not an issue for the United States.

²⁶ United States Environmental Protection Agency, *supra* note 2, at 2-3.

²⁷ *Id.* at 2-3 to 2-4.

6. ARE MEASUREMENT CAPABILITIES SUFFICIENTLY ACCURATE AND CONSISTENT?

In considering whether cap and trade is an appropriate tool to address an environmental problem, policymakers should consider whether sources covered by the program can measure emissions with sufficient accuracy and consistency to support the cap and trade policy tool.²⁸

As with many regulatory programs, accurate measurement and oversight is imperative. We have the ability to accurately measure the improvements in animal welfare and the adherence to the cap and trade limits. For example, it is not very difficult to count the number of battery cages in use at a particular facility. What is needed is the will and the money to ensure compliance. Money to pay for the additional inspectors or program administrators could come from the sale or auction of the credits.

Based on the above review of the necessary criteria for a successful cap and trade program, it is clear that applying cap and trade to the issue of animal welfare has all of the elements to be an effective tool to improve the welfare of animals. Although untraditional, such a market-based approach is relevant to the revolution of animal welfare.

IV. THE PARTICIPANTS IN AN ANIMAL WELFARE CAP AND TRADE

The next important question to consider is which sectors of the animal using industries to include in a cap and trade program. The term used by the EPA for where a source exists to hold cap and trade allowances under a cap and trade program is “point of obligation.”²⁹ They specifically discuss three potential points of obligation to address

²⁸ *Id.* at 2-4.

²⁹ *Id.* at 3-6.

under cap and trade: points of emissions (direct emitters—electricity generators and large industrial sources where pollutants are released, and indirect emitters—downstream sources), upstream (potential emitters), and hybrid.³⁰ Similarly, under an animal welfare cap and trade, a number of points of obligation can be identified.

The first point of obligation in an animal welfare cap and trade program would be the actual animal production facility. This would be akin to the direct emitters of pollution and would include the farms—the use of battery cages, gestation and veal crates, as well as puppy mills, fur farms, etc. This is the point in the process where the actual welfare of animals can be directly impacted.

The second point of obligation would be any of the upstream sources. For the environmental cap and trade model, upstream sources would include those industries involved prior to the creation of the pollution, for example, the provider of the fuels that the direct emissions source uses. For the animal welfare cap and trade program, these would be the providers of the cages and crates or of the components used to build them, not to mention the providers of the spaces or facilities for the mills and farms.

The third point of obligation would be the downstream sources or indirect emitters.³¹ In an environmental cap and trade program, these may be the houses or office buildings that use the electricity from the electricity generators that are directly putting the pollutants into the environment. Under an animal welfare cap and trade system, an indirect emitter could be the food processing companies that turn the

³⁰ *Id.*

³¹ *Id.* at 3-7.

raw animal products into packaged food and the retail establishments that then sell them. Pet shops who sell dogs from puppy mills and companies that use fur in their products and the retailers that sell them would be other instances of “indirect emitters” in an animal welfare cap and trade program.

Lastly, the hybrid point of obligation describes any combination of the above.³² For an environmental program, as described in *Tools of the Trade*, this model is used to cap businesses involved with both upstream and direct points of emissions.³³ The same concept could be applied in an animal welfare cap and trade program by including businesses involved directly and/or upstream and/or downstream in the use of animals.

V. COMMUNICATION ISSUES UNIQUE TO EMISSION TRADING PROGRAMS³⁴

One last section of *Tools of the Trade* to be addressed in this article is “Communication Issues Unique to Emission Trading Programs;” specifically, the issues arising when trying to promote a cap and trade system. Essentially, these are the objections that often arise in addition to those that the affected industries might raise. As in previous sections, the article will identify each objection and discuss its relevance to animal welfare.

- **“Emission trading is immoral.”** Some critics of emission trading start with a philosophical opposition to what they call “the right to pollute.” Even under conventional regulation, however, permitting establishes the “right” to emit pollution at a certain level. Sometimes this right is in the form of an

³² United States Environmental Protection Agency, *supra* note 2, at 3-7.

³³ *Id.*

³⁴ *Id.* at 5-2.

emission rate and sometimes it is in the form of the emissions that result from specific, mandated pollution control technologies. Unlike cap and trade, most of these traditional mechanisms do not limit the total tonnage of pollutants from each plant (i.e., plants can emit more when they operate more). The market-based incentives in cap and trade can also spur innovation and new technologies.³⁵

One can anticipate that people would vociferously raise countless objections to the thought of trading credits to allow companies to continue engaging in negative animal welfare activities. Clearly, people do not have a right to treat animals in a manner inconsistent with basic welfare standards. This truth, however, misses the point of a cap and trade program. The system would not be introduced to create a market for negative animal welfare activities, but rather a cap and trade program for animal welfare would be introduced to begin the process of alleviating those negative activities and to promote an increase in animal welfare. Though it sounds wrong to allow the trading of credits to allow negative animal welfare activity, the end result of a cap and trade program for animal welfare is the overall improvement of animal welfare. Also, as suggested above, the market-based incentives could spur the creativity necessary to devise systems that both increase revenue for business and raise the standards of animal welfare.

- **“Emission trading is unfair.”** A second misperception of emission trading is that it is unfair because companies can buy their way out of their responsibilities to reduce emissions. Similarly, some have argued that emission trading favors large companies at the expense of small companies. These arguments ignore the fact that under a cap and trade system,

³⁵ *Id.* at 5-2.

companies that buy allowances are essentially paying for emission reductions at other companies. Moreover, small companies often benefit the most from cap and trade because they may have fewer internal options for emission reductions and they may benefit from the flexibility of buying allowances. In addition, the largest and highest emitting facilities often have the lowest cost per ton for reducing emissions. This was the case in the U.S. SO₂ Allowance Trading Program, where the highest emitting plants in the Midwestern United States made the most significant emission reductions.³⁶

As the EPA states above, companies trading in negative animal welfare activity credits should not necessarily be viewed as buying their way out of compliance. Those that purchase the credits are essentially subsidizing the improvement of animal welfare at the complying companies. And though many smaller farmers would benefit from selling their unused credits, they could also take advantage of purchasing credits to give them the time to comply with the improved animal welfare standards. So, the trading of credits provides benefits to both large and small operations.

- **“Companies will cheat.”** Some believe cap and trade will allow companies to avoid their obligations because enforcement and oversight is left to “the market.” In fact, if programs are properly designed, accountability can be better under a cap and trade program than under conventional approaches. Cap and trade programs require the creation of compliance structures that are useful regardless of whether any trading occurs. Participating sources must fully account to the government for each ton of emissions according to stringent emission measurement protocols to ensure completeness, accuracy, and consistency of emission data. Automatic financial

³⁶ *Id.* at 5-3.

penalties can be used that are set at levels that discourage noncompliance. The regulating authority's role in the program is to ensure emissions are measured accurately and that all participating sources are in compliance. Finally, reported information on emissions can be made available to the public on the Internet or through other means. This transparency can help build the necessary confidence in the efficacy of the cap and trade approach.³⁷

The same strict compliance and accountability measures would be included in any animal welfare cap and trade system. In fact, *Tools of the Trade* includes a brief discussion on penalties for noncompliance.³⁸ It is imperative to make the penalties strict enough that cheating in the cap and trade system is severely curtailed, thereby leaving the trading of credits or the adherence to the animal welfare standards as the only viable options. Furthermore, the transparency aspect of the reporting may put further pressure on companies to comply with the higher animal welfare standards.

- **“Trading doesn’t clean the air.”** Critics of emission trading sometimes argue that trading does not reduce emissions; it merely shifts the location of existing pollution. However, this argument fails to account for the cap. Under a cap and trade system, the overall level of emissions is reduced and capped. The environmental objective is embodied in the cap and the economic objective in the trade. Moreover, the larger the overall reduction reflected in the cap, the less concern there is about the environmental impacts of any individual trade or group of trades. This point is particularly relevant in addressing concerns about hotspots that may arise due to trading.³⁹

³⁷ *Id.* at 5-3.

³⁸ United States Environmental Protection Agency, *supra* note 2, at 3-24.

³⁹ *Id.* at 5-3.

As previously addressed, the implementation of a cap and trade system for animal welfare does not rely on its success by forcing specific companies to adhere to improved animal welfare standards. Instead, it takes an industry-wide approach by limiting the amount of a certain activity in which the entire industry can engage per allotted time period—the cap. As time in the program advances, the animal welfare standards improve, thus guaranteeing that more and more animals are treated with an improved standard of welfare.

As alluded to, perhaps the easiest scenario to visualize from the food production standpoint is egg farming and the use of battery cages. For purposes of illustration only, in year one of the animal welfare cap and trade system there is a cap of X number of battery cages, which represents a reduction of 10% of pre-cap battery cage usage. Battery cage credits will be allocated for 90% of the existing battery cages in use. Therefore, by the end of that particular compliance period, there will have been an industry-wide reduction in battery cages in use by at least 10%. The next year, 15% fewer battery cage credits are issued. By the end of the second year's compliance period, 15% of the battery cages in use at the start of year two will now be discontinued.

So, essentially, it does not matter which individual companies reduce their battery cage use and by what amount. The focus is on the net effect that the industry as a whole is now providing better animal welfare standards to its hens. Eventually, other market forces will take effect and provide further pressure on those companies that still utilize battery cages to begin phasing them out, further providing for improved animal welfare.

VI. HOW TO MEASURE WELFARE AND CREATE WELFARE GOALS

Now that the basic elements of a cap and trade program have been discussed, the question arises as to how to apply it for the improvement of animal welfare. There are a number of possibilities.

Again considering the use of battery cages, the application of a cap and trade program to increase the welfare of egg-producing hens could be instituted in a number of different ways, including:

1. Setting a cap on the number of battery cages in use.
2. Setting a cap on the number of hens confined to battery cages.
3. Setting a cap on the number of eggs that can be produced from hens in battery cages.
4. Instead of setting a cap, setting a minimum amount of space each hen is required to have.

Each of these metrics is easily measurable. As with a carbon dioxide (CO₂) cap and trade program where the CO₂ emitters get or purchase a certain number of emission credits subject to the emission caps, each egg farming operation would be issued a certain number of “battery cage credits” subject to the battery cage caps. Those egg producers that exceed the cap would be forced to then purchase additional credits from those producers under the cap. This market-based process would reward the egg producers that are under the cap for increasing animal welfare, while providing an incentive for those above the cap to upgrade their egg production operations.

At the same time, those producers that are selling their battery cage credits would recognize extra profit and would be able to keep their prices stable or reduce them and/or expand their operations, thus increasing the supply of cage-free eggs (helping to reduce costs to consumers). Non-compliant producers of battery-cage eggs would have the opposite effect. Their costs would increase due to the purchase of

credits, profits would decline, and costs to consumers may increase, which over time would further decrease profits, as fewer consumers buy their product. In addition to the gradually decreasing cap limits, these effects will all provide incentive for the producers of battery-cage eggs to adopt the animal welfare requirements as promoted by the cap and trade program. While it is true that restructuring their operations to meet the animal welfare standards would increase company expenses, a portion of the money raised through the purchase and sale of credits could be used to lessen the cost burden for companies upgrading their operations.

Ultimately, both individual and corporate consumers would gravitate toward cage-free eggs as supply rises and prices fall, thereby building that market, forcing greater compliance with the cap and trade animal welfare standards, and eventually eliminating the use of battery cages altogether. A similar analysis can be applied to the use of gestation crates and veal crates—both of which have faced bans in the U.S. and abroad. Furthermore, other metrics to be considered for the agricultural production side are waste output and the number of animals per square feet, both of which would also have an environmental impact if included in an animal welfare cap and trade program.

A unique element of cap and trade for animal welfare is that it can not only be applied to the direct source of the treatment of the animals, but it can also be applied downstream as discussed above under “Points of Obligation.” One quick way to affect supply and demand for certain products is to address the products at the point of sale or consumption. The application of cap and trade to retail grocery

chains could apply added incentive for the agricultural producers to adopt the animal welfare standards promoted by the cap and trade program. Sticking with the battery cage example, the retail element of the cap and trade program could set a cap on the number of units of battery-cage eggs that a retail establishment could sell. They would have a certain amount of “battery-cage eggs sold” credits. If they exceeded that set amount, they would need to purchase additional credits to remain in compliance. This would cause the buyers for these retail establishments to increase their purchase of cage-free eggs and begin to reduce and/or phase out their sale of battery-cage-produced eggs. Again, as the supply of cage-free eggs in the retail stores would rise, prices would fall, keeping it economical for consumers. As egg producers would see the demand for cage-free eggs increasing, they would necessarily need to convert their operations to remain viable businesses.

A third area to apply cap and trade for animal welfare would be at a point somewhere in between the agricultural production and the retail establishment—the food processors who turn the raw ingredients into what consumers purchase. The cap and trade program could be designed to cap the amount of a certain type of ingredient that can be used in their processes. Again staying with the battery cage example, corporate food processors would have a cap on how many eggs from battery cage operations they could use to create their bread, snack cakes, frozen dinners, and so on. Fast food chains and restaurants would also be affected, as they would have a certain number of credits that they could use. Those businesses that exceed the cap would need to purchase more credits on the market to remain in compliance.

Those under the cap would have the benefit of selling their unused credits.

This same type of cap and trade analysis and use can be applied to other commercial areas where animal welfare is a concern, such as puppy mills, the pet store industry, the fur industry, and animals used in research.

VII. POLITICAL REALITIES

At first thought, one might think that the concept of cap and trade for animal welfare is a no-go, a non-starter. Clearly, the major agriculture lobbying organizations, the larger players in animal agriculture, retailers, food processors, etc. would most likely oppose the concept. A quick look at the opposition to California's Proposition 2 would give the reader a good idea as to who might oppose a cap and trade system for animal welfare.⁴⁰ However, the opposition to such a concept might not be as strong as one might initially think. In addition to California having banned battery cages, gestation crates, and veal crates through Proposition 2, five other states (Maine, Florida, Colorado, Arizona, and Oregon) have bans on either veal crates, gestation crates, or both. That means that to date, farmers and the farming industry in six states have a direct interest in supporting a cap and trade system for animal welfare. The animal agriculture interests in those states might support this concept for three reasons:

⁴⁰ See California Secretary of State, *Californians for Safe Food, A Coalition of Public Health and Food Safety Experts, Labor Unions, Consumers, Family Farmers and Veterinarians. No on Proposition 2*, <http://cal-access.sos.ca.gov/Campaign/Committees/Detail.aspx?id=1301370&session=2007&view=latel> (last visited Oct. 20, 2009) (Campaign Finance Report).

1. They already face complete bans on using battery cages, veal crates, or gestation crates in some combination.
2. If a cap and trade system for animal welfare is implemented, the animal farming industry in these states would be first in line to be able to sell their animal welfare credits to non-conforming operations, thus earning them extra revenue.
3. They will be able to more easily and readily access the growing markets for products compliant with increased animal welfare standards. Currently, they may feel burdened by the regulations in their respective states. With an animal welfare cap and trade system, they are primed to take advantage of a growing market.

In addition to the animal farming industries in those six states, some large individual companies have already made the decision to increase their commitment to animal welfare. For example, Smithfield Foods, the largest pig producer in the United States, has committed itself to phasing out gestation crates. Their incentive to support a cap and trade system for animal welfare would be the market-based trading of unused credits to increase their bottom line.

Smaller farmers and family farmers might also support the concept. Using Proposition 2 as an example, according to Californians for Humane Farms, more than one hundred California farmers supported Proposition 2.⁴¹ Under the cap and trade approach, not only would farmers interested in better animal welfare support it, but those with financial incentives—through the possibility of increased market share and the opportunity to trade animal welfare credits—may lend their support.

⁴¹ Californians for Humane Farms, *Yes on Prop 2: Endorsers*, http://yesonprop2.hsus.org/index.php?option=com_content&view=article&id=52&Itemid=85 (last visited Oct. 20, 2009).

Similarly, the retail industry and the food processing industry might exhibit the same dichotomy. While many retailers and processors would be opposed to the animal welfare cap and trade system, many would also support it. Companies such as Safeway, Trader Joe's, and Whole Foods are already implementing cage-free egg policies.⁴² Food processors such as Burger King, Ben & Jerry's, and Wolfgang Puck have already moved to use more products that meet higher animal welfare standards.⁴³ All of these companies and others that are already moving in the direction of stronger animal welfare standards would have the market-based incentive to support a cap and trade for animal welfare concept, if not because of their own corporate philosophies in supporting the better treatment of animals, then for the

⁴² Humane Society of the United States [hereinafter HSUS], *Safeway Leading the Way on Animal Welfare*, http://www.hsus.org/farm/news/ournews/safeway_animal_welfare_021108.html (last visited Sept. 9, 2009); HSUS, *Campaign Victory: Trader Joe's Goes Cage Free with its Brand Eggs*, http://www.hsus.org/farm/camp/nbe/traderjoes/trader_joes_goes_cage_free.html (last visited Sept. 9, 2009); HSUS, *Wild Oats and Whole Foods Sow Compassion with Cage-Free Egg Policies*, http://www.hsus.org/farm/camp/nbe/wildoats/wild_oats.html (last visited Sept. 9, 2009).

⁴³ HSUS, *Campaign Victory! Ben and Jerry's Adopts A Cage-Free Egg Policy*, http://www.hsus.org/farm/news/ournews/ben_jerrys_victory.html (last visited Sept. 9, 2009); HSUS, *Burger King Decrees: Better Treatment for Some Farm Animals*, http://www.hsus.org/farm/news/pressrel/burger_king_decree.html (last visited Sept. 9, 2009); HSUS, *Animal Welfare Has a Place at Wolfgang Puck's Table*, http://www.hsus.org/farm/news/ournews/wolfgang_puck_animal_welfare.html (last visited Sept. 9, 2009).

financial incentives that a cap and trade system would offer each of them.

VIII. CONCLUSION

At its most basic level, cap and trade works to affect change because it is a market-based system in a capitalist society. Where appealing to morality, instituting regulations, or taxing behavior may not be effective, providing the opportunity to increase revenue can be very compelling to companies. After all, creating revenue is the ultimate purpose of business. Cap and trade offers businesses a unique opportunity to use the market to develop a compliance process that is most beneficial to their bottom lines.

It has taken many years for the industries that use animals to develop the processes and infrastructure currently in use that provide the substandard levels of animal welfare. It will take time to break down those processes and infrastructure and institute new ones. A cap and trade program for animal welfare would set into motion a measurable and appreciable process to improve animal welfare over time.

Finally, imagine a cap and trade for animal welfare program as an hourglass. The grains of sand within the hourglass are the negative animal welfare activities. Under a well-administered cap and trade program for animal welfare, the decrease in negative animal welfare activities over time will be steady. As companies meet or fall under the cap limits, negative animal welfare activities drop, just as the grains of sand drop through the hourglass. Those activities that are not in compliance with the cap limits are represented by the sands that remain in the upper portion of the hourglass. Eventually, as the cap

and trade program continues to operate and the total number of negative animal welfare activity credits diminish, each company will necessarily decrease its negative animal welfare activities, represented by the continuing downward flow of sand. As the cap and trade program approaches completion, all negative animal welfare activity addressed by the cap limits will have ceased, just as every grain of sand successfully passed through the hourglass. It is at this point that the goals of the cap and trade program will have been achieved.

Animal Cruelty by Another Name: The Redundancy of Animal Hoarding Laws

Jason Schwalm*

I. INTRODUCTION

Police officers and officials from the New Jersey Society for the Prevention of Cruelty to Animals served a warrant at the home of Wanda Oughton on March 26, 2009.¹ There they found “93 cats that had virtually destroyed the interior of the structure.”² The two-story, million dollar brick home in the upscale Chester Township neighborhood of Morris County, New Jersey, was “filled with feline urine and fecal matter” in piles that “reached two feet high.”³

For New Jersey health officials, this sad and somewhat bizarre story is not unique. Less than two years ago, in Bergen County, health officials condemned a 12,000-square-foot mansion containing 62 live cats, as well as a couple dozen dead ones.⁴ In a house emitting an odor

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¹ Tanya Drobness, *Nearly 80 Cats Found Inside \$1 Million Chester Township Home*, http://www.nj.com/news/index.ssf/2009/03/nearly_80_cats_found_inside_1.html (last visited July 22, 2009).

² Lawrence Ragonese & Brian T. Murray, *Chester Twp. Woman Accused of Hoarding 93 Cats Faces Animal Cruelty Complaints*, http://www.nj.com/news/index.ssf/2009/03/owner_of_1m_chester_home_expec.html (last visited July 22, 2009).

³ *Id.*

⁴ Brian T. Murray, *Charges Filed in Historic Animal Hoarding Case*, http://www.nj.com/news/index.ssf/2007/08/23_dead_dogs_and_cats_found_in.html (last visited July 22, 2009).

so intense that it alerted a delivery man to the presence of the ill-treated animals, authorities spent the day following the arrest literally digging cats out of the walls.⁵

As New Jersey's experience indicates, incidents of animal hoarding are not uncommon. In fact, the Humane Society of the United States reports that hoarding causes more animal deaths and injuries than intentional, violent abuse.⁶ Because every hoarding incident involves scores of animal victims, a magnitude of suffering is inevitable. Animal hoarding, as a phenomenon, has surely entered the public consciousness. Dramatic news articles, like those out of New Jersey, are difficult to ignore and hard to forget. Moreover, popular television shows like *30 Rock* and *Scrubs* have used animal hoarding for comic effect.⁷

This media attention complicates the prosecution of animal hoarders. On the one hand, as a result of these news articles and

⁵ *Id.*

⁶ See Randall Lockwood & Barbara Cassidy, *Killing with Kindness?*, THE HUMANE SOCIETY NEWS OF THE HUMANE SOCIETY OF THE UNITED STATES, Summer 1988.

⁷ Although there are surely a number of examples of hoarding behavior used on television for comic effect, a few come specifically to mind. In an episode of *30 Rock*, comedienne Jane Krakowski plays a character called "cat lady." On encountering her, Tracy Morgan exclaims, "this honky Grandma be trippin'!" *30 Rock: Pilot* (NBC television broadcast Oct. 11, 2006). In *Scrubs*, the unnamed character, Janitor, is shown with his army of taxidermed squirrels. A habit which, he later remarks, might not be particularly healthy. *Scrubs: My First Kill* (NBC television broadcast Sep. 21, 2004). Note also the Crazy Cat Lady character from *The Simpsons Movie*, a reference that I borrow, with gratitude, from Megan Renwick.

media portrayals, the average American is at least aware of the existence of “the crazy cat lady.” On the other hand, popular depictions of animal hoarding behavior often ignore its psychological complexities, relying instead on emotional themes designed to “capture readers’ attention and make disparate facts behind cases understandable by packaging them in familiar formats.”⁸ As a result, the average person’s understanding of animal hoarding—perhaps even the average judge’s understanding of this behavior—is likely to be unsophisticated.⁹

This article first examines the failure of general animal cruelty laws to address situations like those in New Jersey. The next section considers one proposed alternative: the creation of laws specifically designed to address animal hoarding. The final section rejects this proposal, and instead offers a combination of legislative reform and enforcement strategies to effectively deter animal hoarding behavior.

II. HISTORY

Animal hoarding presents unique challenges to the legal system.¹⁰ However, in all but a few states, a general anti-cruelty provision is used to prosecute animal hoarders, rather than a law

⁸ Arnold Arluke et al., *Press Reports of Animal Hoarding*, 10 SOC’Y & ANIMALS 113 (2002), available at <http://www.psyeta.org/sa/sa10.2/arluke.shtml>.

⁹ Arluke, *supra* note 8; See also Lisa Avery, *From Helping to Hoarding to Hurting: When the Acts of “Good Samaritans” Become Felony Animal Cruelty*, 39 VAL. U. L. REV. 815 (2005).

¹⁰ See generally Gary Patronek et al., *Long-term Outcomes in Animal Hoarding Cases*, 11 ANIMAL L. 167 (2005).

specifically designed to address hoarding behavior.¹¹ The failures inherent in this approach have been noted by scholars.¹² First, the intent element in many anti-cruelty criminal statutes may be difficult to meet when prosecuting a hoarder who earnestly believes that he or she was helping the animals.¹³ Second, anti-cruelty laws—and the prosecutors and judges who implement them—often fail to recognize the extent to which animal hoarding is symptomatic of a larger psychological condition. When underlying psychological issues go unaddressed, the rate of recidivism for convicted hoarders is staggeringly high.¹⁴

A. THE FAILURE OF ANIMAL CRUELTY LAWS

The anti-cruelty laws in many states were designed to combat deliberate animal abuse.¹⁵ In response to horrific stories of violence

¹¹ 510 ILL. COMP. STAT. ANN. 70/2.10 (West 2008) (Illinois passed the first animal hoarding statute.); HAW. REV. STAT. § 711-1109.6 (2009); See also S. 205 (Vt. 2002), available at <http://www.leg.state.vt.us/DOCS/2002/BILLS/INTRO/S-205.HTM>.

¹² See Avery, *supra* note 9, at 838–841; Patronek, *supra* note 10, at 172.

¹³ See HOARDING OF ANIMALS RESEARCH CONSORTIUM, ANIMAL HOARDING: STRUCTURING INTERDISCIPLINARY RESPONSES TO HELP PEOPLE, ANIMALS AND COMMUNITIES AT RISK (2006), 1, 21 [hereinafter HARC]. This report defines many types of hoarders, among them the “rescuer hoarder,” who has a “strong sense of mission to save animals” and believes that he or she “is the only one who can provide adequate care” to the animals.

¹⁴ Rebecca Simmons, *Behind Closed Doors: The Horrors of Animal Hoarding*, <http://www.hsus.org/ace/21192> (last visited July 22, 2009) (Noting that “[m]ost hoarders revert to old behaviors unless they receive ongoing mental health assistance and monitoring.”).

¹⁵ HARC, *supra* note 13, at 21.

and animal torture, some states have even stiffened the penalty for this kind of wanton abuse.¹⁶ However, such laws are not an effective tool for combating animal hoarding, which is often “not characterized by deliberate intent to harm or by direct abuse.”¹⁷ A legal system which focuses principally on cases of malicious, intentional abuse is ill-equipped to address situations “where neglect is the primary feature—a characteristic common in animal hoarding cases.”¹⁸

In *Commonwealth v. Vonderheid*, a Pennsylvania appellate court found “a complete lack of any willful neglect, cruel wantonness, or wickedness” in the actions of the defendant, and so refused to affirm his conviction for animal cruelty.¹⁹ The court so held, despite the miserable conditions under which the defendants’ animals languished. The defendant operated a roadside attraction called the Red Rock Game Farm, and for this purpose owned 44 different domestic and exotic animals. During the cold winter months, these animals were housed in a storage building. Officers from the Pennsylvania Society for the Prevention of Cruelty to Animals inspected this facility, and found it notably insufficient. Rain leaked into the building, the cages which held the monkeys and some larger members of the cat family were too small and “the water buffalo was snubbed to a post so that he could not move freely, nor lower his head to be allowed to lie down.”²⁰

¹⁷ *Id.*

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ *Commonwealth v. Vonderheid*, 28 Pa. D. & C.2d 101, 106–107 (Pa.Quar.Sess. 1962).

²⁰ *Id.* at 103.

The Pennsylvania appellate court, despite these facts, declined to affirm the defendant's conviction under the state's animal cruelty statute at the time. The statute subjected to punishment any person who "wantonly or cruelly ill-treats, overloads, beats or otherwise abuses any animal."²¹ As applied in a previous Pennsylvania case, the statutory term "wantonly" demanded that an act be "intentional, as distinguished from accidental or involuntary."²² The *Vonderheid* court, unconvinced that the neglect was intentional, reversed the lower court's conviction.

The prosecution of animal hoarders is also difficult where an animal cruelty statute fails to clearly state *any* intent requirement. Admittedly, courts will attempt to apply such statutes, even absent a particular *mens rea*, by balancing "the growing concern for the protection of animals with the discretion that humans have with respect to the treatment of their animals."²³ However, in these situations, it is often the case that "the language of the statute is too vague for a proper determination of the *mens rea*," and so the statute is found unconstitutional.²⁴

²¹ *Id.* at 101 (citing Penal Code of June 24, 1939, Pub. L. No. 872 § 942, 18 PA. STAT. § 942.).

²² *Commonwealth v. Harris*, 36 Pa. D. & C. 122, 125 (Pa. Quar. Sess. 1939).

²³ *Davis v. State*, 806 So.2d 1098, 1102 (Miss. 2001).

²⁴ *Id.* at 1104. See also *People v. Rogers*, where a statute defined animal cruelty as "unjustifiably" injuring, maiming, mutilating, or killing an animal, the court held that "the statute fail[ed] to clearly define the proscribed conduct so one can avoid engaging in it in the first place without having to guess at its meaning." *People v. Rogers*, 703 N.Y.S.2d 891, 893 (N.Y. City Ct. 2000).

B. THE PSYCHOLOGY OF ANIMAL HOARDING

Medical researchers agree that animal hoarding behavior has a strong psychological component.²⁵ While many hoarders can lucidly argue that their accumulation of animals is merely a lifestyle choice, a hoarder's assessment of his own behavior is often skewed and unreliable.²⁶ This is particularly true where the hoarding behavior is accompanied by focal delusion (the insistence, in the face of evidence to the contrary, that obviously under-fed and ill-treated animals are healthy).²⁷

Although animal hoarding is becoming increasingly subject to scrutiny and research, it is still poorly understood by psychologists.²⁸ Animal hoarding behavior coincides with the presence of a number of different psychological conditions, but has not been shown to be caused by any of them. While animal hoarding certainly seems to have a compulsive dimension, some researchers doubt that hoarding

²⁵ Thomas Maier, *On Phenomenology and Classification of Hoarding: A Review*, 110 ACTA PSYCHIATRICA SCANDINAVICA 323 (2004); Alicia Kaplan & Eric Hollander, *Comorbidity in Compulsive Hoarding: A Case Report*, 9 CNS SPECTRUMS 71 (2004).

²⁶ Kelly Milner, *Collectors Think Their Animals Are Healthy*, WYO. TRIB-EAGLE (Cheyenne WYO at A9, citing Randall Lockwood).

²⁷ Randy Frost, *People Who Hoard Animals*, 17 PSYCHIATRIC TIMES 25, 25-29 (2000).

²⁸ "Animal hoarding is not yet recognized as indicative of any specific psychological disorder." Gary J. Patronek, *The Problem of Animal Hoarding*, MUN. LAW., May-June 2001, at 6, 7. See also Frost, *supra* note 27, at 25-29 and Gary J. Patronek, *Hoarding of Animals: An Under-Recognized Public Health Problem in a Difficult-to-Study Population*, 114 PUB. HEALTH REP. 81, 86 (1999).

behaviors are a specific symptom of obsessive-compulsive disorder.²⁹ Other researchers have investigated the incidence of aspects of post-traumatic stress disorder and attention deficit/hyperactivity disorder among animal hoarders.³⁰ In this study, hoarders, when compared to a control group, reported a greater number of traumatic experiences and symptoms of inattention and hyperactivity.³¹ However, even the most ambitious of animal hoarding studies have yet to identify a root cause of the behavior.

In fact, the medical community has yet to agree upon a clear, consistent definition of animal hoarding behavior itself.³² One proposed definition identifies an animal hoarder as:

[S]omeone who accumulates a large number of animals; fails to provide minimal standards of nutrition, sanitation and veterinary care; and fails to act on the deteriorating condition of the animals . . . or the environment . . . or the negative impact of the collection on their own health and well-being.³³

²⁹ On the one hand, Dr. Stephanie LaFarge argues that hoarding is a symptom of obsessive-compulsive disorder. Laura Maloney, *Disorder Drives Some to Get Hundreds of Pets*, TIMES-PICAYUNE (New Orleans, LA), Feb. 26, 2004, at 2. But on the other hand, some clinicians disagree. Kevin D. Wu & David Watson, *Hoarding and Its Relation to Obsessive-Compulsive Disorder*, 43 BEHAV. RES. & THERAPY 897 (2005).

³⁰ Randy Frost et. al., *Relationships Among Compulsive Hoarding, Trauma, and Attention Deficit/Hyperactivity Disorder*, 43 BEHAV. & RES. THERAPY 269 (2005).

³¹ *Id.*

³² Maier, *supra* note 25.

³³ Frost, *supra* note 27, at 25-26 (quoting Gary J. Patronek, *Hoarding of Animals: An Under-Recognized Public Health Problem in a Difficult-to-Study Population*, 114 PUB. HEALTH REP. 81, 82).

However, while many hoarders are discovered in unsanitary, and even toxic, living conditions, this kind of self-neglect does not always accompany hoarding.³⁴

Other definitions have been proposed. Some of these definitions are minimally descriptive, defining hoarding merely as a “behavioural abnormality characterized by the excessive collection of poorly useable objects.”³⁵ On the other hand, the Hoarding of Animals Research Consortium, an interdisciplinary organization of researchers, has created an elaborate taxonomy, identifying three different types of hoarders: 1) the overwhelmed caregiver; 2) the rescuer hoarder; and 3) the exploiter hoarder.³⁶ Unfortunately, this system of often-overlapping categorizations brings us no closer to an effective, clinical definition of animal hoarding behavior.

However animal hoarding may ultimately be defined, it is still true that hoarding behavior has a recognized and widely accepted psychological component.³⁷ This psychological component greatly complicates the process of adjudicating and punishing animal hoarders. In fact, psychologists note that “adjudication of cases rarely alters the behavior.”³⁸ As a result of these difficulties, “[w]ithout a long-term plan and support for the hoarder, the available evidence indicates that recidivism approaches one hundred percent.”³⁹

³⁴ Maier *supra* note 25, at 334.

³⁵ *Id.* at 323.

³⁶ HARC, *supra* note 13, at 19.

³⁷ See *supra* note 25. See also *supra* note 29.

³⁸ Frost, *supra* note 27, at 28.

³⁹ Patronek, *supra* note 10, at 173.

III. ANALYSIS

Motivated by these criticisms, some legal scholars have proposed the adoption of specific anti-hoarding statutes.⁴⁰ These statutes are meant to address the failure of anti-cruelty laws to effectively punish animal hoarders and deter further hoarding behavior. To date, two states have adopted such laws: Illinois and Hawaii.⁴¹ However, these statutes suffer from a number of defects, and are not an effective remedy to the problem of animal hoarding.

A. ANIMAL HOARDING LAWS, CONSIDERED

The nation's first animal hoarding law was adopted in Illinois.⁴² Before this law, the state's general anti-cruelty statute, the Humane Care for Animals Act (hereinafter, "the Illinois Act") was used to

⁴⁰ *Id.* at 187. And for a particularly compelling argument in favor of anti-hoarding laws, see also Megan Renwick, Note, *Animal Hoarding: A Legislative Solution*, __ U. LOUISVILLE L. REV. __, __ (2009). Renwick argues that hoarding laws are necessary because, without them, "It may not be clear under what laws a hoarder can be charged; prosecutors and judges may not take hoarding seriously; the media may portray the hoarder in a sympathetic light and generate public support for him or her; the potential costs of prosecuting a hoarding case may be daunting." (The pagination of this issue of the University of Louisville Law Review had not been completed as of publication of this article. Citation to a specific page number was not possible.)

⁴¹ 510 ILL. COMP. STAT. ANN. 70 *et seq.* (West 2008); HAW. REV. STAT. § 711- 1109.6 (2009); See also S. 205 (Vt. 2002), available at <http://www.leg.state.vt.us/DOCS/2002/BILLS/INTRO/S-205.HTM>.

⁴² See Lisa Avery, *From Helping to Hoarding to Hurting: When the Acts of "Good Samaritans" Become Felony Animal Cruelty*, 39 VAL. U.L. REV. 815, 843-844 (2005).

prosecute animal hoarders.⁴³ The Illinois Act enumerated duties owed by pet owners to their animals:

“Owner’s duties. Each owner shall provide for each of his animals:

- (a) sufficient quantity of good quality, wholesome food and water;
- (b) adequate shelter and protection from the weather;
- (c) veterinary care when needed to prevent suffering; and
- (d) humane care and treatment.⁴⁴

However, in the wake of some distressing, widely publicized cases of animal hoarding, the legislature determined that the Illinois Act was insufficient.⁴⁵ In 2001, the Illinois Act was amended to include the following definition of “companion animal hoarder”:

[A] person who (i) possesses a large number of companion animals; (ii) fails to or is unable to provide what he or she is required to provide under [the “owner’s duties” section of the Act]; (iii) keeps the companion animals in a severely overcrowded environment; and (iv) displays an inability to recognize or understand the nature of or has a reckless disregard for the conditions under which the companion animals are living and the deleterious impact they have on the companion animals’ and owner’s health and well-being.⁴⁶

Under the Illinois Act, a defendant who meets the definition of “companion animal hoarder” has not committed an independent criminal offense. However, when a pet owner is convicted of cruelty or neglect and is determined to be a “companion animal hoarder,” a

⁴³ 510 ILL. COMP. STAT. ANN. 70/2.10. (West 2008).

⁴⁴ 510 ILL. COMP. STAT. ANN. 70/3.

⁴⁵ Sarah Antonacci, *Legislation Introduced Aimed at Controlling Animal Hoarding*, THE STATE J-REG (Springfield, IL), Feb 6, 2001, at 9.

⁴⁶ 510 ILL. COMP. STAT. ANN. 70 *et seq.* (West 2008).

number of alternate sentencing avenues—including mandatory psychological counseling for offenders—are available to judges.⁴⁷

In 2008, Hawaii became the second state to adopt an animal hoarding statute. Under the Hawaii statute, animal hoarding is, itself, a misdemeanor criminal offense:

A person commits the offense of animal hoarding if the person intentionally, knowingly, or recklessly:

- (a) Possesses more than fifteen dogs, cats, or a combination of dogs and cats;
- (b) Fails to provide necessary sustenance for each dog or cat; and
- (c) Fails to correct the conditions under which the dogs or cats are living, where conditions injurious to the dogs', cats', or owner's health and well-being result from the person's failure to provide necessary sustenance.⁴⁸

The Hawaii statute goes on to define “necessary sustenance” as access to sufficient food, water, shelter and clean, adequate space.⁴⁹ The Hawaii statute, like the Illinois Act, also provides for emergency impoundment for veterinary care⁵⁰ and forfeiture of the animals unless

⁴⁷ Under the Illinois Act, a defendant convicted of cruelty or neglect who meets the definition of “companion animal hoarder” must undergo a psychological evaluation, and may be ordered to undergo appropriate treatment. 510 ILL. COMP. STAT. ANN. 70/3-3.03. Also, the Act, as amended, provides for an owner of an impounded animal to post a security bond. 510 ILL. COMP. STAT. ANN. 70/3.05. Where this bond is not posted and a judge finds that the animal should not be returned to the owner, the animal is forfeited. 510 ILL. COMP. STAT. ANN. 70/12. Additionally, the act provides for emergency impoundment of an animal for the purposes of veterinary care. *Id.*

⁴⁸ HAW. REV. STAT. § 711-1109.6 (2009).

⁴⁹ HAW. REV. STAT. § 711-1100.

⁵⁰ HAW. REV. STAT. § 711-1109.1.

the hoarder posts a security bond.⁵¹ Unlike the Illinois statute, the Hawaii statute does not require psychological evaluation and treatment for those convicted of animal hoarding.

An animal hoarding statute has been proposed to the Vermont state legislature, although it has not been made into law. In many ways, the Vermont proposal is similar to the Illinois Act. The Vermont proposal creates a four-part definition of an “animal hoarder,” similar to the definition found in the Illinois Act.⁵² Additionally, under the Vermont proposal, animal hoarding is not an independent criminal offense, but a person convicted of cruelty or neglect and identified as an animal hoarder is subjected to a psychological evaluation.⁵³

B. ANIMAL HOARDING LAWS, REJECTED

Animal hoarding laws are plagued by a number of defects. Although there is considerable variety among the anti-hoarding statutes that have been passed or proposed, they share certain failings.⁵⁴ Animal hoarding behavior continues to puzzle the psychological community, and so the varying statutory definitions of

⁵¹ HAW. REV. STAT. § 711-1109.2.

⁵² S. 205 (Vt. 2002), *available at* <http://www.leg.state.vt.us/DOCS/2002/BILLS/INTRO/S-205.HTM>.

⁵³ *Id.*

⁵⁴ Although there are differences among the statutes, each employs a nearly identical definition of animal hoarding. 510 ILL. COMP. STAT. ANN. 70 *et seq.* (West 2008); HAW. REV. STAT. § 711- 1109.6 (2009); *See also* S. 205 (Vt. 2002), *available at* <http://www.leg.state.vt.us/DOCS/2002/BILLS/INTRO/S-205.HTM>. These statutes echo the definition found in Gary Patronek, *Hoarding of Animals: An Under-Recognized Public Health Problem in a Difficult-to-Study Population*, 114 PUB. HEALTH REP. 81, 82.

hoarding behavior are loose and often contradictory. Animal hoarding laws have co-opted the language of already existing animal cruelty laws, and, when applied, these anti-hoarding statutes often prove wholly redundant. Additionally, anti-hoarding statutes employ vague, subjective language that is susceptible to constitutional challenges. Ultimately, animal hoarding laws are unlikely to provide the most effective remedy to animal hoarding behavior.

1. ANIMAL HOARDING BEHAVIOR IS ILL-DEFINED

In response to the failure of general animal cruelty laws to address the psychological dimension of hoarding behavior, anti-hoarding statutes have been enacted in a few states.⁵⁵ However, animal hoarding's psychological component eludes definition. To date, the medical literature has not conclusively established what, if any, psychological condition gives rise to hoarding behavior.⁵⁶ Moreover, no universally accepted definition of animal hoarding exists.⁵⁷ Given this uncertainty, attempts to define animal hoarding by statute are likely to result in confusing, contradictory outcomes.

Animal hoarding laws are designed to address the psychological dimension of hoarding behavior. One anti-hoarding law contains a provision for mandatory psychological counseling for offenders.⁵⁸ Moreover, the definition of hoarding behavior employed by this statute

⁵⁵ 510 ILL. COMP. STAT. ANN. 70 *et seq.* (West 2008); HAW. REV. STAT. § 711- 1109.6 (2009).

⁵⁶ See *supra* notes 28 and 29.

⁵⁷ See Maier, *supra* note 25.

⁵⁸ 510 ILL. COMP. STAT. ANN. 70/3-3.03 (West 2008).

echoes the definition of hoarding behavior found in some of the psychological literature.⁵⁹

However, animal hoarding is in the midst of a definitional crisis. Medical researchers have been unable to conclusively determine what, if any, psychological condition causes hoarding behavior.⁶⁰ Moreover, the psychological community has not arrived at a universally accepted definition of hoarding behavior itself and, at present, animal hoarding is not a listed condition in the Diagnostic and Statistical Manual of Mental Disorders.⁶¹

This definitional crisis is particularly apparent in the context of the “self-neglect” requirement imposed by some anti-hoarding statutes. The Illinois Act defines an animal hoarder as a person who fails to understand “the deleterious impact [the conditions] have on the companion animals’ and owner’s health and well-being.”⁶² Illinois’s definition of animal hoarding, which assumes a “negative impact of the collection on [the owner’s] health and well-being,” echoes the writing of some medical researchers.⁶³

However, Vermont’s proposed anti-hoarding statute makes no mention of the owner’s health and well-being.⁶⁴ And, under the Hawaii statute, animal hoarding exists “where conditions injurious to the dogs’,

⁵⁹ Compare 510 ILL. COMP. STAT. ANN. 70/2.10-3 (West 2008), with Patronek, *supra* note 54, at 85.

⁶⁰ See *supra* notes 28 and 29.

⁶¹ See *supra* note 25.

⁶² 510 ILL. COMP. STAT. ANN. 70/2.10 (West 2008).

⁶³ Frost, *supra* note 27, at 25 (citing Patronek, *Hoarding of Animals*, 114 PUB. HEALTH REP. 81, 82).

⁶⁴ S. 205 (Vt. 2002), available at <http://www.leg.state.vt.us/DOCS/2002/BILLS/INTRO/S-205.HTM>.

cats', or owner's health and well-being result" from the neglect.⁶⁵ Presumably, the use of the conjunction "or" indicates that self-neglect is not a necessary condition for the offense of animal hoarding under Hawaiian law.

A legislature may look to available medical research when debating the inclusion of a self-neglect requirement in a proposed anti-hoarding statute. However, public policy considerations also weigh on this determination. And so, while the statutory definition of animal hoarding should be faithful to the medical literature, it should also aid in accomplishing the purpose of anti-hoarding statutes: preventing and punishing the mistreatment of animals.

The self-neglect requirement may ultimately frustrate the purpose of an anti-hoarding statute. In the context of a law designed to prevent and punish the mistreatment of animals, it seems unnecessary to require a showing that harm has been visited on humans as well.⁶⁶ This requirement seems particularly counterproductive if it would provide an effective defense to an otherwise guilty hoarder. Additionally, many hoarders do not occupy the same living space as their animals. Where this is the case, the self-neglect requirement may go unmet even though the anti-hoarding statute would have otherwise been violated.⁶⁷

The creators of animal hoarding statutes are thereby faced with a dilemma. On the one hand, the anti-hoarding statutes, if drafted in a way that is faithful to the definition of animal hoarding proposed by

⁶⁵ HAW. REV. STAT. § 711-1109.6 (emphasis added).

⁶⁶ Renwick, *supra* note 40, at ____.

⁶⁷ *Id.*

many clinicians, may fail to address all instances of hoarding behavior. On the other hand, the anti-hoarding statutes, if drafted broadly enough to address all instances of hoarding behavior, may depart from the medical community's understanding of hoarding.

2. ANIMAL HOARDING LAWS ARE REDUNDANT

Animal hoarding statutes are fundamentally redundant. Every anti-hoarding law, passed or proposed, ties the definition of animal hoarding to the definition of animal cruelty.⁶⁸ Admittedly, anti-hoarding statutes impose an additional, numerosity requirement. However, the numerosity requirement is, in some statutes, stated in such vague language that it inevitably collapses into other elements of the crime.⁶⁹ Where the behavior proscribed by an anti-hoarding statute is identical to the behavior proscribed by an anti-cruelty statute, and the number of animals that must be involved is an afterthought, an anti-hoarding law will only ever be violated where an anti-cruelty law has already been violated.

Animal hoarding, as defined by statute, can be reduced to two key elements: numerosity and behavior. Every anti-hoarding statute defines animal hoarding as a certain kind of behavior—usually the failure to provide adequate food, water or shelter—perpetrated on a certain number of animals.⁷⁰

Each state articulates the numerosity element differently. Some legislatures have created a bright-line rule, requiring a specific number

⁶⁸ 510 ILL. COMP. STAT. ANN. 70/2.10 (West 2008).

⁶⁹ *Id.* (The Illinois statute requires only that a "large" number of animals be possessed by the hoarder.).

⁷⁰ 510 ILL. COMP. STAT. ANN. 70/2, 2.10, 70/3; HAW. REV. STAT. § 711-1109.6 (2009).

of animals be involved.⁷¹ Others employ more ambiguous terms, demanding some kind of fact-based inquiry.⁷² In Hawaii, a perpetrator must own more than 15 animals to be guilty of the crime of animal hoarding.⁷³ In Illinois, where animal hoarding is not an independent criminal offense, a “large number” of animals must be involved.⁷⁴ The anti-hoarding statute proposed in Vermont required only five or more animals.⁷⁵

Admittedly, the simplicity of a bright-line rule is attractive. However, some scholars criticize this approach, as it prevents the legal system from intervening in a clear case of hoarding “until a hoarder has accumulated a certain number of animals.”⁷⁶ While a bright-line rule can be easily applied by judges and prosecutors, it may also have the unintended effect of creating a legal black hole, in which obviously criminal behavior will evade prosecution, so long as it is perpetrated on a limited number of animal victims.⁷⁷

On the other hand, where no fixed number of animals is demanded by an anti-hoarding statute, the result is an inevitable blurring of the numerosity and behavior requirements. While it is

⁷¹ HAW. REV. STAT. § 711-1109.6 (2009).

⁷² 510 ILL. COMP. STAT. ANN. 70/2, 2.10, 70/3.

⁷³ HAW. REV. STAT. § 711-1109.6.

⁷⁴ 510 ILL. COMP. STAT. ANN. 70/2.10 (West 2008).

⁷⁵ S. 205 (Vt. 2002), *available at* <http://www.leg.state.vt.us/DOCS/2002/BILLS/INTRO/S-205.HTM>.

⁷⁶ Renwick, *supra* note 40, at ____.

⁷⁷ However, even if an offender may escape prosecution under the anti-hoarding statute, presumably, an anti-cruelty statute, if effectively drafted, may allow for prosecution of the hoarder.

undoubtedly true that “no magic number of animals . . . qualifies a person as a hoarder,” the less guidance that the statutory language provides, the more courts must look to the adequacy of the food and shelter provided to the animals to satisfy the numerosity element.⁷⁸ Which is to say, the less clarity that the numerosity element provides, the more courts will simply look to the behavioral element, to satisfy both parts of the statute. Ultimately, these two elements become indistinguishable from one another.

In fact, many proponents of animal hoarding laws would encourage this blurring of the numerosity and behavior elements. For these scholars, it is not the number of animals in the space, or the degree of overcrowding in the space, but the “condition of the space and the care given to the animals” that indicates the occurrence of hoarding behavior.⁷⁹ However, once the numerosity and behavior elements of an anti-hoarding statute have blurred, it begs the question: if animal hoarding is not defined by the number of animals in a household, but by the treatment those animals receive, what is the difference between animal hoarding and animal cruelty? Ultimately, there is little difference between the two.

Where the numerosity element is no longer a key component of an anti-hoarding statute, animal hoarding laws are rendered fundamentally redundant. Most anti-hoarding laws tie the definition of animal hoarding to the definition of animal cruelty.⁸⁰ Consequently, the

⁷⁸ Renwick, *supra* note 40, at ____.

⁷⁹ *Id.*

⁸⁰ 510 ILL. COMP. STAT. ANN. 70/2.10 (West 2008) (incorporating language of its anti-cruelty statute with its anti-hoarding statute); HAW. REV. STAT. § 711-1109.6

behavior element of an anti-hoarding statute is nearly identical to the state's corresponding anti-cruelty statute.

Given the identical language employed by both statutes—and given the tendency to overlook the numerosity element—an anti-hoarding law will only be violated where an anti-cruelty law has already been violated. Simply owning thirty cats is not, *per se*, a criminal act, while owning thirty cats and failing to provide them with adequate food or shelter constitutes the offense of animal hoarding. However, owning thirty cats and failing to provide them with adequate food or shelter already constitutes the offense of animal cruelty under most state statutes.

The central distinction between an anti-hoarding statute and an anti-cruelty statute is the numerosity element, and this is precisely the part of an anti-hoarding statute that has been jettisoned from the analysis. Consequently, many scholars have reasoned that “despite [the] absence of animal hoarding laws . . . [state officials] can use animal cruelty statutes to effectively pursue charges against animal hoarders.”⁸¹

3. ANIMAL HOARDING LAWS ARE VAGUE AND SUBJECTIVE

Animal hoarding statutes employ arcane, subjective language that would likely be found unconstitutionally vague. Admittedly, animal cruelty statutes have, in most states, survived constitutional challenges. However, these anti-cruelty statutes have an element of

(noting the anti-hoarding statute uses the phrase “necessary sustenance”); HAW. REV. STAT. § 711-1100 (using the same phrase in the anti-cruelty statute).

⁸¹ Avery, *supra* note 9, at 845.

objectivity that is lacking in anti-hoarding statutes. This is particularly true where an anti-hoarding statute uses broad, unclear terms like “large” to articulate the numerosity standard.

Animal cruelty statutes have long been the subject of constitutional challenges.⁸² However, “most states faced with contentions of the vagueness of animal cruelty statutes have upheld their constitutionality.”⁸³

In *State v. Andree*, a Washington anti-cruelty statute proscribed the killing of “an animal by a means causing undue suffering.”⁸⁴ The defendant argued that the statutory language was unconstitutionally vague. The court evaluated the phrase “undue suffering” in context of the facts of the case, and so asked “whether a person of ordinary intelligence would understand that killing a kitten by stabbing it nine times with a hunting knife would cause undue suffering.”⁸⁵ Unsurprisingly, the court answered this question in the affirmative, and the statute survived the constitutional challenge.⁸⁶

Likewise, New York rejected a constitutional challenge to its animal cruelty statute in *People v. Bunt*.⁸⁷ Here, the word “cruelty,” itself, was at issue. The New York court noted, at the outset, that “the word ‘cruelty’ is one commonly known to an average person and it would be for a jury to determine whether the defendant acted in a

⁸² See *Moore v. State*, 107 N.E. 1 (Ind. 1914) (upheld a statute against a constitutional challenge for vagueness).

⁸³ *Avery*, *supra* note 9, at 845.

⁸⁴ *State v. Andree*, 954 P.2d 346, 348 (Wash. App. 1997).

⁸⁵ *Id.* at 349.

⁸⁶ *Id.*

⁸⁷ *People v. Bunt*, 462 N.Y.S.2d 142 (N.Y. Justice Ct. 1983).

cruel manner.”⁸⁸ The court then explained that the test for cruelty is “the justifiability of the act or omission,” and that this test would enable “a person of ordinary intelligence . . . [to] determine whether defendant’s act was prohibited and unjustified.”⁸⁹ Ultimately, the word “cruelty” was sufficiently well-defined, and the statute was not unconstitutional.⁹⁰

Both the New York and Washington anti-cruelty statutes survived a constitutional challenge for vagueness, as have the anti-cruelty statutes in most other states.⁹¹ The drafters of the Illinois and Hawaii animal hoarding statutes, hoping to avoid vagueness challenges to the new anti-hoarding legislation, wisely adopted the constitutionally-tested language from anti-cruelty statutes.⁹²

⁸⁸ *Id.* at 144.

⁸⁹ *Id.*

⁹⁰ *Id.* at 146.

⁹¹ However, note that constitutional challenges are sometimes successful, particularly where no specific *mens rea* is demanded by the statute. *Davis v. State*, 806 So.2d 1098 (Miss. 2001); *See also* *People v. Rogers*, 703 N.Y.S.2d 891 (N.Y.City Ct. 2000). A New York statute stated: “[a] person who . . . tortures . . . or unjustifiably injures, maims, mutilates or kills any animal . . . is guilty of a misdemeanor.” *Id.* at 892. Section 350(2) of that statute defined “Torture” or “Cruelty” as including “every act, omission, or neglect, where by unjustifiable physical pain, suffering or death is caused or permitted.” *Id.* The question in *Rogers* was whether the statute failed to clearly define the proscribed conduct so one can avoid engaging in it in the first place without having to guess at its meaning.” *Id.* at 893.

⁹² *See supra* note 80.

This strategy may not prove successful, however, because of unique aspects of anti-hoarding laws. On the one hand, an anti-hoarding statute that adopts the “Owner’s Duties” section of an anti-cruelty statute—precisely what the Illinois anti-hoarding law has done—is likely to survive a constitutional challenge to the parts of the statute demanding adequate treatment of the animals.⁹³ On the other hand, anti-cruelty statutes do not possess a numerosity element, and so the numerosity language in an anti-hoarding statute will not have been constitutionally vetted during the challenge to the anti-cruelty statute.

Undoubtedly, an anti-hoarding statute that relies on bright-line language is not unconstitutionally vague. The Hawaiian anti-hoarding law, which demands that more than 15 animals be involved before the crime of animal hoarding has been committed, is one example.⁹⁴ However, not every state’s anti-hoarding statute relies on fixed, objective criteria.

Every anti-cruelty statute that has survived a constitutional challenge incorporates a clear, objective standard of reasonableness. As explained by one court, statutory language is not void for vagueness if it “convey[s] sufficiently definite warnings of the proscribed conduct when measured by common understanding and practice.”⁹⁵ Many anti-cruelty statutes rely on terms like “necessary,” “adequate,” and “proper” when defining the care and treatment that owners owe their

⁹³ 510 ILL. COMP. STAT. ANN. 70/3 (West 2008).

⁹⁴ HAW. REV. STAT. § 711-1109.6.

⁹⁵ *Gardner v. Johnson*, 451 So.2d 477, 478 (Fla. 1984).

animals.⁹⁶ Although open to debate, these terms are sufficiently clear to allow “a person of ordinary intelligence . . . [to] determine whether defendant’s act was prohibited and unjustified.”⁹⁷

Unfortunately, in some states, the numerosity element of the anti-hoarding statute lacks this clarity and objectivity. The Illinois anti-hoarding law defines an animal hoarder as one who “possesses a large number of companion animals.”⁹⁸ Unlike “necessary,” “adequate,” “sufficient,” “needless,” or “proper,” the word “large” does not “convey[] sufficiently definite warnings of the proscribed conduct when measured by common understanding and practice.”⁹⁹ Instead, the word “large” invites a prosecutor or judge to enshrine her own, personal sensibilities as law.

A judge, applying the statutory term “large,” may find himself criminalizing behavior merely because he finds it bizarre. Unlike the word “cruel,” which in *Bunt* was defined by the justifiability of an action,¹⁰⁰ the word “large” makes reference to no such objective standard.¹⁰¹ Surely, living in a house with six cats, four dogs and twelve birds is not a lifestyle that attracts everyone. And surely some judges would find 22 animals to be a “large” number of animals, but a statute

⁹⁶ Kentucky criminalizes the failure to “provide adequate food, drink, space, or health care.” KY. REV. STAT. ANN. § 525.130(1)(a). Indiana defines abandonment as the failure to provide “for adequate long term care of the animal.” IND. CODE 35-46-3-0.5.

⁹⁷ *People v. Bunt*, 462 N.Y.S.2d 142, 144 (N.Y. Justice Ct. 1983).

⁹⁸ 510 ILL. COMP. STAT. ANN. 70/2.10 (West 2008).

⁹⁹ *Gardner*, 451 So.2d at 478.

¹⁰⁰ *Bunt*, 462 N.Y.S.2d at 144.

¹⁰¹ *Id.*

should not empower a judge to give his own personal predilections the force of law.

Subjective language is particularly problematic in the context of animal hoarding behavior, which is already so poorly understood and often misrepresented.¹⁰² On the one hand, the statutory term “large” may invite a judge to criminalize behavior which he finds personally distasteful. On the other hand, a judge may also find himself failing to criminalize actions that an expert would consider to be animal hoarding. Not all hoarding behavior is perpetrated by the “crazy cat lady.” Most Americans have built a conception of animal hoarding out of equal parts popular myth and media representation.¹⁰³ However, this lay understanding of animal hoarding behavior is likely to be unsophisticated. A statute that permits a judge to employ his own, private understanding of hoarding behavior may also result in clear cases of hoarding going unpunished.

Proponents of animal hoarding laws tend to oppose bright-line numerosity standards.¹⁰⁴ They argue that to demand a fixed number of animals be involved in cases of animal hoarding is unrealistic, and limiting. Moreover, they argue that hoarding behavior can be identified by the conditions in which the animals are kept, not necessarily by the number of animals present.¹⁰⁵ However, bright-line rules may be a necessary evil. If the touchstone for the constitutional analysis of a statute is objective standards of reasonableness, then loose, subjective

¹⁰² Arluke, *supra* note 8.

¹⁰³ *Id.*

¹⁰⁴ Renwick, *supra* note 40, at ____.

¹⁰⁵ *Id.*

statutory terms like “large” will expose an anti-hoarding statute to constitutional challenges.

IV. RESOLUTION

Animal hoarding presents unique challenges to the legal system. The failures inherent in existing anti-cruelty laws are real. However, there are better ways to address these failures than the passage of redundant, potentially unconstitutional anti-hoarding laws. Instead, legislatures should ensure that anti-cruelty statutes effectively address hoarding behavior. Anti-cruelty statutes should not require some kind of heightened mental state for conviction. Additionally, anti-cruelty statutes should aid law enforcement officials in limiting instances of recidivism, not just among animal hoarders, but among all offenders who commit crimes against animals.

When drafted effectively, general animal cruelty statutes can be used to prosecute hoarders. In *Commonwealth v. Erickson*, animals were found in an excrement-covered apartment, in varying states of starvation and dehydration.¹⁰⁶ The defendant argued that “the animal cruelty statute requires proof of knowing and willful conduct, not merely wanton and reckless conduct.”¹⁰⁷ The court, however, disagreed. The Massachusetts animal cruelty statute required “proof of only a general intent” rather than “[t]he heightened mental state of ‘knowing’ and ‘willful’ conduct.”¹⁰⁸

¹⁰⁶ *Commonwealth v. Erickson*, 905 N.E.2d 127 (Mass. App. Ct. 2009).

¹⁰⁷ *Id.* at 131.

¹⁰⁸ *Id.*

Likewise, in *State v. Brooks*, Ohio prosecutors were successful in charging the owner of 46 horses under the state's anti-cruelty statute.¹⁰⁹ The defendant failed to provide sufficient food, water and medical care to the horses, despite the repeated warnings of friends and the animals' veterinarian.¹¹⁰ The defendant's knowledge that her failure to act would result in harm to the animals was sufficient to support a conviction for animal cruelty, despite the absence of any evidence of malice.¹¹¹

As these two cases indicate, a specific anti-hoarding statute is not necessary to ensure the successful prosecution of animal hoarders. Instead, state legislatures should draft anti-cruelty statutes that demand only an intentional act, rather than a willful or wanton act. Admittedly, many hoarders do not aim to break the law and even believe that they are helping the animals they hoard. But under a general intent theory "[i]t is not necessary that the defendant [know that he is] breaking the law, but it is necessary that [he intends] the act to occur which constitutes the offense."¹¹²

Altering the *mens rea* demanded by anti-cruelty statutes is only one part of the larger solution to the problem of animal hoarding. Recidivism is a common characteristic among animal hoarders.¹¹³ As anti-cruelty laws are reformed, these changes should aid courts and law

¹⁰⁹ *State v. Brooks*, 2008 WL 2876619, 3 (Ohio App. Ct. 2008).

¹¹⁰ *Id.* at 6-7.

¹¹¹ *Id.*

¹¹² *Erickson*, 905 N.E.2d at 131-132.

¹¹³ *Patronek*, *supra* note 10, at 173.

enforcement officials in identifying, prosecuting and rehabilitating repeat offenders.

One solution is to categorize animal cruelty as a felony offense. Many animal hoarders, following prosecution for an initial offense, will relocate to new communities and commit subsequent offenses.¹¹⁴ If animal cruelty was a felony offense, it would be more difficult for repeat offenders to leap-frog from one jurisdiction to the next.

Perhaps the most effective solution to the problem of recidivism is mandatory psychological counseling. Whatever its root cause may be, hoarding behavior is a psychological problem.¹¹⁵ Only by ensuring that hoarders receive the treatment they need can a state hope to discourage further incidents of animal hoarding.

Admittedly, mandatory psychological counseling is included as a key component of some anti-hoarding statutes.¹¹⁶ However, legislatures, rather than creating a new animal hoarding law, should instead modify existing anti-cruelty statutes to incorporate mandatory psychological counseling as a possible punishment. While it is true that animal hoarding behavior is likely the result of a psychological condition, so too are other behaviors which would fall under the purview of anti-cruelty statutes, including various forms of animal torture and intentional animal abuse.¹¹⁷ Amending existing anti-cruelty

¹¹⁴ HARC, *supra* note 13, at 32.

¹¹⁵ See *supra* note 25.

¹¹⁶ 510 ILL. COMP. STAT. ANN. 70/3-3.03 (West 2008).

¹¹⁷ "[A]busing animals, and possibly observing abuse by others, is likely to have negative developmental consequences." Clifton P. Flynn, *Why Family Professionals Can No Longer Ignore Violence Towards Animals*, 49 FAM. REL. 87, 87 (2000); See also Jeremy Wright & Christopher

statutes to incorporate mandatory psychological counseling would have the added benefit of affording treatment not only to animal hoarders, but also to offenders who have committed other crimes against animals.

V. CONCLUSION

In their present form, some anti-cruelty laws are not effective tools in the prosecution of animal hoarders. However, anti-hoarding statutes are a clumsy, redundant and potentially unconstitutional solution to this problem. Rather than creating new statutes designed to address animal hoarding behavior, legislatures should refine existing anti-cruelty statutes. These alterations should include amending the *mens rea* required by anti-cruelty statutes, so that the prosecutor need only show that the defendant acted intentionally, rather than willfully or maliciously. Additionally, these alterations should include measures designed to combat the problem of recidivism among animal hoarders by imposing required psychological evaluation and treatment as a possible sentence.

The Downfall of Riparianism: A Comparison of the Tennessee and Kentucky Water Pumping Permit Systems

Justin Brewer*

Two bordering states, somewhat similarly situated in terms of water abundance, have remarkably different systems by which they allow water to be pumped. Both are considered riparian doctrine states, at least as compared to prior appropriation doctrine states.¹ Kentucky, however, is a modified riparian state, with what resembles adaptive governance controlling how water is allocated in most situations. Tennessee is pure riparian, at least at the state level, and leaves the governance of water pumping to the cities. Both face some present drought or emergency conditions. The future clearly implies more strain on either water allocation system due to steady increases in population.

Questions must arise regarding which system is better. This is a problematic inquiry, since “better” is a term that is impossible to define in any singular way in regard to water use regulation. With development of land being linked to economic expansion,² and water

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¹ Riparian doctrine states evaluate water rights based on owning land next to water bodies. Prior appropriation doctrine states instead evaluate such rights based on who diverted water from the water body first. See DAVID H. GETCHES, *WATER LAW IN A NUTSHELL*, 4-6 (West Publishing Co. 1997).

² See Oliver A. Pollard, *Smart Growth: The Promise, Politics, and Potential Pitfalls of Emerging Growth Management Strategies*, 19 VA. ENVTL. L.J. 247, 248 (2000).

being crucial for that development to continue, sustainable uses should be considered the most important of the goals to be facilitated by these systems, although no infrastructure will be able to force the people using it to value water in a sustainable fashion. Any governance structure will, without a comprehensive plan to change how the society around it views water, fail to be sustainable against future increased demand and emergency situations.³

The first section of this paper will describe the two systems in some detail, including the information Kentucky requires on its pumping permit forms and Tennessee's reliance on the localities. Kentucky's intricate Division of Water and Watershed Management Branch governance will be described, along with the overarching Watershed Management Framework.

The second section is an overview of the various competing interests in a given permitting system. This overview will facilitate a discussion of how defining "better" in analyzing the effectiveness of a system is perspective dependant. Both systems serve some objectives better than others.

The third section will describe the present distress of both systems. One county in Kentucky⁴ and a much larger section of

³ Christopher Elmendorf, *Ideas, Incentives, Gifts, and Governance: Toward Conservation Stewardship of Private Land, in Cultural and Psychological Perspective*, U. ILL. L. REV. 423, 423 (2003).

⁴ <http://www.drought.unl.edu/> (follow "drought monitor" hyperlink; then follow the hyperlink within Kentucky on the map).

Tennessee⁵ were in severe drought conditions in 2007. Magoffin County, Kentucky has been declared to be in a State of Emergency by the Governor.⁶ Each state's reaction to the situation at hand will be analyzed with the understanding that no evidence exists as to the outcome of either drought. The present conditions and their responses should be a fair index of the state's response to emergency.

The fourth section will analyze both systems, identifying strengths and weaknesses. Both have some weaknesses that could be altered to effectuate the ends of more than one perspective. Beyond nonpartisan fixes, a focus on renewability and response to emergency situations will be advocated. Such a focus should not, and indeed could not realistically, preclude further development. Finally, water governance policy makers must be aware of any water governance system's own limitations, insofar as enforcement is not always practicable or, in some cases, possible.

The fifth and final section will be a suggestion for the future of the two systems. Both are functioning at present and perhaps could do so for some time. If the present population expansion rates continue, however, and the demand continues upward, neither system will be able to stay the way it is and continue to provide all of the stakeholders with the water they want. Eventually it is likely there will be a shortage of the water the stakeholders need. It will then become necessary to

⁵ <http://drought.unl.edu/> (follow "drought monitor" hyperlink, then follow the hyperlink within Tennessee on the map).

⁶ Kentucky Energy and Environment Cabinet, *Governor declares state of emergency for Magoffin County*, <http://www.eec.ky.gov/press/press2008/october/10-10emergency.htm> (last visited Oct. 10, 2009).

view water pumping permit systems as mediation systems in much the same way as land use systems have been viewed.⁷

By viewing water regulatory systems as mediation systems, it is obvious that more infrastructure and permit requirements will not suffice. It is necessary to involve the stakeholders in water, and to make the general public aware that water is a finite resource surrounding them. These mediation systems, as Professor Arnold points out, can only serve the society that uses them.⁸ Because strict limits on permission to withdraw water alone will not stop pumping nor cure supply, water quality, or land development problems, this Note will suggest a system that attempts to educate the public, and use nearby water landmarks to connect the public to water. If the public can be persuaded into identifying itself with a nearby water landmark, then a permitting system can be effective in regulation, since it is mediating between a water-conscious public that will still need to develop land and make efficient use of the water system.

I. THE TWO PUMPING PERMIT SYSTEMS

Until the 1950's, many states east of the Mississippi River had their water rights governance defined by riparian rules.⁹ After that, Hawaii and most states east of the Mississippi River began to regulate water usage in ways that overrode the previous riparian governance.

⁷ Craig Anthony Arnold, *The Structure of the Land Use Regulatory System in the United States*, 22 J. LAND USE & ENVTL. L., 441, 482 (2007).

⁸ *Id.* at 461.

⁹ See Joseph W. Dellapenna, *Special Challenges to Water Markets in Riparian States*, 21 GA. ST. U.L. REV. 305, 314-36 (providing an overview of regulated riparianism and the history behind it).

Over time, these regulations have overtaken the riparian system, leaving rules that do not resemble the traditional view of riparian rights. Kentucky is a state in which regulation has become so pervasive that there are few remnants of riparianism still in place. Tennessee, however, has enacted less regulation, and thereby has water governance that still strongly represents a riparian governance system.

A. KENTUCKY

The Kentucky Division of Water (DoW) approves permits for many different water related activities, including pumping.¹⁰ The DoW requires permit applications for any pumping “from any surface, spring or groundwater source,”¹¹ subject to certain limitations. Domestic pumping, which is defined as pumping for the needs of a single household, is not required to get a permit. Further, pumping for agricultural uses, such as irrigation does not require a permit. Finally, steam powered electrical generation plants are not required to get a permit, so long as they are regulated by the Kentucky Public Service Commission (KPSC), presumably because that entity either would be advised by the DoW or would regulate such endeavors itself keeping in mind hydrological concerns.¹² The steam powered electrical generation plants can obtain an exception if they are required by the Kentucky

¹⁰ Division of Water, *Permitting and Approvals*, <http://www.water.ky.gov/permitting/> (last visited Oct. 10, 2009).

¹¹ Division of Water, *Water Withdrawal Permitting*, <http://www.water.ky.gov/permitting/withdrawal/> (last visited Oct. 10, 2009).

¹² *Id.*

Public Service Commission to get a certificate of environmental compatibility.¹³

The KPSC also regulates water utilities. The commission requires that the utility show that it will provide enough water to its customers, except in “emergency situations,” which are not defined.¹⁴ Water utilities are also required to keep track of the interruptions that occur in the system, and what they did to remediate the possibility of recurrence.¹⁵ Further, KPSC requires that those utilities under its control measure the amount of water pumped out of the water body from which they are permitted to pump.¹⁶ Those measurements are then used to ensure that the rate adjustments used by the utility will include water wasted above fifteen percent of water used. The amount of water used by the utility is excluded from this equation.¹⁷

There are four different water pumping permits available from the DoW.¹⁸ There is no fee for applying for a pumping permit. Any use not excepted requires a permit. This applies when the source of water is public.¹⁹ Public waters are defined as “water occurring in any stream, lake, groundwater, subterranean water or other body of water in the Commonwealth which may be applied to any useful or beneficial purpose.”²⁰

¹³ *Id.*

¹⁴ 807 KY. ADMIN. REGS. 5:066 § 4(1) (2009).

¹⁵ *Id.*

¹⁶ 807 KY. ADMIN. REGS. 5:066 § 6 (2009).

¹⁷ *Id.*

¹⁸ The permit applications follow this note as Appendix I-IV.

¹⁹ KY. REV. STAT. ANN. § 151.150 (2008).

²⁰ KY. REV. STAT. ANN. § 151.120 (2008).

Permits can be required for pumping that averages less than ten thousand gallons per day under special circumstances. These circumstances include when the DoW determines that the amount being pumped is a significant portion of the amount of water at that source. It can also be ordered when the DoW determines it is necessary for such pumping to be monitored and reported.²¹

Each permit can be given with limits on the amount to be pumped.²² The permittee can be limited not only with regard to what its needs are, but further with regard to what the DoW believes the source is able to sustain while allowing for present users, plant and animal life in the stream, and future demand.²³ Any permit holder that is allowed to pump is required to keep accurate data of the actual amount of water pumped and must give that information to the DoW each month.²⁴ The DoW keeps this information and has water pumping information from as far back as 1966. The DoW can provide the information upon request and it can be compiled by use category, county or river basin.²⁵

Once the applicant has completed the appropriate form, it is sent to the Watershed Management Branch of the Kentucky DoW.²⁶ The permitting system is under the supervision of the Water Quantity

²¹ 401 KY. ADMIN. REGS. 4:010 (2009).

²² Kentucky Divisions of Water, *Water Management*, <http://www.water.ky.gov/wateruse/watermgt/> (last visited Oct. 10, 2009).

²³ *Id.*

²⁴ *Id.*

²⁵ *Id.*

²⁶ *Id.*

Management Section.²⁷ The Water Quantity Management (WQM) system exists to implement and govern “the sections of KRS 151 and KRS 224A and 401 KAR 4:220 pertaining to water withdrawal permitting, water supply planning and drought.”²⁸ The directive for WQM exists in KRS 151.110. It refers to the Environmental and Public Protection Cabinet of Kentucky, which was abolished in favor of the Energy and Environment Cabinet.²⁹ The Energy and Environment Cabinet oversees the Division of Water (DoW), which established the Watershed Management Branch (WMB).³⁰

In Kentucky, there are twelve basins divided into seven management units. Each unit has a dedicated “basin coordinator” and a basin coordination team.³¹ These coordinators are not all funded by the DoW, but are all generally overseen by the DoW. Some other partners of the DoW fund the basin management framework.³² The basin coordinators follow a “five-year basin management cycle,” and the basin management units “follow a schedule of activities that includes scoping and data gathering, assessment, prioritization and targeting, plan development and implementation.”³³ The various basins will be at different points of the schedule during a given five year

²⁷ *Id.*

²⁸ *Id.*

²⁹ Kentucky Energy and Environment Cabinet, *Homepage*, <http://www.eec.ky.gov/> (last visited Oct. 12, 2009).

³⁰ Kentucky Division of Water, *Homepage*, <http://water.ky.gov/> (last visited Oct. 12, 2009).

³¹ Ky. Div. of Water, *Watersheds*, <http://www.water.ky.gov/watersheds/> (last visited Oct. 12, 2009).

³² *Id.*

³³ *Id.*

period, and each is designated to begin the five year cycle with a different activity.³⁴ These basin coordinating teams are required to prepare a “basin status report” at the beginning of the five year cycle to inform stakeholders as to the present status of the basin.³⁵

The final program relevant to the relatively complex pumping permit system in Kentucky is the Watershed Management Framework (WMF).³⁶ This not a new agency, but rather is fashioned to allow the variety of other agencies in charge of water in Kentucky to communicate.³⁷ It is governed by a five chapter “Framework Document”, which describes the various goals and procedures of the WMF.³⁸ The WMF seeks to involve Kentucky water stakeholders in the various governance processes, increase the availability of information, and coordinate the various branches of the Energy and Environment Cabinet.³⁹

B. TENNESSEE

Tennessee has a simpler system of water pumping regulation. There is, in fact, no application or permit to be obtained for pumping

³⁴ Ky. Div. of Water, *What is the Watershed Management Framework*, http://www.watersheds.ky.gov/homepage_repository/What+is+the+Watershed+Management+Framework.htm (last visited Oct. 12, 2009).

³⁵ *Id.*

³⁶ Ky. Div. of Water, *Framework and Coordination*, <http://www.watersheds.ky.gov/framework> (last visited Jan. 13, 2009).

³⁷ *Id.*

³⁸ *Id.*

³⁹ *Id.*

water in many situations in Tennessee.⁴⁰ The Tennessee Department of Environment and Conservation (TDEC) does have a Division of Water Supply (DWS).⁴¹ If an excess of 50,000 gallons per day is withdrawn, DWS must be notified, although the ramifications of such notification are somewhat unclear.⁴²

While only notification is necessary for most pumping, there are some water use permits that the DWS does require.⁴³ The relevant ones are available online.⁴⁴ A thorough review of many of those permits would not be instructive due to their lack of application to extraction of water from a water body. They could be indicative of Tennessee's approach to governance of water in general, but they are either focused on pollution of water or diversion of water, both topics beyond the scope of this paper.

Forms are reviewed by the DWS for consistency with their design manual, "to determine whether the design standards have been met."⁴⁵ Once the form has been approved, the applicant can build according to its plan, but cannot transfer the permit, nor appeal any

⁴⁰ Tenn. Dep't of Env't & Conservation, *Environmental Permit Requirements Guide*, <http://www.tn.gov/environment/permits/whoami.shtml> (last visited Jul. 15, 2009).

⁴¹ *Id.*

⁴² *Id.*

⁴³ *Id.*

⁴⁴ Tenn. Dept. of Env't & Conservation, *Permits*, <http://www.state.tn.us/environment/permits/> (last visited Oct. 12, 2009).

⁴⁵ Tenn. Dept. of Env't & Conservation, *Environmental Permit Requirements Guide*, <http://www.tn.gov/environment/permits/whoami.shtml> (last visited Jul. 15, 2009).

denial.⁴⁶ The project engineer is required to continue to inspect the process as it is being built, and construction is required to begin within one year of the approval. The applicant is still subject to regulation by the Tennessee Regulations for Public Water Systems and Drinking Water Quality. The DWS is allowed to inspect the site if that is deemed necessary during construction as well.⁴⁷

TDEC lists a few examples of those that constitute “Public Water Systems.” Beyond those that desire to bottle and sell water, the list includes: “churches, schools, industries, restaurants, camps and subdivisions relying on a water well, spring, or surface source.”⁴⁸ There are exceptions, however. If a system meets four criteria, it is not regulated, and thereby does not need a permit from DWS. Those four criteria are: 1) Consisting only of distribution and storage facilities, without treatment or collection capabilities; 2) obtaining all of the system’s water from a public water system without being owned by that system; 3) not selling water to anyone; and 4) not a passenger carrier in interstate commerce.⁴⁹ Due to the specificity of these qualifications, it appears that few systems would be exempted.

Another of the permits required is the Wellhead Protection Program Approval.⁵⁰ Any Public Water System obtaining water from a

⁴⁶ Tenn. Dept. of Env’t & Conservation, *Permits*, <http://www.state.tn.us/environment/permits/pubh2o.shtml> (last visited Oct. 12, 2009).

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ *Id.*

⁵⁰ Tenn. Dept. of Env’t & Conservation, *Environmental Permits: Wellhead Protection Plan Approval*, <http://www.tn.gov/environment/permits/wellhd.shtml> (last visited Jul. 15, 2009).

groundwater source must receive approval.⁵¹ If the Public Water System obtains all of its water from a regulated supplier, it needs no approval.⁵² The information required to obtain approval includes the Wellhead Area Delineation of the groundwater source unless the system is among the smallest.⁵³ Possible contamination sources, hazardous waste storage, and contingency responses to spills of wastes must be reported.⁵⁴ This information is submitted to the county governing body and the county regional planning commission. DWS then checks the plan for consistency with its manual and decides whether or not to issue a three year permit.⁵⁵

The structure in Tennessee for governance of water appears to exist primarily at the local level, through land use decisions by local governments. This is apparent from the lack of governance at a regional level. Either the water pumping in Tennessee remains unregulated, or the localities are wrestling with the task themselves. There is the aforementioned permitting system, though it appears to be less relevant to water supplies in the state than each locality's decisions, since the permitting system simply exempts most pumping. The TDEC oversees the DWS.⁵⁶ The DWS is responsible for an annual

⁵¹ *Id.*

⁵² *Id.*

⁵³ *Id.*

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ Tenn. Dept. of Env't & Conservation,
<http://www.tn.gov/environment/about.shtml> (last visited
Oct. 12, 2009).

report of the quality of water in Tennessee, though that obligation does not appear to cover the quantity of water.⁵⁷

C. COMPETING INTERESTS

Water pumping permit systems face two interests that are diametrically opposed. In the traditional view, land developers desire little to no control over their choices in development, whereas environmental concerns seek moratoriums on development.⁵⁸ Neither of these extremes can realistically function. Water is a finite resource,⁵⁹ but development is necessary for an economy that relies on constant expansion.⁶⁰ The tension between the two is what shapes water pumping permit systems. In Kentucky, it appears that the infrastructure is present for an emphasis on sustainability in regards to development. On the other hand, Tennessee maintains a fairly limited regional governance of water, making development easier. Because localities are making land use decisions by themselves in many

⁵⁷ Tenn. Dept. of Env't & Conservation, *Water Pollution Control*, <http://state.tn.us/environment/wpc> (last visited Jul. 15, 2009).

⁵⁸ See generally David A. Dana, *Natural Preservation and the Race to Develop*, 143 U. PA. L. REV. 655 (1995) (discussing the advantages to over-regulation and under-regulation in land development views).

⁵⁹ Pamela LeRoy, *Planet Earth 2025: 10 Billion Served? Troubled Waters: Population and Water Scarcity*, 6 COLO. J. INT'L ENVTL. L. & POL'Y, 299, 299 (1995).

⁶⁰ See generally Christopher S. Elmendorf, *Ideas, Incentives, Gifts, and Governance: Toward Conservation Stewardship of Private Land, in Cultural and Psychological Perspective*, 2003 U. ILL. L. REV. 423, 423 (discussing policy alternatives for private land development and conservation).

situations, development is, on average, more quickly and easily approved in Tennessee than in Kentucky.

It is the purpose of this Note to argue that both ends can, and should, be met. Development does not need to be stifled by an effective water pumping regulatory system. If anything is certain, it is that neither extreme can prevail; development cannot be completely halted, nor can it be permitted to expand without limits or oversight. Halting development completely would certainly have a negative impact on the economy. The expanding population needs somewhere to go. However, development without curtailment would cause many environmental problems.⁶¹ Ultimately, some system will have to regulate the rate at which, and where, this development occurs.

To evaluate the systems objectively, sustainability of water use can easily be advocated without going to extremes that stifle an already ailing economy. In reality, neither system is perfect, as evidenced by the troubles that both are facing presently, and responding to very differently. However, the responses of the two systems to duress can be evaluated objectively. That evaluation will aid in determining which system is closer to an acceptable compromise between development and nature.

D. SYSTEMS UNDER DISTRESS

It is because of the aforementioned tension that neither Tennessee's nor Kentucky's approach to water pumping governance

⁶¹ See Craig Anthony Arnold, *Eastern Water Law Symposium: Integrating Land Use Law and Water Law: The Obstacles and Opportunities, Clean-Water Land Use: Connecting Scale and Function*, 23 PACE ENVTL. L. REV. 291 (2006) (discussing land development damages to hydrological systems).

can be outright considered “better.” Without serious inefficiencies to objectively evaluate, claiming one system to be better than another necessarily involves a value judgment. An objective test to the system, without placing more or less weight on either ease of development or water conservation, is to view the two systems in emergency situations. This test gains relevance as populations increase and water supply situations that were once emergencies become the norm.

Solving emergencies, such as long term droughts, is beyond the scope of any water pumping permit system. Instead, a successful system will be able to ease the burden on any one party throughout a drought. It will be flexible enough to assign new maximums for gallons per day per stakeholder. The inability to make every stakeholder capable of continuing to pump at their fullest capacity during an emergency is not a sign of an inefficient system. Instead, it is a permit system’s previous failings that will be highlighted in the case of emergency, and if the system lacks flexibility, then change is in order. Tennessee faces the sort of water related emergency that stresses any system of water governance, pumping or otherwise. Kentucky faces distress as well, but its distress is of far less severity than Tennessee’s.

There are many different ways to measure drought. Two commonly used drought indices are the Standard Precipitation Index (SPI) and the Palmer Drought Severity Index (PDSI).⁶² The SPI is a system that utilizes the probability of precipitation on a few different

⁶² Michael J. Hayes, *Drought Indices*, <http://drought.unl.edu/whatis/indices.htm> (last visited Oct. 12, 2009).

time scales, and is valued because it is flexible.⁶³ Positive numbers on the scale indicate wet time periods, and negative numbers indicate dry time periods. The wettest periods will be at or above 2 on the SPI, and the driest periods will be at or below -2.⁶⁴ The PDSI is used by some government organizations to indicate when an area is in drought such as that it is eligible to receive aid. It is an algorithm based on soil moisture and is less useful as a region become less homogenous in its terrain. The wettest regions on the PDSI are at 4.0, and the driest at or below -4.0.⁶⁵

The National Drought Mitigation Center (NDMC) utilizes five different labels for drought conditions, each indicating a range of conditions present in the area.⁶⁶ These labels utilize both the SPI and the PDSI, giving a more accurate picture of drought than any one scale could on its own.⁶⁷ For that reason, I will utilize the NDMC's scale and labeling to indicate the severity of drought throughout Tennessee.

The first label is D0, indicating abnormally dry conditions in a region, or an area coming out of more severe drought conditions. Crops are expected to be undergoing short-term damage in these ranges. D0 indicates a range of -1.0 to -1.9 on the PDSI, and -0.5 to -0.7 on the SPI.⁶⁸ The third range is D1, which indicates moderate drought.

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ U.S. Drought Monitor, <http://drought.unl.edu/dm/monitor.html> (last visited Oct. 12, 2009).

⁶⁷ *Id.*

⁶⁸ National Drought Mitigation Center, *Drought Monitor - Explanation*,

Within this range, the region will be experiencing lower levels of reservoirs and wells, noticeably increased risk of fire, and moderate damage to crops. D1 indicates a PDSI range of -2.0 to -2.9, and a SPI range of -0.8 to -1.2.⁶⁹ The fourth range is D2, which indicates severe drought. At this point, crops and pastures are likely to be lost, and water shortages are going to occur. The risk of fire is very high. D2 indicates a PDSI range of -3.0 to -3.9, and a SPI range of -1.3 to -1.5.⁷⁰ The fifth range is D3, which indicates extreme drought. At this range, widespread loss of crops and pastures will occur, and water shortages will become widespread, and the danger of fire becomes extreme. D3 indicates a PDSI range of -4.0 to -4.9, and an SPI of -1.6 to -1.9.⁷¹ The last and most extreme range is D4, which indicates exceptional drought. At this point, water emergencies begin to occur and losses of crops and pastures become exceptional and widespread. D4 indicates a PDSI of -5.0 or less, and a PSI of -2.0 or less.⁷²

1. TENNESSEE'S DROUGHT

Tennessee's drought has become less severe over time, eventually returning to normal conditions. In October of 2007, 70.5% of the state was in D4 drought conditions on the NDMC scale. At the same time, 99.0% of the state was in at least D3 drought conditions. The entirety of the state was in D2 conditions or worse.⁷³ By January of

<http://drought.unl.edu/dm/archive/99/classify.htm> (last visited Oct. 12, 2009).

⁶⁹ *Id.*

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² *Id.*

⁷³ Mark Svoboda, National Drought Mitigation Center, *October 16, 2007 Map of Tenn.*,

2008, the amount of D4 conditions had reduced to 19.9% of the state. Also, the amount of the state in D3 and worse conditions reduced to 46.8%, those in D2 and worse were only 53.8%, D1 and worse were at 60.8%, D0 and worse at 72.6%, and a full 27.4% of the state was no longer in any drought condition.⁷⁴ As of October 21, 2008, the conditions were still dire, though again improving. None of the state was in D4 conditions, 21.8% in D3 or worse conditions, 46.7% in D2 or worse conditions, 61.1% in D1 or worse conditions, 80.0% in D0 conditions, and 20% in no drought conditions at all.⁷⁵ Ultimately, this data shows that Tennessee has been in serious drought conditions in 2007 and 2008.

Tennessee is faced with major damages to its 20 billion dollar farming industry due to this drought.⁷⁶ Crops, bereft of enough water from rain or irrigation sources, have been smaller than usual, and are causing serious financial problems for local farmers.⁷⁷ Springs threaten

http://drought.unl.edu/dm/archive/20071016/pics/tn_dm_071016.png (last visited Oct. 12, 2009).

⁷⁴ Richard Helm, National Drought Mitigation Center, *January 1, 2008 Map of Tenn.*,

http://drought.unl.edu/dm/archive/20080101/pics/tn_dm_080101.png (last visited Oct. 12, 2009).

⁷⁵ Rich Tinker, National Drought Mitigation Center, October 14, 2008 *Map of Tenn.*,

http://drought.unl.edu/dm/archive/20081014/pics/tn_dm_081014.png (last visited Oct. 12, 2009).

⁷⁶ Blake Farmer, *Tennessee Drought Stunts Growth of Local Crops*, NPR U.S. AND WORLD NEWS HEADLINES, June 15, 2007, available at

<http://www.npr.org/templates/story/story.php?storyId=11095767> (last visited Oct. 12, 2009).

⁷⁷ *Id.*

to dry up, and force bottlers out of business, too.⁷⁸ In September of 2008, Governor Bredesen request federal aid from the USDA, due to crop losses of 35 to 70 percent in many counties.⁷⁹ The drought prompted localities to request voluntary reductions in water usage throughout the state.

2. KENTUCKY'S DROUGHT

Kentucky faces much less strenuous conditions than Tennessee. The conditions are nearly as pervasive as those in Tennessee, but with far less severity on the whole. In October of 2007, 1.7% of Kentucky was in D4 drought conditions. 15.4% of the state was in D3 or worse conditions, 33.1% of the state was in D2 or worse conditions, 41.8% of the state was in D1 or worse conditions, 56.4% of the state was in D0 conditions or worse, and 43.6% of the state faced no drought at all.⁸⁰ By January of 2008, conditions had improved, and 0.2% of the state was in D4 conditions, 4.9% in D3 conditions or worse, 9.7% in D2 conditions or worse, 16.1% in D1 conditions or worse, 27.3% in D0 conditions or worse, and 72.7% in no drought at all.⁸¹ Finally, in October of 2008, the

⁷⁸ Bob Swanson and Doyle Rice, *Whiskey Maker Battles Tennessee Drought*, USA TODAY, June 12, 2007, http://blogs.usatoday.com/weather/2007/06/whiskey_maker_b.html (last visited Oct. 12, 2009).

⁷⁹ Congressman John J. Duncan's homepage, http://www.house.gov/list/press/tn02_duncan/24092008.shtml (last visited Oct. 12, 2009).

⁸⁰ Douglas Le Comte, National Drought Mitigation Center, October 31, 2007 *Map of Ky.*, http://drought.unl.edu/dm/archive/20071030/pics/ky_dm_071030.png (last visited Oct. 12, 2009).

⁸¹ David Miskus, National Drought Mitigation Center, January 24, 2008 *Map of Ky.*, http://drought.unl.edu/dm/archive/20080122/pics/ky_dm_080122.png. (last visited Oct. 12, 2009).

drought conditions had spread, but gotten less severe: none of the state was in D4 conditions, 8.4% in D3 conditions, 50.5% in D2 or worse conditions, 73.9% in D1 or worse conditions, 89.2% in D0 or worse conditions, and only 10.8% of the state was without drought at all.⁸²

The Kentucky data indicates a different variety of strain than Tennessee faced on its water systems, and thereby a different test of its water pumping permit system. It is possible that the test of Kentucky's system is more revealing, however, insofar as it is much closer to the level of harm that a permitting system should be able to mitigate to a very noticeable degree. Tennessee may be slowly approaching or already at such conditions that a water pumping permit system would be able to mitigate the present damage being done.

3. THE STATES' RESPONSES

It is still appropriate to analyze the reactions of both systems and compare the two, regardless of the asymmetry of severity. Kentucky faced a surmountable obstacle, while Tennessee's permitting system did not. However, both faced adversity, and both systems showed what their responses would be to adversity of any severity. Comparing the two without keeping the difference in mind would be inappropriate, but the responses of both are telling of their merits.

Those merits can and should be compared along the path towards determining what permit system is more appropriate for the foreseeable future. By maintaining locality-based water governance

⁸² David Miskus, National Drought Mitigation Center, October 28, 2008 *Map of Ky.*, http://drought.unl.edu/dm/archive/20081028/pics/ky_dm_081028.png (last visited Oct. 12, 2009).

and not requiring any permits for most pumping, Tennessee has left itself with few options, most of which are based on general emergency situations, and none of which are specific to water.⁸³ Kentucky has developed a flexible system with regional and statewide programs, such that permitting is doing as much as could be expected of it to solve the present drought problems.⁸⁴

Both states have options in front of them that fail for three basic reasons. The first of these is that every one of the options relies on action after the emergency has already occurred. The second is that there tend to be inefficiencies when a state-wide movement is made, because different solutions could be optimal for different watersheds, and each state contains more than one watershed. The last reason is that no matter how well the states respond to drought, mitigating its impact and insuring systems are in place to handle it before it occurs will be more efficient, and effective, than these responses.

i. TENNESSEE'S RESPONSES AND OPTIONS

One of the options that Tennessee has is to declare a state disaster, drought being included in the definition of disaster,⁸⁵ and implement the State Disaster Relief Fund. After a declaration of a

⁸³ National Drought Policy Commission's Summary of Tennessee State Drought Programs, <http://govinfo.library.unt.edu/drought/finalreport/filec/Tennessee%20State%20Drought%20Programs.htm> (last visited Oct. 12, 2009).

⁸⁴ National Drought Policy Commission's Summary of Kentucky State Drought Programs, <http://govinfo.library.unt.edu/drought/finalreport/filec/KENTUCKY%20State%20Drought%20Programs.htm> (last visited Oct. 12, 2009).

⁸⁵ TENN. CODE ANN. § 58-2-101 (2000).

drought from TDEC's commissioner, affected parties could apply for funding from the state.⁸⁶ A similar option would be to enact Civil Defense Emergency Provisions,⁸⁷ which would allow grants to subdivisions for personnel and administrative costs for civil defense and preparedness,⁸⁸ though the application of that to droughts is perhaps tenuous. The governor could elect to ban burning during the drought season.⁸⁹ Enabling legislation exists for insurance policies from the state that would include drought as a possible claim,⁹⁰ and a state insurer guaranty in the case of disasters such as drought to pay if an insurer becomes insolvent.⁹¹ The state seems to have elected federal aid for the local farmers from the USDA in the recent drought,⁹² but the preceding options are available in droughts generally.

The TVA also aids Tennessee during drought seasons by operating dams and reservoirs.⁹³ Further, there are regional controls in place to assist localities through TVA, and TVA attempts to aid both the state Legislature and the federal Legislature to come up with effective water policies.⁹⁴ However, TVA is also a multi-state entity,⁹⁵ and

⁸⁶ *Id.*

⁸⁷ TENN. CODE ANN. § 58-2-101 *et seq* (2006).

⁸⁸ *Id.*

⁸⁹ TENN. CODE ANN. § 8-1-108 (1989).

⁹⁰ TENN. CODE ANN. § 56-2-201 (2008).

⁹¹ TENN. CODE ANN. § 4-31-801 *et seq* (1995).

⁹² Phil Bredesen Governor, State of Tennessee,

<http://www.tennesseeanytime.org/governor/viewArticleContent.do?id=1285>.

⁹³ *Tennessee Valley Authority's Involvement in Water Supply for the Tennessee Valley*,

<http://www.tva.gov/river/watersupply/responsibilities.htm>

⁹⁴ *Id.*

certainly appears to have the majority of its resources in the energy field. The regional approach that TVA has with respect to water policy⁹⁶ is insufficient to carry out the goals that a well designed water pumping permit system would be able to carry out.

The options in front of Tennessee exemplify the three basic reasons why both states have policies that are inefficient to deal with drought, especially as compared to a redesigned water governance system as a whole, and a water pumping permit system specifically. The insurance policy options are by definition *ex post facto* solutions. Other options rely on a state of emergency being declared, which could not happen until after a drought has already begun.

Due to the amount of time that a drought can last, as exemplified by 2007 being labeled “one of the driest years in history,”⁹⁷ relying on action after the fact is problematic.⁹⁸ By the time ambient conditions have become dry enough to be labeled a drought, the damage to local crops and water bodies has either already been done, or is at a point at which it cannot be easily reversed. The second

⁹⁵ *Tennessee Valley Authority FAQ*,
<http://www.tva.com/abouttva/keyfacts.htm> (last visited Oct. 12, 2009).

⁹⁶ *TVA, River Neighbors - Regional approach helps deal with drought*,
<http://www.tva.gov/river/neighbors/may07/regional.htm>
(last visited Oct. 12, 2009)

⁹⁷ *Blake Farmer, Tennessee Drought Stunts Growth of Local Crops*, NPR (2007),
<http://www.npr.org/templates/story/story.php?storyId=11095767> (last visited Oct. 12, 2009).

⁹⁸ *Thomas Lundmark, Systemizing Environmental Law on a German Model*, 7 DICK. J. ENVTL. L. & POL'Y 1, 13 (1998) (advantages of proactive environmental solutions generally).

problem, that of inefficiencies due to mismatched sizes between the program being implemented and watersheds, is present as well. Even if acting exclusively after the drought has been identified, implementing solutions on the wrong scale can be as detrimental as inaction.⁹⁹ The appropriate solution for damage to one watershed may not be the answer for another, and all of the above solutions are both remedial and statewide. Finally, none of these options are as efficient as a well designed water pumping permit system could be, at least in part because these options have water as an afterthought. It is almost coincidence that each statute includes drought as an emergency, since none are designed to deal with the problems that drought causes.

ii. KENTUCKY'S RESPONSES AND OPTIONS

Kentucky's available responses are much different than Tennessee's. It has the Kentucky River Authority (KRA), which generates a model Water Resources Plan as part of its responsibilities.¹⁰⁰ The Water Resources Plan is required to evaluate and analyze any drought related insufficiencies.¹⁰¹ This program exists to aid localities and regional governance bodies in Kentucky.¹⁰² Also, the governor can declare a state of emergency, as was done for Magoffin County in October of 2008.¹⁰³ This declaration allowed the

⁹⁹ Craig Anthony Arnold, *Clean-Water Land Use: Connecting Scale and Function*, 23 PACE ENVTL. L. REV. 291, 292 (2006)

¹⁰⁰ KY. REV. STAT. ANN. §151.720 (2008).

¹⁰¹ KY. REV. STAT. ANN. §151.110 (1992).

¹⁰² *Id.*

¹⁰³ Kentucky's Energy and Environment Cabinet, Press Releases,

<http://www.eec.ky.gov/press/press2008/october/10-10emergency.htm> (last visited Oct. 10, 2009).

Energy and Environment Cabinet to take “extraordinary measures to protect Magoffin County’s water supply during the emergency.”¹⁰⁴ The EEC can either suggest or force local officials to begin enacting their water shortage plans (or move to a particular stage in those plans, should that be more appropriate), modify permits for some existing water pumping permits, and restrict some water pumping that would usually be excepted.¹⁰⁵

The Kentucky responses do not necessarily fall into all of the three problems that the Tennessee responses do. The latter responses do fall into the first category, being *ex post facto*. A state of emergency is not declared until after a drought has already occurred. The Water Resources Plan, however, if properly executed, could prove to be a mitigation system not reliant on damage being done before it is utilized. The second category, the scale problem, is at least addressed by the programs available. The EEC works with local officials when it advises them, and the shortage plans have been developed locally. Further, the permit modification option shows a flexibility that is simply not present in Tennessee’s system. Mitigation or prevention would be better than the state of emergency solution, but the EEC’s flexible powers may be an adequate replacement when mitigation and prevention are impossible.

Finally, Kentucky’s water basin coordinator system promotes watershed based planning, as compared to Tennessee’s lack of any regional governance at all. The basin coordinator system may not be utilized to its fullest presently, but the option is readily available.

¹⁰⁴ *Id.*

¹⁰⁵ *Id.*

II. BETTER SYSTEMS

Kentucky has a framework for water pumping permits that is a workable foundation for future improvements. The current system is not perfect, of course, but immediately accessible changes that would result in sustainable water usage are less substantial than Tennessee's system would require to attain sustainability, and are focused primarily on details of the existing water governance framework. Tennessee is presently governing water pumping without a framework. Such a lack of framework is difficult at best to implement efficiently, and a more suitable replacement is a system that is similar to Kentucky's. Both of the competing ends of the spectrum of water regulation will be better served by a more regional system that recognizes that no one process will be appropriate for all the watersheds in the state.

Kentucky's system does need to be refined. Its structure is preferable to Tennessee's, but there are some alterations to be suggested. First, the utilities that are not covered could remain that way, since the KPSC is regulating the water pumping by those utilities.¹⁰⁶ However, KPSC should be informed by, and bound to, the water specific governance that is available. If they are not, KPSC's regulation of the pumping could be as inefficient as excepting the plants entirely. The Watershed Management Branch and the Watershed Management Framework are tools that should be able to provide the KPSC with the information that it needs without subjecting power plants to another level of bureaucracy.

¹⁰⁶ Ky. Div. of Water, *Water Withdrawal Permitting*, <http://www.water.ky.gov/permitting/withdrawal/> (last visited Oct. 12, 2009).

Second, the complete exception for all agricultural use from obtaining a permit is a mistake that could prove costly in the near future. The United States Geological Survey (USGS) indicates that in 2000, 137 billion gallons of water was used per day for irrigation. This amounts to 65% of water withdrawals not including thermoelectric power withdrawals.¹⁰⁷ Therefore, agriculture amounts to a large percentage of the strain on water supply systems in the United States, and Kentucky is no exception. If agriculture is to be promoted, there must be other methods than a wholesale exception for their water pumping permits. The permits could start by having an assumption of valid use for agricultural uses, which would still promote farming in Kentucky without allowing irrigation to go on unfettered, regardless of need or efficiency.

The third exception, which allows any domestic uses to go on without permits, should be removed as well. Households, generally speaking, are served by water utilities that are regulated. This exception presently applies to more rural areas in which there is no water utility, and a household is obtaining their water from a single well. It will be important, as the state becomes more arid, for regional governance to be aware of every single source that is pumping water.

The second detail that Kentucky would be well advised to alter is the length of its permits. Monthly reporting of actual pumping is

¹⁰⁷ Susan S. Hutson, Nancy L. Barber, Joan F. Kenny, Kristin S. Linsey, Deborah S. Lumia, and Molly A. Maupin, *Estimated Use of Water in the United States in 2000*, UNITED STATES GEOLOGICAL SERVICE, March 2004, available at <http://pubs.usgs.gov/circ/2004/circ1268> (last visited Oct. 12, 2009).

required,¹⁰⁸ but applicants do not have to apply again once a permit has been granted. The ability of the EEC to alter permits once an emergency has been declared¹⁰⁹ is helpful, but relies on an existing emergency to be effective. As a supplemental measure, Kentucky should mandate that permits expire after five years, with opportunities to renew at the end of each five year period. This achieves two different ends. First, it allows for more flexibility for the DoW to regulate before problems occur, and the second is that it forces reevaluation of water sources. Water bodies change over time, as do local climate conditions, as does the impact of land development in the area. Ignoring those facts by imposing long term permits should be avoided.

Given all of the problems that it faces, and the present reliance on the USDA to save its farmers, Tennessee should completely reevaluate its water governance. It may be possible to revamp the present reliance on localities by forcing them to generate water pumping permits for more uses than is present required, but such an effort would be at least as difficult, and probably more difficult, than using an entirely new system.

An overhaul may not be possible due to the realities of state politics and the legal system. Because these limitations may exist, defining the next best option for Tennessee is instructive. Merely reforming a system that is unlikely to continue working in the future

¹⁰⁸ 401 KY. ADMIN. REGS. 4:010 (2005)

¹⁰⁹ Kentucky's Energy and Environment Cabinet, Press Releases, <http://www.eec.ky.gov/press/press2008/october/10-10emergency.htm>.

may seem like an exercise in futility, but it should instead be viewed as the first step towards more efficient, and sustainable, water pumping governance.

Presently, Tennessee only requires notification in the case of water pumping in excess of 50,000 gallons per day.¹¹⁰ That number should be lowered by a significant amount. Lowering the number would require more reporting by those pumping water in Tennessee, and would provide the DWS with more information about who is pumping water and where. Further, that notification should become, at the very least, a form to be filled out that closely resembles Kentucky's "Standard Withdraw Application."¹¹¹ The completeness of the information in that form would allow the TVA to better function in its hydrological decisions, and would allow the DWS to make more informed decisions about the permit applications it receives for public water systems.¹¹² While an application would be better, this extra level of information is a solid beginning.

The next improvement that Tennessee could make relatively easily is to require estimates of amounts of water to be pumped daily into its "Plans Review and Approval for Public Water Systems" application form. Presently, that application only asks for the various

¹¹⁰Department of Environment and Conservation of Tennessee, <http://www.state.tn.us/environment/> (then follow the "Do I need a permit?" hyperlink under the "Permitting" tab).

¹¹¹ Attached as Appendix II.

¹¹² Such as those for public water systems. See section (I)(B) above; Tenn. Dept. of Env't. & Conservation, *Plans Review and Approval for Public Water Systems*, <http://www.state.tn.us/environment/permits/pubh2o.shtml> (last visited Oct. 12, 2009).

plans regarding the building of the public water system, not for how much water that system expects to take in.¹¹³ Not only does this serve the purpose of giving the DWS more information from which to make permit decisions, but it would also give guidelines for the DWS to limit permits to maximum gallons per day. Such a limitation could be enforced within the present system if DWS is allowed to extend its ability to inspect sites during construction¹¹⁴ to any time that the site is pumping water, and not only during construction.

The final of the small scale improvements that Tennessee could make is to its Wellhead Protection Program Approval. Presently, the smallest varieties of Wellheads do not have to obtain multiphase approval from DWS.¹¹⁵ Removing that exception would succeed in presenting the DWS with a more accurate picture of how the groundwater in the state is being pumped. If there is concern regarding overregulation of domestic uses, then the smallest wells could be given an automatic approval of their wells, which they are already receiving, but still be required to present the information to DWS. Finally, the Wellhead applications should require estimated daily gallons per day being pumped out of the groundwater source. This information would be helpful to DWS in maintaining groundwater sources, since it could

¹¹³ Tenn. Dept. of Env't & Conservation, *Environmental Permit Requirements Guide*, <http://www.tn.gov/environment/permits/whoami.shtml> (last visited Oct. 12, 2009).

¹¹⁴ *Id.*

¹¹⁵ Tenn. Dept. of Env't & Conservation, *Wellhead Protection Program Approval*, <http://www.state.tn.us/environment/permits/wellhd.shtml> (last visited Oct. 12, 2009).

deny applications for new wells based on a groundwater system that is being over-pumped, or will be over-pumped by the applicant.

Both states have some evident flaws in their water pumping permitting system. The solutions to the immediate problems in Kentucky are not as clear as those for Tennessee. In Kentucky, any change necessarily implicates some degree of value judgment—even if that degree is very small—between sustainability and the ease with which development can continue. The changes recommended above are likely to only serve the ends of sustainability, and will not make development easier in the state. They will not, however, place a substantial strain on development, and will provide some progress in the effort to reach sustainability. In reality, development could be eased by developers being aware, and able to work within, clear rules for obtaining water for developments.

The suggestions for Tennessee do not contain the same sort of value judgment. They are instead better for both the ease of development and the sustainability that environmental concerns seek. They seek to take steps towards stronger regulation of pumping. This would usually not favor development, but when there is little to no regulation in the present, it tends to do as much for future development as it does for sustainability. Unchecked growth, combined with unchecked water pumping that is necessarily implicated by that growth, will run out of water quickly if a plan is not implemented to keep water bodies healthy. If the available water has all already been claimed under an unfettered riparian system, then development cannot continue, since all development will require at least some water.

III. A DIFFERENT SOLUTION

The troubles that face Kentucky and Tennessee are not going to abate with the receding drought. From 2000 to 2008 Tennessee's population has increased by 9.2%, or by roughly 525,000 people.¹¹⁶ In the same period, Kentucky's population increased about 5.6%, or by roughly 225,000 people.¹¹⁷ This population increase will continue to occur. These two states will continue to be susceptible to an economy that is reliant on constant expansion, with that expansion generally coming in the form of more development. This trend indicates more demand for water.

With more demand for water, there is not a parallel increase in water supply. As the TVA attempts to serve the public while not permanently damaging water supplies,¹¹⁸ and Kentucky's DoW monitors individual watersheds for signs of problems, among other duties,¹¹⁹ the demand and stress on the relevant water bodies will only increase. Faced with this ever increasing demand, neither system can

¹¹⁶ U.S. Census Bureau, *Tennessee QuickFacts from the US Census Bureau*, (2009), <http://quickfacts.census.gov/qfd/states/47000.html> (last visited Oct. 13, 2009).

¹¹⁷ U.S. Census Bureau, *Kentucky QuickFacts from the US Census Bureau*, (2009) <http://quickfacts.census.gov/qfd/states/21000.html> (last visited Oct. 13, 2009).

¹¹⁸ See Tenn. Valley Auth., *TVA's Involvement in Water Supply for the Tennessee Valley*, <http://www.tva.gov/river/watersupply/responsibilities.htm> (last visited July 14, 2009).

¹¹⁹ See Ky. Div. of Water, *Water Management*, <http://www.water.ky.gov/wateruse/watermgt/> (last visited Oct. 13, 2009).

survive without a change in the way that water pumping permit systems are viewed (or even water governance as a whole).

Deciding what variety of system would be optimal is the first step to an overhaul of water pumping permit governance. The ways to label a legal system are: constitutive, distributive, protective, and mediating.¹²⁰ A constitutive system does more than a water pumping permit system, or any system of water governance could do. Such a system forms the society around it.¹²¹ This is beyond the scope of pumping permits by definition.

Permit systems could be distributive systems, however, as they only distribute a resource to those that demand it.¹²² If the environment could be considered among the demanding parties, it is possible for a pumping permit system to be labeled distributive. The problem is that all of the present needs are not known, since the water body demands varying amounts of water with the conditions around it, and over time. Secondly, the water bodies will not fare well if treated as other users are, insofar as they cannot reduce their demand through technology, conservation, and recycling.

Water pumping permit systems could be labeled protective systems, since protective systems in this context simply protect a

¹²⁰ Craig Anthony Arnold, *The Structure of the Land Use Regulatory System in the United States*, 22 J. LAND USE & ENVTL. L. 441, 460-61 (2007) (providing an overview of the four system labels, and applying them to land use regulation).

¹²¹ Holly Doremus, *Constitutive Law and Environmental Policy*, 22 STAN. ENVTL. L.J., 295 *passim* (2003).

¹²² Arnold, *supra* note 120, at 461.

resource.¹²³ Unfortunately, this sort of labeling polarizes the conflict between development and sustainability. It places land development demands on one side of the permitting system, and sustainability concerns on the other, guarding the water that land development seeks to obtain. This is likely how pumping permit systems are being viewed now, with the DoW or DWS on the sustainability side, keeping developers from the water they want—with varying degrees of success. Such a tension only exacerbates the problem, incentivizes developers to circumvent the system, and makes mutual understanding and collaboration nearly impossible. A protective water pumping permit system may result in less water used in the short term, but it may render itself ineffective if it engenders anger, rather than support, from stakeholders.

Instead, these systems should be viewed as mediation systems. A mediation system acts as a third party, mediating between the resource and the demand for that resource.¹²⁴ Pumping permit systems should act as mediators between the developers that want to build and pump water to those new structures, and the water supply itself. This model allows for regulation without polarization, since the DWS and the DoW would be in a position of a disinterested third party, rather than a guardian to be defeated.

¹²³ *Id.*

¹²⁴ See Christine Baxter, *Canals Where Rivers Used to Flow: The Role of Mediating Structures and Partnerships in Community Lending*, 10 ECON. DEV. Q. 44 (1996) (defining mediation systems from an economic perspective).

A mediation system will only be effective at enforcing what the society around it wants. Water pumping permit systems would be acting as mediators between a public that demands constant expansion—and consistently increasing amounts of water to be pumped for that expansion—and a finite supply of water. Of the three parties involved, the water bodies cannot change, and the mediation system can only reflect what the society wants. Given these limitations, the only solution remaining is to attempt to alter society. The best way to achieve these ends is to change the way that the public thinks about water.

The framework of the water pumping permit system is crucial in how people will view that system, and the water they seek to pump. Kentucky's system could already easily be viewed as a mediator. The only permanent permit, the Standard Water Withdraw Permit, is demanding in the breadth and depth of information that the society, through its regulatory framework seeks, but the process is also flexible. There are four different permits, three of which (the Temporary Authorization, Emergency Authorization, and Interim Authorization) require far less information than the Standard permit.¹²⁵ From the correct perspective, this variety of permits for more immediate demand situations, and for other temporary situations, indicates a mediation system that works with development and sustainability interests to achieve an acceptable compromise.

¹²⁵ See *supra* Part I (describing all the relevant permits for both systems).

Tennessee's framework does not achieve these ends.¹²⁶ Lacking any sort of basic permit requirements, the flexibility of Kentucky's system simply is not present. Notice for pumping of over 50,000 gallons per day, and a permit requirement only for specific situations ignores water quantity issues that will soon be prevalent. By implementing a *laissez faire* attitude towards water pumping, Tennessee has effectively created a distributive system. Neither side is really represented in any kind of mediation, but instead the water resources currently available are doled out to, or simply taken by, any stakeholders ready and willing.

By adopting a framework that resembles Kentucky's, Tennessee would be able to achieve a few different ends. First, more information would be available to decision makers regarding the condition of water bodies in the state and which ones have the potential to be over-pumped. Secondly, water users would be better aware of what their rights are in an environment of increasing demand and more constraints on supply. Presently, water users may begin pumping, suddenly find that a state of emergency has been declared, and then have their rights significantly reduced.¹²⁷ Even if it requires having less water on average to use, any development would be better served by having a constant supply of water that developers, investors, and consumers know they can count on outside of the most extreme droughts.

Adopting an adaptive governance framework such as Kentucky's would be insufficient, however, since neither state is in a position to

¹²⁶ *Id.*

¹²⁷ TENN. CODE ANN. § 58-2-101 (2000).

deal with ever increasing demand. The only way to deal with this problem is to learn from what the arid west has done. Kentucky and Tennessee have both usually been wet enough; in middle Tennessee, the problem is usually that there is too much rainfall for farmers.¹²⁸ As populations continue to increase, however, the same strain that is presently on those water systems in the west will be on Kentucky and Tennessee's water bodies. With no limit on demand, Kentucky will eventually face the same supply over demand ratio that locations such as Phoenix, Los Angeles, and Las Vegas face.

The Mono Lake story is one to take cues from for those seeking to alter present water use governance towards sustainability. The situation at Mono Lake was one of environmental harm and degradation due to water withdrawals from ecologically valuable feeder streams to supply water to a growing population with sprawling development. In the Mono Lake story, that city was Los Angeles.¹²⁹ In the near future, in Kentucky and Tennessee, those cities could easily be Louisville, Lexington, Memphis or Nashville pumping too much water from any of the local sources.

The Mono Lake Committee is among the biggest success stories for these kinds of tensions—that is, between development and

¹²⁸ Blake Farmer, *Tennessee Drought Stunts Growth of Local Crops*, MORNING EDITION, June 15, 2007, available at <http://www.npr.org/templates/story/story.php?storyId=11095767>.

¹²⁹ Craig Anthony Arnold, *Working Out an Environmental Ethic, Anniversary Lessons From Mono Lake*, 4 WYO. L. REV. 1, 13-14 (2004).

sustainable water pumping.¹³⁰ It is not possible to apply one geographical area's (Mono Lake's, for example) solution to a different geographical area's problems. The two situations are in many ways comparable, so lessons should be taken from them, but should then be applied to the specifics of Tennessee and Kentucky's problems. Both states have a water body in them that could be used to garner the same sort of awareness that was generated by the Mono Lake Committee. Kentucky has the Ohio River; Tennessee has the Mississippi River. Both have major metropolitan areas located on those rivers—Louisville in Kentucky and Memphis in Tennessee—that would be ready places to begin this sort of campaign.

The successes at Mono Lake that are most applicable to Kentucky and Tennessee are those that were the least confrontational. The slew of lawsuits filed by the Mono Lake Committee would be inadvisable in the instant situation.¹³¹ Beyond the legal issues, such as standing, that may bar such suits, they would be costly and ineffective in the present situation. The better solutions are those that did not label any particular entity as the enemy, which lawsuits have a tendency to do. There is no singular enemy here, nor should anyone be labeled as such. Instead, the other lessons, such as the Committee speaking to various environmental groups in the area,¹³² clothing and bumper stickers that have some kind of water conservation slogans on

¹³⁰ See *id.* (reviewing completely the Mono Lake story, and the Mono Lake Committee).

¹³¹ *Cf. id.* at 15-18.

¹³² *Id.* at 14.

them,¹³³ tours, outdoor programs, and educational programs for local youth¹³⁴ should be employed. These programs simultaneously avoid labeling anyone in particular as an enemy and spread awareness of the upcoming issues through the community.

A connection between the water body and the community is among the factors that caused the Mono Lake Committee to succeed.¹³⁵ This connection with the water body, and awareness of the potential dangers facing the water body, allowed for more water recycling programs to be put into place, and for the city of Los Angeles to increase their water rates by twenty percent in the summer months.¹³⁶ It is this level of conservation, and these sorts of recycling programs that would succeed in Louisville and Memphis, first, and then in Kentucky and Tennessee once the education programs and awareness were spread to the rest of the two states.

Louisville, as a city, already has a degree of private and commercial identification with the Ohio River. So far as public systems go, there is the bus system named the Transit Authority of the River City,¹³⁷ the parking system called the Parking Authority of the River City,¹³⁸ a not for profit housing organization named River City

¹³³ *Id.* at 14-15, 18-19.

¹³⁴ *Id.* at 19.

¹³⁵ *See id.* at 24-25.

¹³⁶ *Id.*

¹³⁷ Transit Authority of River City, *TARC homepage*, <http://www.ridetarc.org/> (last visited July 16, 2009).

¹³⁸ Parking Authority of the River City, *Homepage - PARC - LouisvilleKy.gov*, www.louisvilleky.gov/PARC (last visited July 16, 2009).

Housing,¹³⁹ and a church named the River City Worship Center.¹⁴⁰ There is at least awareness that some citizens of Louisville identify the city, and themselves, with the river. Even more pervasive is the commercial value of the name “The River City.” There are many examples of commercial use of the name “River City” to attempt to associate the commercial entity with a pride that exists regarding not just the city itself, but also the river in it. A few examples are The River City Bank,¹⁴¹ RiverCity Flooring,¹⁴² and River City Wrestling, a youth wrestling program.¹⁴³

Memphis, Tennessee has at least as much connection to the Mississippi River as Louisville has to the Ohio River. There are multiple public entities, such as the River City High School.¹⁴⁴ More impressively, there is a Mississippi River Museum,¹⁴⁵ which is part of the “unique historical, cultural and recreational attraction” known as Mud Island River Park.¹⁴⁶ Memphis similarly has a multitude of commercial

¹³⁹ River City Housing homepage, www.rivercityhousing.org (last visited, July 16, 2009).

¹⁴⁰ River City Worship Center homepage, www.rivercitywc.com (last visited Oct. 12, 2009).

¹⁴¹ River City Bank homepage, www.rivercitybankky.com, (last visited July 16, 2009).

¹⁴² RiverCity Flooring homepage, www.rivercityflooring.com, (last visited July 16, 2009).

¹⁴³ River City Wrestling homepage, www.rivercitywrestling.org (last visited July 16, 2009).

¹⁴⁴ Great Schools, *River City High School of Leadership Service*, http://www.greatschools.net/modperl/browse_school/tn/2507/ (last visited July 16, 2009).

¹⁴⁵ Mud Island River Park homepage, www.mudisland.com (July 16, 2009).

¹⁴⁶ *Id.*

activities attempting to associate themselves with the river by invoking the River City name.¹⁴⁷

Given the commercial viability that is being tapped into for association with the “River City” in both of these major metropolitan areas, the next step for water governance in general, and for pumping permit systems specifically, is to use this sentiment to their advantage. Many factors contributed to the changes that occurred at Mono Lake, some of which are simply not replicable in either Kentucky or Tennessee, such as the litigation. Educational programs centered on the landmarks already located in both cities are a ready possibility. There is not an immediate conflict to point to, so the program would not have any polarization and would not have to label any single party as an enemy, but the commercial market has indicated that there is some sentiment present in both cities that could be used. There is a pride regarding the large rivers in both towns, and both act as monuments and attractions.

It is that undercurrent of feeling that should be emphasized. If it is appropriately harvested for the right purposes, and combined with a water pumping permit framework, it is possible that both cities will be able to face the upcoming challenges by the time that they present themselves. The population increase is not such as that it will be necessary to have the entire public thinking about water, and water pumping, differently tomorrow. It will probably unnecessary over the

¹⁴⁷ See e.g., River City Limo Services, www.rivercitylimo.com; River City Gymnastics Inc, www.rivercitygymnastics.com; River City Karaoke, www.rivercitykaraoke.com; and River City Communications, www.rccom.net.

next few years. These sorts of programs do not act in short time frames, either. Because it is not an immediate effect sought, and because an immediate effect would not be possible, these education programs should be begun now; in fact, the change that education programs create is not visible until those children are making water use decisions.

The force of an organization such as River Fields Inc.,¹⁴⁸ an existing conservation group in the Ohio Valley area that has its headquarters in Louisville, would be perfect to spearhead this sort of campaign. River Fields is a good candidate for such a task, since it already seeks to protect the Ohio River Valley area specifically.¹⁴⁹ This sort of program is outside of their normal scope of conservation easements and environmental protection but, with the appropriate government assistance, the task should be well within their bounds, since they already have the environmental expertise requisite to produce the material, and a staff of people dedicated to protecting environmental concerns. The Tennessee Wildlife Federation,¹⁵⁰ while not located in Memphis and not specifically associated with the Mississippi River, should still have this sort of educational campaign within its scope, as it also has the expertise and staff qualifications.

If these programs can be initiated and successfully educate people on the impacts of their water use and the impacts of development on the rivers that are important to their cities, then water

¹⁴⁸ River Fields, Inc. homepage, www.riverfields.org, (last visited July 16, 2009).

¹⁴⁹ *Id.*

¹⁵⁰ Tennessee Wildlife Federation homepage, <http://www.tnwf.org/tnwf/> (last visited July 16, 2009).

pumping permit systems can be effective. Once the society around the system has been altered, the system itself can effectively mediate between a more conscious demand for water, and the finite water available. Perhaps adults already entrenched in land development expansion, and the idea that water is an infinite resource to be used as frequently and in as much quantity as possible, would be difficult or impossible to convince to change their water use habits. Children that have been educated regarding the dangers to the valuable water bodies around them are more likely to be responsive and receptive to recycling programs and other conservation measures.

IV. CONCLUSION

After reviewing both Tennessee's and Kentucky's water pumping permit system, several conclusions have become evident. Kentucky employs a complex framework that resembles an adaptive governance approach to water in general, while Tennessee has allocated pumping to smaller localities to deal with by and large. To decide which system is better may not, ultimately, require much of a value judgment regarding development versus sustainability. The two interests are almost always at competing ends, and developers would likely favor the Tennessee *laissez faire* approach, but it is possible that a more structured approach is better for everyone. Filling out extra forms before developing is likely worth what it achieves, which is a definite knowledge of what your rights are, rather than having no definite rights that may or may not be reduced.

The two systems face problems the likes of which may not be solvable by pumping permit systems. The drought in Tennessee was of such proportion that eliminating all of the problems drought could

cause is simply beyond the scope of a state water governance system. Kentucky has shown that it has more flexibility available to it in case of emergency. Kentucky also faces much less severe immediate difficulties than Tennessee, so the flexibility is perhaps exaggerated by the disparity in distress. Still, the future brings the specter of unstoppable growth, and thereby increased demand for water for which neither state is really prepared. Thus, water shortage will eventually be a regular condition rather than a short-term situation.

Because of that certain increase in demand in the future, the two systems both have room for improvement. Some of that improvement relies on a perspective that values sustainability slightly above ease of development, but development-minded values are still present. The less revolutionary proposals are smaller details, such as who receives absolute exceptions and when, in Kentucky, and entire structural problems in Tennessee. Because water pumping permit systems are mediation systems that are limited in how much they can do, environmental conservation groups in the area should utilize local rivers—landmarks that commerce is already utilizing—to connect people to the water that they use, thereby changing their desires, and possibly making future water recycling and stricter regulation of water use possible.

Green is the New Red:
A Comparison of the Government's Treatment of
Those Who Dare to Dissent

Rexéna Napier^{*}

Those who claim history does not repeat itself have probably claimed that before.

There have been some dark times in our nation's history. Times when a government meant to protect the people scared them instead. Times when a government founded on the free exchange of ideas silenced dissent. Times when a government for the people and by the people, monitored its people. Those times are here again.

Citizens were targeted because of their ideals during two eras of this nation's history: the First Red Scare, and the Second, Great American Red Scare. In both eras, intolerance for ideas challenging the status quo pervaded the country. During both eras, "Communist" was a label to be avoided, and any ideas perceived to be "un-American" were subverted.

During the First Red Scare three laws were passed, most notably the Espionage Act, to punish treasonous activities.¹ They were applied in a much broader sense, and were used to quiet so-called radicals.²

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¹ ROBERT K. MURRAY, RED SCARE: A STUDY IN NATIONAL HYSTERIA, 1919-1920 13-14 (1955).

² *Id.*

During the Great American Red Scare, laws and public hearings were combined to create an atmosphere of intolerance.³

Today, history is repeating itself. The fear of “terrorism” in a post 9/11 world bears a striking resemblance to the anti-communist sentiments during fearful and intolerant post-war eras in this nation’s history. Just as the assumption that the country was under attack by Communists was popular during these post-war eras, the assumption that terrorists are targeting us today is just as prevalent. However, the “communist” label, and fear of what that meant, was used to subvert any and all who would dissent. Today the “terrorist” label is being used in much the same way in the name of economic interests.

Today, there is a fear of being labeled a “terrorist” within the animal rights movement.⁴ Because the term “eco-terrorism” is used to encompass most acts of environmental or animal rights activism, the fear is well placed.⁵ The FBI defines “eco-terrorism” as: “the use or threatened use of violence of a criminal nature against innocent victims or property by an environmentally-oriented, subnational group for environmental-political reasons.”⁶ Through legislation, the government has singled out property crimes.⁷ Because action on behalf of animals

³ ALBERT FRIED, *MCCARTHYISM: THE GREAT AMERICAN RED SCARE*, A DOCUMENTARY HISTORY 15-18 (1997).

⁴ Dane E. Johnson, *Cages, Clinics, and Consequences: The Chilling Problems of Controlling Special-Interest Extremism*, 86 OR. L. REV. 249, 249 (2007).

⁵ Jared S. Goodman, *Shielding Corporate Interests From Public Dissent: An Examination of the Undesirability and Unconstitutionality of "Eco-Terrorism" Legislation*, 16 J.L. & POL'Y 823, 833 (2008).

⁶ *Id.*

⁷ *Id.*

or the environment is adverse to corporate interests, it therefore threatens the status quo.⁸ To respond to this threat, corporate interests have lobbied to have animal and environmental activists labeled as terrorists, marking them in much the same way as Communists were during the post-war era.⁹

The Animal Enterprise Terrorism Act (AETA) has codified the labeling of animal rights activists as terrorists.¹⁰ With sweeping language reminiscent of Red Scare legislation, the AETA has criminalized once lawful activities engaged in by animal and environmental advocates, such as protests and boycotts. Protected free speech activities on behalf of billions of animals used for food, clothing and research in this country have been chilled as a result of the possible “terrorist” label.¹¹

This note explores the parallels between the two Red Scares and today’s movement to label animal and environmental activists as eco-terrorists. The laws enacted during the Red Scares and those enacted today regarding eco-terrorism have striking similarities, as do their uses. The first section explores the history of the First Red Scare, the Second, Great American Red Scare and animal rights targeted legislation, including the Animal Enterprise Protection Act (AEPA) and Animal Enterprise Terrorism Act (AETA). The second section explores the similarities between trials conducted during the First Red Scare and the trial of the Stop Huntingdon Animal Cruelty 7 (SHAC 7) under the

⁸ *Id.* at 833–834.

⁹ *Id.* at 838.

¹⁰ 18 U.S.C. § 43 (2006).

¹¹ Goodman, *supra* note 5, at 846.

AEPA, as well as the parallels between the Great American Red Scare and the use of the AETA. The note concludes with recommended revisions for the AETA.

I. THE RED MENACE

A. THE FIRST RED SCARE, 1919–1921

The First Red Scare provides an example of what happens when a democratic nation supplants reason with fear.¹² It also demonstrates how easily excessive hate and intolerance can spread through the entire social system.¹³ It offers valuable lessons to today's country.¹⁴

During World War I, the government demanded absolute loyalty, and this demand permeated the entire social structure.¹⁵ Independent agencies such as the National Security League and the American Defense Society, along with the government-sponsored American Protective League, converted thousands of Americans into "super-patriots" by spreading propaganda on the dangers of wartime sabotage.¹⁶ The American Protective League worked with the Justice Department's Bureau of Investigation to ferret out internal enemies.¹⁷ These agencies were purported to be the "first line of defense against wartime subversive activity."¹⁸ By the end of the war, however, these agencies were more interested in increasing economic and political

¹² MURRAY, *supra* note 1, at ix.

¹³ *Id.*

¹⁴ *Id.*

¹⁵ *Id.* at 12.

¹⁶ *Id.* at 12.

¹⁷ Nancy Murray & Sarah Wunsch, *Civil Liberties in Times of Crisis: Lessons from History*, 87 MASS. L. REV. 72, 76 (2002).

¹⁸ MURRAY, *supra* note 1, at 12.

conservatism than in fostering healthy patriotism.¹⁹ The agencies often used patriotism to tarnish the reputation of people or groups whose opinions they either feared or hated.²⁰

Both state and federal governments passed legislation seeking to enforce loyal conduct during the war. Most of this legislation was still in effect in 1919, after the war had ended. The laws served as a reminder that animosity to nonconformity was still the norm. Three federal laws passed during this era played a significant role in the social atmosphere of the First Red Scare. These three laws were the Espionage Act of 1917, the Sedition Act of 1918, and a third law directed at suppressing the free thought and speech of aliens. The Espionage Act of 1917 primarily targeted treason. However, it was so poorly constructed and broadly interpreted that it covered activity that was not quite disloyal.²¹ The law made it a crime to

convey false reports or false statements with intent to interfere with the operation or success of the military or naval forces of the United States or to promote the success of its enemies . . . or attempt to cause insubordination, disloyalty, mutiny, or refusal of duty, in the military or naval forces of the United States, or . . . willfully obstruct recruiting or enlistment service.²²

Violation of the law was punishable by a \$10,000 fine and twenty years imprisonment.²³

The Espionage Act gave the post office broad new powers.²⁴ The post office could exclude “any material advocating or urging

¹⁹ *Id.*

²⁰ *Id.*

²¹ MURRAY, *supra* note 1, at 13.

²² *Id.* at 13–14.

²³ MURRAY, *supra* note 1, at 13.

treason, insurrection, or forcible resistance to any law of the United States.”²⁵ Albert S. Burluson, the Postmaster General at the time, used this new power to exclude any material critical of the war from the mail.²⁶ Socialist newspapers and publications became the main target.²⁷

The Sedition Act of 1918, amending the Espionage Act, dealt more directly with sedition, stating a person could not utter, print, write, or publish any disloyal, profane, scurrilous, or abusive language about the form of government of the United States, or the Constitution of the United States, or the uniform of the Army or Navy of the United States, or any language intended to . . . encourage resistance to the United States, or to promote the cause of its enemies.²⁸

Violation of the Sedition Act was also punishable by a fine of \$10,000 and twenty years in prison.²⁹

The third law passed during World War I was aimed at restricting the activities of nonconforming aliens thought to be a threat to the nation.³⁰ The law, passed in October of 1918,³¹ stated that all aliens who were anarchists or believed in the violent overthrow of the American government or advocated the assassination of public officials were henceforth to be excluded from admission into the United States . . . any alien who, at any

²⁴ CHRISTOPHER M. FINAN, *FROM THE PALMER RAIDS TO THE PATRIOT ACT: A HISTORY OF THE FIGHT FOR FREE SPEECH IN AMERICA* 9 (2007).

²⁵ *Id.*

²⁶ *Id.*; CHRISTOPHER CATHERWOOD & JOE DIVANNA, *THE MERCHANTS OF FEAR: WHY THEY WANT US TO BE AFRAID* 19 (2008).

²⁷ FINAN, *supra* note 24, at 10.

²⁸ MURRAY, *supra* note 1, at 14.

²⁹ *Id.*

³⁰ *Id.*

³¹ *Id.*

time after entering the United States, is found to have been at the time of entry, or to have become thereafter, a member of any one of the classes of aliens [above mentioned] . . . shall upon warrant of the Secretary of Labor, be taken into custody and deported.³²

Deportation was the instrument of choice for disposing of undesirable aliens.³³ It was much quicker than criminal indictments, trials and appeals.³⁴ An accused alien was given a hearing in which the Secretary of Labor's decision was final if the alien was found deportable.³⁵ The alien's ties to America (i.e. American spouse and/or children) and length of residence in America made no difference in the deportation hearings.³⁶ This system of deportation was viewed as a veiled and unjust punishment for dissent by most civil libertarians.³⁷

Many prosecutions for violations of these laws during wartime appeared in courts after the war had ended³⁸ because returning soldiers pushed for the immediate punishment of such nonconformity.³⁹ These prosecutions and cries for punishment served as a reminder that there was still disloyalty in the nation's midst, feeding the apprehension of a fearful nation.⁴⁰

³² *Id.*

³³ TED MORGAN, REDS: MCCARTHYISM IN TWENTIETH CENTURY AMERICA 60 (2003).

³⁴ *Id.*

³⁵ *Id.*

³⁶ *Id.*

³⁷ *Id.* at 60-61.

³⁸ MURRAY, *supra* note 1, at 14.

³⁹ *Id.*

⁴⁰ *Id.*

The First Red Scare occurred in the midst of this intolerant social atmosphere.⁴¹ The Red Scare grew out of the Bolshevik Revolution of 1917⁴² and the Russian peace agreement with Germany in March of 1918.⁴³ As a result of this peace agreement with their enemy, the Allies, including the United States, falsely concluded that the Bolshevik movement was German controlled.⁴⁴ The Bolsheviks' disregard for tradition shocked the American public.⁴⁵ The separate peace agreement with Germany was considered a betrayal.⁴⁶ The nation watched with apprehension as the "Red Scourge" moved into Europe, and then seemingly into their neighborhoods.⁴⁷

The media fed this atmosphere of fear.⁴⁸ The press disseminated exaggerated information on the "Bolshevik reign in Russia."⁴⁹ On November 1, 1919, *The Saturday Evening Post* reported that the "'Russo-German movement' was trying to 'dominate America.'"⁵⁰ The *Los Angeles Times* reported that "Bolshevism is a right-here-now American menace and the sooner the American people wake up the quicker the problem will be solved."⁵¹ Even the clergy

⁴¹ *Id.* at 15.

⁴² *Id.* at 15; Murray & Wunsch, *supra* note 17, at 76; The Bolsheviks denied most of the principles that older governments had been founded upon, and attempted to advance the idea of "world-wide proletarian revolution." MURRAY, *supra* note 1, at 15.

⁴³ MURRAY, *supra* note 1, at 15.

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ MURRAY, *supra* note 1, at 15.

⁴⁷ *Id.*

⁴⁸ *Id.* at 15-16.

⁴⁹ *Id.*

⁵⁰ MORGAN, *supra* note 33, at 63.

⁵¹ *Id.*

joined in the persecution.⁵² One such clergyman was quoted calling for deportation of Bolsheviks “in ships of stone with sails of lead, with the wrath of God for a breeze and with hell for their first port.”⁵³

The bad press and fear sparked two divergent reactions. Conservatives seized upon the bad press and fear to further a campaign of suppressing political and economic liberalism. American radicals who sympathized with the Russian revolution countered this campaign. Some radicals even advocated a similar revolution in the United States.⁵⁴

Two American Communist parties existed by 1919, the Socialist Party and the Industrial Workers of the World. These domestic Communists held meetings, distributed leaflets and literature, and even held parades. Some even published revolutionary manifestos and sent out calls for action. The open presence of these radicals in the United States fed into the atmosphere of fear in an intolerant post-war era. The assumption that the country was actually under attack from the Communists, known as the Reds, was widely accepted. Even protests centering on the economy after the war were attributed to the Reds.⁵⁵

The nation was overwhelmed with fear following the war. The public reached exaggerated and unjustified conclusions on the size and influence of the Bolshevik movement in the United States. The public was assailed daily with dire warnings from business organizations, scare propaganda from the patriotic agencies, and press coverage of the

⁵² *Id.* at 63–64.

⁵³ *Id.*

⁵⁴ MURRAY, *supra* note 1, at 16.

⁵⁵ *Id.* at 16, 19.

ideals of a small group of radicals. Hysteria ensued.⁵⁶ As one English journalist observed:

No one who was in the United States as I chanced to be, in the autumn of 1919, will forget the feverish condition of the public mind at the time. It was hag-ridden by the spectre of Bolshevism. It was like a sleeper in a nightmare, enveloped by a thousand phantoms of destruction. Property was in an agony of fear, and the horrid name 'Radical' covered the most innocent departure from conventional thought with a suspicion of desperate purpose. 'America,' as one wit of the time said, 'is the land of liberty—liberty to keep in step.'⁵⁷

B. THE GREAT AMERICAN RED SCARE: MCCARTHYISM

McCarthyism was born in February of 1950, when Senator Joseph R. McCarthy gave a speech to a small meeting of Republicans in West Virginia. The speech was unrecorded, and those in attendance gave conflicting reports of its content. According to the summary carried by newswires, McCarthy claimed the State Department contained exactly 205 Communists (meaning traitors). These reports, which normally received little attention at the time, made headlines.⁵⁸

McCarthy's accusations incensed the administration and Democrats. Instead of offering proof, McCarthy offered more accusations, this time with names. He began his campaign by destroying the reputations of specific individuals. Because denials did not get as much press as accusations, the charges stuck.⁵⁹

But the Great American Red Scare began years before McCarthy's appearance in the public eye. The far right was frustrated

⁵⁶ MURRAY, *supra* note 1, at 16.

⁵⁷ *Id.* at 16-17.

⁵⁸ FRIED, *supra* note 3, at 1.

⁵⁹ *Id.*

by America's friendship with the Soviet Union during World War II and lack of concern over Communism. As soon as World War II ended, the right began to test "anti-communist waters." Republicans denounced Roosevelt and Democrats for supporting Stalin and his conquests. The Republicans swept Congress in 1946, forcing President Truman to get "tough on Communism."⁶⁰

In 1947, the Truman Doctrine⁶¹ was announced only days before a "loyalty review" program, meant to ferret out federal employees who were Communists, went into effect. Loyalty review boards based on Truman's model sprang up all across the nation. Personal lives and political beliefs were scrutinized in the public as well as private sector. The Attorney General kept a list of organizations he deemed subversive. Anyone, who at any time in their lives had belonged to any of the organizations on the list, or knew or was related to anyone belonging to any of them, was subjected to scrutiny by loyalty review boards. Legislative and administrative committees held "inquisitorial hearings" that were highly publicized, with the intent to defame and humiliate the object of their fervor.⁶²

Irony would have its day with Truman, however. Between 1949 and 1950, international events, combined with bombshells at home, turned the tide against Truman and the Democrats. Such international

⁶⁰ FRIED, *supra* note 3, at 4.

⁶¹ Truman provided economic and military support to Greek and Turkish governments. Truman presented this bold move to the public in ideological terms. He presented the move as necessary to defend against totalitarianism whose aim was the enslavement of mankind. This came on the heels of Hitler and World War II. FRIED, *supra* note 3, at 4.

⁶² *Id.* at 4.

events included: the Soviet Union detonating an atomic bomb, which meant the United States had lost its monopoly on that technology; the United States-backed Chinese government falling to Mao Zedong's Communist armies; and American soldiers beginning to fight in South Korea against Communist North Korea. Amidst these defeats abroad, Alger Hiss, a State Department official, went to jail on the home-front. A confessed Communist spy alleged, and proved to a jury, that Hiss had turned over secret State Department documents. McCarthy burst onto the scene amidst these events.⁶³

"Twenty years of treason" was McCarthy's slogan. The Truman administration was now enveloped by the Red Scare it had helped create. The Truman administration, liberal Democrats, and Cold War liberals were the targets of McCarthy's accusations. Liberals were removed from office and victimized by the Red Scare.⁶⁴

J. Edgar Hoover and the FBI he directed played an enthusiastic role in the Red Scare. Hoover gave public warnings against any group that questioned the status quo, and routinely fed slanderous information to newspapers, columnists, and "grand inquisitors", including McCarthy. Hoover's FBI committed flagrant illegalities.⁶⁵

One significant law and two important actions took place during the Great American Red Scare: The Smith Act, the House Un-American Activities Committee Hearings, and the FBI wire-tapping program.

⁶³ *Id.* at 4.

⁶⁴ *Id.* at 5.

⁶⁵ FRIED, *supra* note 3, at 6.

The Alien Registration Act, enacted in June of 1940,⁶⁶ came to be known by the name of its author, Virginia Representative Howard Smith.⁶⁷ The Smith Act gave the federal government sweeping, undefined authority to target groups it decided were subversive.⁶⁸ For example, in 1941, the Smith Act was used to jail eighteen Trotskyists⁶⁹ simply because they were Trotskyists.⁷⁰ The Smith Act went into full effect during McCarthyism, used to persecute liberals and Socialists.⁷¹ The Smith Act, which is still on the books today, criminalized:

[1] Whoever knowingly or willfully advocates, abets, advises, or teaches the duty, necessity, desirability, or propriety of overthrowing or destroying the government of the United States or the government of any State, Territory, District or Possession thereof, or the government of any political subdivision therein, by force or violence, or by the assassination of any officer of any such government; or [2] Whoever, with intent to cause the overthrow or destruction of any such government, prints, publishes, edits, issues, circulates, sells, distributes, or publicly displays any written or printed matter advocating, advising, or teaching the duty, necessity, desirability, or propriety of overthrowing or destroying any government in the United States by force or violence, or attempts to do so; or [3] Whoever organizes or helps or attempts to organize any society, group, or assembly of persons who teach, advocate, or encourage the overthrow or

⁶⁶ *Id.* at 15.

⁶⁷ *Id.*

⁶⁸ *Id.*

⁶⁹ Trotskyism is a form of Communism advocated by Leon Trotsky, "based on an immediate, worldwide revolution by the proletariat." Dictionary.com, <http://dictionary.reference.com/browse/Trotskyism> (last visited Feb. 17, 2009).

⁷⁰ FRIED, *supra* note 3, at 15.

⁷¹ *Id.*

destruction of any such government by force or violence; or becomes or is a member of, or affiliates with, any such society, group, or assembly of persons, knowing the purposes thereof.⁷²

In 1938, the House of Representatives created a “Special Committee on Un-American Activities” (HUAC).⁷³ Its job was to expose Communists in the government, trade unions, Hollywood and anywhere else they may hide.⁷⁴ HUAC fell into disuse during World War II, but was brought back to life in 1945.⁷⁵ It was sponsored by John E. Rankin, a notorious racist and anti-Semite.⁷⁶ HUAC was authorized to investigate:

(1) the extent, character and objects of un-American propaganda activities in the United States (2) the diffusion within the United States of subversive and un-American propaganda that is instigated from foreign countries or of domestic origin and attacks the principles of the form of government as guaranteed by the Constitution.⁷⁷

The powers given to the Committee were extremely broad.

Finally, the FBI, with Hoover at the helm, began conducting wiretaps on anyone it considered subversive.⁷⁸ President Roosevelt had authorized the FBI to conduct wiretaps as long as they were for “reasons of national defense” and approved by the Attorney General.⁷⁹ In 1946, Hoover requested that approval from Attorney General Tom Clark.⁸⁰ However, in his request, Hoover omitted any mention of

⁷² 18 U.S.C. § 2385 (1948).

⁷³ FRIED, *supra* note 3, at 16.

⁷⁴ *Id.*

⁷⁵ *Id.*

⁷⁶ *Id.*

⁷⁷ *Id.*

⁷⁸ *Id.* at 19.

⁷⁹ FRIED, *supra* note 3, at 19.

⁸⁰ *Id.*

national defense.⁸¹ Clark approved the request, and President Truman signed Clark's letter of approval to the FBI. The FBI now had full authority to wiretap anyone it deemed subversive.⁸²

II. THE GREEN MENACE

A. THE ANIMAL ENTERPRISE PROTECTION ACT

The Animal Enterprise Protection Act (AEPA) was the predecessor of the Animal Enterprise Terrorism Act (AETA). The AEPA had its beginnings in the late 1980's and early 1990's. During this time, Representative Charles W. Stenholm (D-TX) attempted to enact federal legislation "to prevent, deter, and penalize crimes . . . against U.S. farmers, ranchers, food processors, and agricultural and biomedical researchers." Representative Stenholm's attempts included the proposed Farm Animal and Research Facilities Protection Act of 1989, the Farm Animal and Research Facilities Protection Act of 1991, and the Animal Rights Terrorism Act of 1992. These legislative measures were designed to amend the Food Security Act of 1985. The legislation called for harsh penalties, lacked a requirement for interstate travel, and included private rights of action for animal facility owners. Stenholm's attempts were unsuccessful, however, and none of these measures were enacted into law.⁸³

Congress finally enacted the AEPA in 1992.⁸⁴ The National Association for Biomedical Research pushed the legislation through

⁸¹ *Id.*

⁸² *Id.*

⁸³ Kimberly E. McCoy, *Subverting Justice: An Indictment of the Animal Enterprise Terrorism Act*, 14 ANIMAL L. 56, 56 (2007).

⁸⁴ Goodman, *supra* note 5, at 836.

Congress.⁸⁵ The AEPA created the crime of "animal enterprise terrorism,"⁸⁶ creating a punishable offense for anyone who:

(1) travels in interstate or foreign commerce, or uses or causes to be used the mail or any facility in interstate or foreign commerce, for the purpose of causing physical disruption to the functioning of an animal enterprise; and (2) intentionally causes physical disruption to the functioning of an animal enterprise by intentionally stealing, damaging, or causing the loss of, any property (including animals or records) used by the animal enterprise, and thereby causes economic damage exceeding \$10,000 to that enterprise, or conspires to do so . . .⁸⁷

The term "animal enterprise" is defined as: "(A) a commercial or academic enterprise that uses animals for food or fiber production, agriculture, research, or testing; (B) a zoo, aquarium, circus, rodeo, or lawful competitive animal event; or (C) any fair or similar event intended to advance agricultural arts and sciences."⁸⁸

The AEPA provided for a fine, imprisonment of up to one year or both for a violation.⁸⁹ It also provided for increased penalties of up to ten years if a violation resulted in serious bodily injury to an individual, and life in prison if a violation resulted in death.⁹⁰

The AEPA remained merely a threat to activists until September 16, 1998. It was then that Peter Young and Justin Samuel were indicted by a federal grand jury in Wisconsin for animal enterprise terrorism.

⁸⁵ *Id.*

⁸⁶ 18 U.S.C. § 43 (1992).

⁸⁷ 18 U.S.C. § 43(a) (1992).

⁸⁸ 18 U.S.C. § 43(d)(1)(A)-(C) (1992).

⁸⁹ 18 U.S.C. § 43(a) (1992).

⁹⁰ 18 U.S.C. § 43 (1992); Goodman, *supra* note 5, at 836-837.

The indictment alleged Young and Samuel's connection to a raid on fur farms in 1997. During this raid, between 8,000 and 12,000 mink were released from mink farms in the Midwest over a two-week period. Samuels pled guilty, received a two-year sentence and was ordered to pay over \$360,000 in fines. After seven years on the run, Young was apprehended and pled guilty to animal enterprise terrorism charges under the AEPA. Young was sentenced to "two years in federal prison, 360 hours of community service at a charity to benefit 'humans and no other species,' \$254,000 restitution, and one year probation."⁹¹

Despite these convictions, the animal enterprise industry pushed to broaden animal enterprise terrorism legislation.⁹² "Heavy lobbying from animal-testing firms and pharmaceutical companies" resulted in amendments to various provisions of the AEPA in 2002.⁹³ The 2002 revisions eliminated the \$10,000 requirement for economic damage, providing a federal cause of action for nominal economic loss.⁹⁴

B. THE ANIMAL ENTERPRISE TERRORISM ACT

President Bush signed the Animal Enterprise Terrorism Act (AETA) into law on November 27, 2006.⁹⁵ The AETA grew out of efforts by industry groups and lobbyists seeking to shield their corporate interests from all opposition.⁹⁶ Although the AEPA had been used successfully to prosecute individuals who did not engage in any direct

⁹¹ Goodman, *supra* note 5, at 837.

⁹² *Id.* at 838.

⁹³ *Id.*

⁹⁴ *Id.*

⁹⁵ *Id.* at 847; Johnson, *supra* note 4, at 252.

⁹⁶ Goodman, *supra* note 5, at 843-844.

action,⁹⁷ animal industry groups pushed for broader legislation and greater maximum sentences that would extend beyond direct actions on paper as well as in practice.⁹⁸

In May of 2004, the Senate Committee on the Judiciary held hearings on "Animal Rights: Activism vs. Criminality."⁹⁹ Government officials, corporate executives and animal experimenters discussed what they perceived as the need for stronger legislation regarding animal and environmental activists.¹⁰⁰ The FBI Deputy Assistant Director of the Counterterrorism Division, John E. Lewis, argued "while it is a relatively simple matter to prosecute activists who allegedly commit arson or use explosive devices under existing federal statutes, it is often difficult if not impossible to address a campaign of low-level . . . criminal activity . . . in federal court."¹⁰¹ The proposed amendments included: (1) "a provision to prohibit causing economic loss, even in the absence of any physical destruction;" (2) "expanding the act to include tertiary targets;" (3) "expanding the definition of "animal enterprise" to

⁹⁷ "Direct action seeks to create such a crisis and foster such a tension that a community which has constantly refused to negotiate is forced to confront the issue. These tactics are intended to have an immediate impact on a problem or its causes, and can include legal and illegal activities, such as demonstrations, boycotts, civil disobedience, vandalism and property damage." Goodman, *supra* note 5, at 829-830. (quoting Martin Luther King, Jr., Letter from Birmingham Jail (Apr. 16, 1963), available at http://www.africa.upenn.edu/Articles_Gen/Letter_Birmingham.html).

⁹⁸ Goodman, *supra* note 5, at 843.

⁹⁹ *Id.* at 844.

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

include the use of animals ‘for education ... [and] for the purpose of advancing biomedical sciences;’” and (3)[sic.] “increasing the maximum prison sentence to ten years for physical or economic disruption.”¹⁰²

In 2005, Senator James Inhofe (R-OK) and Representative Thomas Petri (R-WI) introduced the AETA as an amendment to the ACPA. It was drafted with help from the Department of Justice and the FBI. The proposed purpose was to “enhance the effectiveness of the U.S. Department of Justice's response to recent trends in the animal rights terrorist movement.” The final version of the bill was introduced to Congress in 2006.¹⁰³

Animal advocacy and civil rights organizations opposed the AETA. Of particular concern was the AETA's characterization of the loss of property. The AETA's characterization of property had the potential to infringe upon time honored and constitutionally protected forms of activism such as demonstrations, undercover investigations, leafletting and boycotts. These groups argued that the AETA “would have had a chilling effect on free speech” because traditionally protected forms of activism could potentially be criminalized leaving animal advocates unclear on what they could and could not legally do.¹⁰⁴

The American Civil Liberties Union (“ACLU”) sent a letter to the House Judiciary Committee stating it would not oppose the AETA if changes were made to protect free speech. The ACLU stated that the AETA should define “‘real or personal property’ as ‘tangible’ property to avoid penalizing legitimate and otherwise legal activity that results in

¹⁰² Goodman, *supra* note 5, at 844.

¹⁰³ *Id.* at 845.

¹⁰⁴ *Id.* at 845-46.

lost profits.” The ACLU also asked that a provision imposing a penalty for actions not causing any reasonable fear of bodily harm, any actual bodily injury or economic damage, be applied only to conspiracies or attempted violations of the Act. However, these recommendations received little consideration, and the changes were not made.¹⁰⁵

The AETA expands the scope of “animal enterprise terrorism” beyond that of the AEPA.¹⁰⁶ The AETA eliminates the “physical disruption” requirement of the AEPA, and criminalizes all conduct engaged in “for the purpose of damaging or interfering with the operations of an animal enterprise.”¹⁰⁷ The AETA also broadens the scope of individuals and entities enjoying its protections.¹⁰⁸ “Animal enterprise” was redefined to include

(A) a commercial or academic enterprise that uses or sells animals or animal products for profit, food or fiber production, agriculture, education, research, or testing; (B) a zoo, aquarium, animal shelter, pet store, breeder, furrier, circus, or rodeo, or other lawful competitive animal event; or (C) any fair or similar event intended to advance agricultural arts and sciences . . .¹⁰⁹

This definition practically covers any industry or company involved in the exploitation of animals, whether directly or indirectly.¹¹⁰ “Tertiary targeting”¹¹¹ is also included within the AETA’s scope, expanding the

¹⁰⁵ *Id.* at 846–47.

¹⁰⁶ Goodman, *supra* note 5, at 848.

¹⁰⁷ *Id.*; 18 U.S.C. § 43 (2006).

¹⁰⁸ Goodman, *supra* note 5, at 848.

¹⁰⁹ 18 U.S.C. § 43(d)(1)(A)–(C) (2006).

¹¹⁰ Goodman, *supra* note 5, at 848.

¹¹¹ Tertiary targets are defined as any “person or entity having a connection to, relationship with, or transactions

breadth of protections offered beyond those that fell within the definition of animal enterprise under the AEPA.¹¹²

III. DISSENT ON TRIAL: SOCIALISTS AND SHAC 7

A. SOCIALISTS ON TRIAL

Socialists faced difficulty with the general public during the First Red Scare.¹¹³ The difficulty they faced with the courts, however, was much more frightening.¹¹⁴ When these Socialists were brought to trial, the courts applied the Espionage Act so strictly it is surprising everyone accused was not convicted.¹¹⁵

Two trials held pursuant to the original Espionage Act and the amended version including the Sedition Act, set the stage for an atmosphere of intolerance during the First Red Scare.¹¹⁶ These trials were that of Victor L. Berger and Charles T. Schenck.

1. VICTOR L. BERGER

Victor Berger was a pacifist, a Socialist and a member of the United States House of Representatives. Berger helped form the Socialist party in the United States in 1901, and served on its Executive Board. In 1910, he became the first Socialist to be elected and serve in the United States House of Representatives. He was reelected in 1912 and 1914. Berger believed that socialism could only be achieved

with an animal enterprise." 18 U.S.C. § 43(a)(2)(A) (2006).

¹¹² Goodman, *supra* note 5, at 848.

¹¹³ MURRAY, *supra* note 1, at 20.

¹¹⁴ *Id.*

¹¹⁵ MURRAY, *supra* note 1, at 20-21; FINAN, *supra* note 24, at 27.

¹¹⁶ MURRAY, *supra* note 1, at 21-26; CATHERWOOD & DIVANNA, *supra* note 26, at 16.

through peaceful means. He opposed all anarchists and direct-actionists within the Socialist party. As a result, many radical Socialists actually considered him “bourgeois.”¹¹⁷

Because of his pacifist position, Berger had opposed the war from the outset. The public and the courts took this as an indication he supported Germany. Berger made statements to the contrary, such as, “Personally, I was against the war before war was declared . . . But now since [w]e are in the war, I want to win this war—for democracy . . . Let us hope we will win the war quickly.” However, more charged statements made trouble for the peace loving Socialist. On one occasion he wrote, “The war of the United States against Germany can not be justified,” and on another, “the blood of American boys [is] being coined into swollen profits for American plutocrats.”¹¹⁸

In February 1918, Berger was indicted for violation of the Espionage Act for expressing his opinions on the war. He was not tried until ten months later. During the interim he was reelected to the House of Representatives on a peace platform. Two months after his reelection, Berger was found guilty for conspiracy to violate the Espionage Act.¹¹⁹ Judge Kenesaw Mountain Landis sentenced him to twenty years in Fort Leavenworth.¹²⁰ Two years earlier, Judge Landis had expressed his opinion on free speech in a case against 166 members of the Industrial Workers of the World.¹²¹ He stated, “When

¹¹⁷ MURRAY, *supra* note 1, at 21-22.

¹¹⁸ *Id.* at 22.

¹¹⁹ *Id.*

¹²⁰ *Id.*

¹²¹ MARGARET A. BLANCHARD, *REVOLUTIONARY SPARKS: FREEDOM OF EXPRESSION IN MODERN AMERICA* 87 (Oxford University Press 1992).

the country is at peace it is the legal right of free speech to oppose going to war. . . . But when once war is declared this right ceases.”¹²² Berger was convicted for expressing his opinion of the war, he had not engaged in any treasonous activities.¹²³

2. CHARLES T. SCHENCK

Charles T. Schenck was a Socialist who distributed unpopular information.¹²⁴ Schenck was the general secretary for the Socialist party.¹²⁵ As part of his duties, he printed and distributed approximately 15,000 leaflets discouraging enlistment in the armed forces.¹²⁶ One side of the leaflet quoted the Thirteenth Amendment of the Constitution, with the caption “Do not submit to intimidation.”¹²⁷ The leaflet confined itself to peaceful measures such as a petition for the repeal of the act.¹²⁸ The other side decried the conscription as invalid and urged those drafted to “Assert Your Rights.”¹²⁹ Schenck was tried and convicted for violating the Espionage Act.¹³⁰

The importance of this case lies in the Supreme Court’s decision on appeal. Justice Oliver W. Holmes, Jr. wrote for a unanimous court.¹³¹ He likened the distribution of this information to a man falsely shouting fire in a theatre and causing a panic.¹³² Justice Holmes wrote, “The

¹²² *Id.* at 88.

¹²³ MURRAY, *supra* note 1, at 22.

¹²⁴ *Id.* at 22-23.

¹²⁵ *Id.* at 22.

¹²⁶ *Id.*

¹²⁷ *Id.* at 23.

¹²⁸ *Schenck v. United States*, 249 U.S. 47, 51 (1919).

¹²⁹ MURRAY, *supra* note 1, at 23.

¹³⁰ *Id.*

¹³¹ *Schenck*, 249 U.S. at 47.

¹³² *Schenck*, 249 U.S. at 52.

question in every case is whether the words used are used in such circumstances and are of such a nature as to create a clear and present danger that they will bring about the substantive evils that Congress has a right to prevent."¹³³ The Court decided that in this case the words used, words which quoted the Constitution, presented a clear and present danger, and affirmed the conviction.¹³⁴

The Court had fundamentally undermined the First Amendment with this decision.¹³⁵ The Court used a "bad tendency" test for speech, and upheld a long jail sentence for someone urging people to exercise their constitutional rights.¹³⁶ Justice Holmes made the observation that First Amendment protections are not absolute, and imposed additional limitations during wartime.¹³⁷ This was the first era in which courts played a significant role in restricting freedom of expression.¹³⁸

B. SHAC 7

¹³³ *Id.*; Justice Holmes later reconsidered his stance in *Schenck* and dissented in *Abrams v. United States*, joined by Louis D. Brandeis. In his dissent, Justice Holmes called for a "free trade in ideas." He stated: "It is an experiment, as all life is an experiment. Every year if not every day we have to wager our salvation upon some prophecy based upon imperfect knowledge. While that experiment is part of our system I think that we should be eternally vigilant against attempts to check the expression of opinions that we loath and believe to be fraught with death, unless they so imminently threaten immediate interference with the lawful and pressing purposes of the law that an immediate check is required to save the country." FINAN, *supra* note 24, at 33

¹³⁴ *Schenck*, 249 U.S. at 53; MURRAY, *supra* note 2, at 23.

¹³⁵ FINAN, *supra* note 24, at 27.

¹³⁶ *Id.*

¹³⁷ *Id.* at 28.

¹³⁸ Murray & Wunsch, *supra* note 17, at 77.

Beginning in 1999, animal rights activists engaged in a direct action campaign against Huntingdon Life Sciences (HLS). HLS is a contract research laboratory. HLS is purported to kill 180,000 animals per year testing “pharmaceutical products, pesticides, industrial and other chemicals.” The international campaign was known as Stop Huntingdon Animal Cruelty (SHAC). HLS was targeted due to five undercover investigations. The investigations revealed animal cruelty and violations of the Animal Welfare Act. Video footage acquired during the investigations showed workers “punching beagle puppies in the face, dissecting live monkeys and falsifying scientific data.”¹³⁹

SHAC activists “utilized direct action tactics, the internet, an understanding of the legal system, and a singular focus on eliminating HLS as a primary representative of the evils of the vivisection industry.” Stop Huntingdon Animal Cruelty USA (SHAC USA) was the result of the campaign. SHAC USA was an incorporated organization whose purpose was “to provide information, distinct from the SHAC campaign in which activists participate in both legal and illegal forms of direct action.” SHAC USA operated a website providing information and support for protests against HLS and its business associates. The activists running the website, which was distinct from the direct action campaign, were raided and arrested by federal agents in May of 2004. The six activists, along with SHAC USA, are known as the SHAC 7.¹⁴⁰

¹³⁹ Goodman, *supra* note 5, at 839–40.

¹⁴⁰ Goodman, *supra* note 5, at 839–841; The SHAC 7 consists of: Kevin Kjonaas, Lauren Gazzola, Jacob Conroy, Darius Fullmer, Andrew Stepanian, and Joshua Harper. John McGee, a seventh activist, was also charged originally but was later dropped from the case. SHAC7.com, The Case,

The SHAC 7 were charged and indicted for conspiracy to violate the AEPA. The charges were based on the mere existence of the SHAC USA website. The activists responsible for the creation of the site did not advocate any direct action. The website actually included a disclaimer at the bottom of each page, which read: “[SHAC USA does] not advocate any form of violent activity, and in fact . . . urge[s] people that when they write letters or they send emails, that they're polite, they're to the point, they're not threatening in nature.”¹⁴¹

Federal prosecutors, failing to produce any evidence of direct action involvement, instead argued that the information contained on the website enabled activists to target affiliates of HLS and encouraged illegal direct action. In March of 2006, the SHAC 7 were found guilty on all counts. Each of the defendants was found guilty of “conspiracy to violate the Animal Enterprise Protection Act.” They became the first to be found guilty of animal enterprise terrorism. The sentences for the activists ranged from one to six years in federal prison. SHAC USA received five years probation and was ordered to pay \$1,000,001 in restitution to HLS. The individual defendants are responsible for the restitution payment.¹⁴²

C. FROM THE ESPIONAGE ACT TO SHAC

Victor Berger, Charles Schenck and the SHAC 7 all have something in common: they expressed an unpopular opinion in an intolerant legal system. They did not have a treasonous or terrorist

<http://www.shac7.com/case.htm> (last visited Feb. 16, 2009).

¹⁴¹ Goodman, *supra* note 5, at 841.

¹⁴² Goodman, *supra* note 5, at 842–43

intent. They were expressing an opinion, disseminating information, and showing the public the realities of different situations. These opinions, information and realities were disliked, however, by the government and the interests that too often infect the legal process.

The Socialist trials of the First Red Scare and the case of the SHAC 7 are frighteningly similar. Both cases concern forms of speech traditionally protected by the First Amendment. Both used speech that expressed an unpopular viewpoint; dissent from the status quo. Additionally, both cases demonstrate the influence of special interests behind the laws guiding the trials, and an overbroad interpretation of the laws by the judicial system.

Victor Berger was a pacifist who pushed for a peaceful path to Socialism.¹⁴³ He openly opposed anarchists and direct action campaigns.¹⁴⁴ The SHAC 7 likewise did not advocate any direct action.¹⁴⁵ The website they were convicted for maintaining included a disclaimer disavowing any violence and urging a peaceful, even polite, campaign.¹⁴⁶ Berger made the mistake of speaking ill of the wealthy during his time.¹⁴⁷ He spoke out about the profits the wealthy were making on the war.¹⁴⁸ The SHAC 7 posted videos and blogs of protest information concerning one of the largest suppliers of laboratory test

¹⁴³ MURRAY, *supra* note 1, at 21.

¹⁴⁴ *Id.* at 21-22.

¹⁴⁵ Goodman, *supra* note 5, at 841.

¹⁴⁶ *Id.*

¹⁴⁷ MURRAY, *supra* note 1, at 22.

¹⁴⁸ *Id.*

animals.¹⁴⁹ It was businesses such as these that pushed for animal terrorism laws in the first place in order to protect their profits.¹⁵⁰

Charles Schenck printed and distributed leaflets containing opinions on the legality of the draft, information about the draft, and information about people's rights with respect to the draft.¹⁵¹ The leaflet actually quoted the Thirteenth Amendment of the Constitution.¹⁵² Schenck confined the substance of the leaflet to peaceful measures such as petitions.¹⁵³ In a similar vein, the SHAC 7 disseminated information containing their opinion of the legality of HLS activities.¹⁵⁴ SHAC confined its suggested actions to peaceful measures such as letter writing campaigns.¹⁵⁵ Despite no direct action tactics and peaceful disclaimers, Schenck was found to be disseminating information that presented a clear and present danger to the country,¹⁵⁶ while the SHAC 7 were found to be disseminating information that encouraged illegal direct action.¹⁵⁷

The Espionage Act of 1917 was primarily directed at treason.¹⁵⁸ However, it was poorly constructed and broadly construed.¹⁵⁹ The trials of Berger and Schenck prove that in reality, it covered activity of a

¹⁴⁹ Goodman, *supra* note 5, at 840.

¹⁵⁰ *Id.* at 836.

¹⁵¹ MURRAY, *supra* note 1, at 22.

¹⁵² *Id.* at 23.

¹⁵³ *Schenck*, 249 U.S. at 51.

¹⁵⁴ Goodman, *supra* note 5, at 840.

¹⁵⁵ *Id.* at 841.

¹⁵⁶ MURRAY, *supra* note 1, at 23.

¹⁵⁷ Goodman, *supra* note 5, at 842.

¹⁵⁸ MURRAY, *supra* note 1, at 13.

¹⁵⁹ *Id.*

much less sinister character.¹⁶⁰ It was used to target speech the government, and public to a large extent, disagreed with.¹⁶¹ Similarly, the AEPA was primarily directed at terrorist activities.¹⁶² Its aim was to prohibit intentional physical disruption to the functioning of an animal enterprise.¹⁶³ As the case of the SHAC 7 demonstrates, however, the law was used to target mere speech on the subject of an animal enterprise. The SHAC 7 ran a website broadcasting information on the activities of protestors.¹⁶⁴ Much like Schenck, they were merely disseminating information. Although both laws were directed at specific criminal behavior, the courts broadly interpreted these laws to include unpopular speech.

IV. BIG BROTHER IS WATCHING: FROM COMMUNISM TO TERRORISM

While “Communist” was a label that would ruin lives during the Great American Red Scare, “terrorist” is a label used today to destroy lives. During the Great American Red Scare, laws were passed, lists were made, wiretaps conducted, and hearings were held all in the name of protecting the country from Communism. Today, laws have been passed, lists have been made, and wiretaps conducted all in the name of protecting the country from terrorism. We have not learned from history.

The FBI has played a significant role in monitoring both alleged Communists and supposed terrorists. The FBI conducted wiretaps of

¹⁶⁰ See discussion *supra* Sections I.A.1-2.

¹⁶¹ See discussion *supra* Sections I.A.1-2.

¹⁶² Goodman, *supra* note 5, at 836.

¹⁶³ 18 U.S.C. § 43(a) (1992).

¹⁶⁴ Goodman, *supra* note 5, at 840-843.

supposed subversives during the Great American Red Scare.¹⁶⁵ The scope of the wiretapping was broad, as it was not restricted by a “reasons of national defense” requirement.¹⁶⁶ Today, the FBI has been given authority to wiretap citizens under provisions of the Patriot Act.¹⁶⁷ Among the many other interceptions allowed, the FBI has been authorized to intercept communications relating to animal enterprise terrorism.¹⁶⁸ As discussed, the AETA, which defines animal enterprise terrorism, can be so broadly construed that this may include perfectly legal activities such as boycotts, protests, and dissemination of information.¹⁶⁹

A list of subversive groups seems to be consistent throughout both the Great American Red Scare and the Green Scare of today. During the Great American Red Scare, the Attorney General kept a list of organizations he deemed subversive.¹⁷⁰ Anyone, who at any time in his or her life had belonged to any of the organizations on the list, or knew or was related to anyone belonging to any of them, was subjected to scrutiny.¹⁷¹ Today, the FBI keeps a list of persons and organizations “who are known or appropriately suspected to be or have been engaged in conduct constituting, in preparation for, in aid of, or related to terrorism.”¹⁷² Loyalty review boards focused on the Communists or

¹⁶⁵ FRIED, *supra* note 3, at 19.

¹⁶⁶ *Id.*

¹⁶⁷ Patriot Act of 2001, Pub. L. No. 107-56, 115 Stat. 272 (2001).

¹⁶⁸ 18 U.S.C. § 2516(1)(c).

¹⁶⁹ See Section II (B) *supra*.

¹⁷⁰ FRIED, *supra* note 3, at 4.

¹⁷¹ *Id.*

¹⁷² Federal Bureau of Investigation, Terrorist Screening Center,

Socialists on the Attorney General's list.¹⁷³ Today, the FBI has chosen to focus on animal rights and environmental activists, despite a history of non-violence toward people.¹⁷⁴ FBI Deputy Assistant Director John Lewis has declared the environmental and animal rights movements to be the number one domestic terror threat to the United States.¹⁷⁵ Unpopular opinions have been targeted in both eras.

<http://www.fbi.gov/terrorism/counterterrorism/faqs.htm> (last visited Feb. 17, 2009).

¹⁷³ FRIED, *supra* note 3, at 4.

¹⁷⁴ Johnson, *supra* note 4, at 263. While a few animal rights extremists have used violent tactics involving property damage, there has never been any loss of life due to the movement (unlike conservative extremists such as anti-abortion activists). Those lobbying for the AETA presented the legislation "as necessary to protect against a threat comparable to that of al-Qaeda" despite acknowledgment by the FBI that successful prosecutions under existing criminal laws had achieved effective deterrence. Johnson, *supra* note 4, at 265.

The Animal Liberation Front (ALF), a militant animal rights group, is considered the "most representative of the threat from domestic terrorism directed toward animal enterprises" by the FBI. The ALF doctrine states that "no person may be killed or seriously injured in the pursuit of fulfilling a mission." Johnson, *supra* note 4, at 265. Specifically, the ALF credo states "It is a nonviolent campaign, activists taking all precautions not to harm any animal (human or otherwise)" while the ALF guidelines state "T[o] inflict economic damage to those who profit from the misery and exploitation of animals. . . . T[o] take all necessary precautions against harming any animal, human and non-human." The ALF Credo and Guidelines, http://www.animalliberationfront.com/ALFront/alf_credo.htm (last visited June 29, 2009).

¹⁷⁵ Tricia Engelhardt, *Foiling the Man in the Ski Mask Holding a Bunny Rabbit: Putting a Stop to Radical Animal Activism with Animal and Ecological Terrorism Bills*, 28 WHITTIER L. REV. 1041, 1041 (2007).

Being labeled with an unpopular identity that has grave legal and social consequences frightens many otherwise politically active individuals into silence. The HUAC hearings instilled a fear of being labeled a Communist or Communist sympathizer.¹⁷⁶ The atmosphere and the congressional investigations at the time scared many who opposed or disagreed into silence.¹⁷⁷ Being labeled a Communist meant losing one's job, becoming a social pariah, and facing possible prosecution.¹⁷⁸

Today, animal rights activists fear being labeled a terrorist under the AETA.¹⁷⁹ Peaceful animal rights supporters fear the consequences that accompany the label, such as loss of social status, intrusive monitoring by the FBI, and possible legal action under the AETA.¹⁸⁰ As in the Great American Red Scare, this fear has had a chilling effect on the political and free speech activities of law-abiding citizens.¹⁸¹ The result in both eras has been an atmosphere of chilled free speech. As Socialists feared the label "Communist" and the consequences that accompanied it, so, too, do the animal rights activists of today fear being labeled a "terrorist."

V. CONSTITUTIONAL CHALLENGES TO THE AETA

Many individuals and groups concerned about the AETA have suggested a constitutional challenge to the Act.¹⁸² While there are

¹⁷⁶ Christina E. Wells, *Fear And Loathing In Constitutional Decision-Making*, 2005 WIS. L. REV. 115, 132 (2005).

¹⁷⁷ *Id.*

¹⁷⁸ FRIED, *supra* note 3, at 4, 15.

¹⁷⁹ Johnson, *supra* note 4, at 250.

¹⁸⁰ *Id.*

¹⁸¹ Goodman, *supra* note 5, at 848.

¹⁸² See McCoy, *supra* note 83.

definite constitutional concerns, the Act as amended in 2006 will be much harder to challenge. Courts are reluctant to find a law unconstitutional if it can be construed constitutionally. The disclaimer included in the AETA will make it very difficult to convince the courts to strike the Act down.¹⁸³ It is worth noting the two bases for challenge that could be most effective.

A. VAGUENESS

A statute is unconstitutional if it “fails to specify a standard of conduct, such that men of common intelligence must necessarily guess at its meaning.”¹⁸⁴ The public must be given fair warning and a precise description of what conduct is prohibited.¹⁸⁵

The AETA is vague for several reasons. First, the AETA does not define the word “interfere.”¹⁸⁶ Instead of the vague “interference,” actual “physical disruption” was criminalized under the AETA.¹⁸⁷ However, the AETA expanded the scope of the law, making it unlawful

¹⁸³ 18 U.S.C. § 43(e)(2006) (“Nothing in this section shall be construed—(1) to prohibit any expressive conduct (including peaceful picketing or other peaceful demonstration) protected from legal prohibition by the First Amendment to the Constitution; (2) to create new remedies for interference with activities protected by the free speech or free exercise clauses of the First Amendment to the Constitution, regardless of the point of view expressed, or to limit any existing legal remedies for such interference.”)

¹⁸⁴ McCoy, *supra* note 83, at 60.

¹⁸⁵ *Id.* at 61.

¹⁸⁶ 18 U.S.C. § 43(a) (2006) (“Whoever travels in interstate or foreign commerce, or uses or causes to be used the mail or any facility of interstate or foreign commerce— (1) for the purpose of damaging or interfering with the operations of an animal enterprise;”).

¹⁸⁷ 18 U.S.C. § 43 (1992).

to “interfere” with an animal enterprise.¹⁸⁸ Without some clarification, it is difficult for a reasonable person to understand what conduct is prohibited.¹⁸⁹ Second, the term “property” is also not defined.¹⁹⁰ Without specifying “real or personal property” as “tangible” property, the law could be used to prosecute based on intangibles, such as lost profits or loss of business good will.¹⁹¹ These losses are the very goal of traditional, peaceful forms of activism such as boycotts, protests, demonstrations, undercover investigations and whistle blowing.¹⁹² The vague construction of the AETA creates an opportunity for arbitrary and discriminatory enforcement.¹⁹³

B. CONTENT AND VIEWPOINT BASIS

“If there is a bedrock principle underlying the First Amendment, it is that the government may not prohibit the expression of an idea simply because society finds the idea offensive or disagreeable.”¹⁹⁴ The First Amendment prohibits the government regulation of speech if restriction is based on the speaker's "ideology[,] opinion or

¹⁸⁸ McCoy, *supra* note 83, at 61; 18 U.S.C. § 43 (2006).

¹⁸⁹ McCoy, *supra* note 83, at 61.

¹⁹⁰ 18 U.S.C. § 43(a)(2) (“in connection with such purpose—
(A) intentionally damages or causes the loss of any real or personal property (including animals or records) used by an animal enterprise, or any real or personal property of a person or entity having a connection to, relationship with, or transactions with an animal enterprise.”).

¹⁹¹ McCoy, *supra* note 83, at 61.

¹⁹² *Id.*

¹⁹³ *Id.*

¹⁹⁴ *Id.* at 63.

perspective.”¹⁹⁵ The AETA “singles out animal advocates based upon their ideology and seeks to suppress a particular point of view.”¹⁹⁶

Branding the proponents of a certain viewpoint as terrorists is the single most effective way to stifle the dissent and eliminate the viewpoint from the marketplace.¹⁹⁷ Perpetrators of far more serious and dangerous crimes are not subjected to punishments as severe as those in the AETA.¹⁹⁸ Perpetrators of hate crimes and abortion clinic bombings have not been subjected to the terrorist label or the enhanced punishments that accompany it.¹⁹⁹ In fact, perpetrators of hate crimes have actually been protected from laws based on viewpoint.²⁰⁰

For legislation to be constitutionally valid, it must examine the criminality of the act and not the motivation behind it.²⁰¹ Each offense included in the AETA was already an established crime.²⁰² The AETA only adds a focus on the ideologies motivating the crimes and special protections for animal enterprises.²⁰³ The AETA is content and viewpoint based, and thus violates the First Amendment.²⁰⁴

¹⁹⁵ *Id.*

¹⁹⁶ *Id.*

¹⁹⁷ *Id.* at 64.

¹⁹⁸ *Id.*

¹⁹⁹ McCoy, *supra* note 83, at 64.

²⁰⁰ *Id.* at 64-65. “In *R.A.V. v. City of St. Paul, Minnesota*, the Supreme Court found a local hate crime ordinance facially invalid on the basis of content discrimination.” McCoy, *supra* note 83, at 65.

²⁰¹ McCoy, *supra* note 83, at 65.

²⁰² *Id.*

²⁰³ *Id.*

²⁰⁴ *Id.*

VI. THE DEVIL'S COMPROMISE: REWORKING THE EXISTING ACT

While the ideal situation would be a repeal of the Act, it is unlikely that anything short of the McCarthy hearings will accomplish that goal. A rewording of the existing Act, however, may alleviate some of the concerns. While amendments to the Act may solve some of the legal issues concerned, they are unlikely to solve the social ones.

The AETA should be amended and changed as the ACLU suggested to the House Judiciary Committee. The AETA should define "real or personal property" as "tangible" property to avoid penalizing legitimate and otherwise legal activity that results in lost profits.²⁰⁵ Tangible property is defined as "[p]roperty that has physical form and characteristics,"²⁰⁶ whereas intangible property is defined as "[p]roperty that lacks a physical existence. Examples include . . . business goodwill."²⁰⁷ Leaving "real or personal property" undefined within the act creates the possibility that prosecutions for things such as loss of business goodwill or profit may occur. Again, these are the very things that legal, constitutionally protected activities such as boycotts and protests are meant to affect.

The provision imposing a penalty for actions not causing any reasonable fear of bodily harm, any actual bodily injury, or economic damage should only be applied to conspiracies or attempted violations the Act.²⁰⁸

²⁰⁵ Goodman, *supra* note 5, at 846-847.

²⁰⁶ BLACK'S LAW DICTIONARY 1254 (8th ed. 2004).

²⁰⁷ *Id.* at 1253.

²⁰⁸ Goodman, *supra* note 5, at 847.

Additionally, section (a)(1) of the Act should be amended. Currently, this section reads: “Whoever travels in interstate or foreign commerce, or uses or causes to be used the mail or any facility of interstate or foreign commerce— (1) for the purpose of damaging or interfering with the operations of an animal enterprise[.]”²⁰⁹ This section should be amended to read: “Whoever travels in interstate or foreign commerce, or uses or causes to be used the mail or any facility of interstate or foreign commerce— (1) for the purpose of causing physical damage to the property of an animal enterprise.” This change will eliminate the ambiguity and vagueness of the term “interfere.” A prohibition of physical damage to property, defined as tangible property, properly puts the public on notice of what behavior is criminalized. This change will also eliminate free speech concerns, as it requires actual physical damage to property for a violation.

VII. CONCLUSION

We must wait to see if the hunt for “terrorists” will turn out as terrifying as the hunt for “reds.” As history seems to be on a course of repetition, we must hope the next stop is not hearings to ferret out animal rights sympathizers. We, as citizens, must not let the fear of the label quiet our voices and chill our speech. Our democracy was founded on the principle of free speech and a government by the people, not over the people. We must ensure that the fear of terrorism does not give the government free reign to subvert ideals that are unpopular or adverse to the status quo. We must lobby our legislators for a change in the law. Dissent is patriotic.

²⁰⁹ 18 U.S.C. § 43(a)(1) (2006).

Let There Be Beer

Adam Watson*

The precise origins of beer are a mystery long lost to time, but its prominence in human history is undeniable. Early grain-based cultures found their lives enriched by the invention of beer as it allowed them to concentrate grain-wealth, sanitize drinking water, and improve their social and religious ceremonies.¹ American poet John Ciardi even went so far as to proclaim that “fermentation and civilization are inseparable.”² While the definition of beer is dynamic and its recipes wildly diverse, there is one ingredient that beer simply cannot do without: water. As the American brewing industry continues to make a strong showing second only to China in the ever growing global beer market,³ the demand for adequate water supplies also grows. In the context of increasing household and industrial water demands, widespread drought, pollution concerns, and allocation conflicts in the eastern United States, an understanding of the water needs and responsibilities of eastern American breweries is necessary to maintain an adequate supply of beer.

I. INTRODUCTION

There is no liquid more vital to the genesis and sustenance of life on Earth than water. This is a biological matter of little dispute.

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¹ TOM STANDAGE, A HISTORY OF THE WORLD IN SIX GLASSES 18–19, 22, 35 (Walker and Company 2005).

² *Id.* at 9.

³ Research and Markets, *Beer in China 2008: A Market Analysis*, “Summary”

http://www.researchandmarkets.com/reportinfo.asp?report_id=652011&t=e&cat_id= (last visited November 8, 2008).

Humankind has never been satisfied with mere life, though. In order to flourish, mankind needed civilization, and for civilization, mankind needed beer. The Sumerians, Earth's oldest known culture, even laid down in the *Epic of Gilgamesh* that drinking beer, along with eating food and bathing, was a vital step in the transformation of Enkidu from wild man to human.⁴

Just as water is vital to biological organisms in order to sustain life, it is vital to nearly every business. Some industries rely on water in a much more central fashion than others, but none can operate entirely without it.⁵ The industry of beer brewing is highly dependent on a steady supply of water in great quantities and of certain qualities. This is of particular importance to the American brewing industry, which led the world in beer production and is now second only to China's exploding beer market.⁶ By 1972, the United States had reached production levels roughly equaling the production of that year's second and third largest beer producers combined by producing 131,800,000 barrels of beer.⁷ In 2008, the United States sold a staggering 210,619,000 barrels of beer.⁸ With the industry standard of thirty-one gallons to a barrel,⁹ that comes to over six and a half *billion* gallons.

⁴ THE EPIC OF GILGAMESH 14 (Andrew George trans., Penguin Books 2000).

⁵ Bill Staudenmaier, *Water and the Law: A Guide to What Matters*, 15 APR BUS. L. TODAY 13–14 (2006).

⁶ Research and Markets, *supra* note 3.

⁷ JOHN PORTER, ALL ABOUT BEER 89 (Doubleday and Co. 1975).

⁸ *Craft Brewing Statistics*, Brewers Association, <http://www.beertown.org/craftbrewing/statistics.html>, (last visited July 13, 2009).

⁹ *Id.*

Beer obviously plays a major role in the American economy; approximately \$101 billion worth of product was sold in 2008.¹⁰ However, this economic activity is not without its price, as the brewing industry requires equally staggering quantities of water to sustain its operations, and that water must fit certain quality standards. The destinies of water and beer are intertwined; tensions about their respective uses in relation to one another have been known to blossom into outright disputes.

One of the most famous documented water/beer disputes was between Arthur Guinness and the Dublin City Corporation in 1775. Following claims that the lease to the St. James's Gate Brewery did not include water rights, the sheriff and a handful of interested parties attempted to physically shut off Guinness's water supply, only to be met by an angry, pick-wielding Arthur Guinness who threatened to re-dig any channel they shut off. The sheriff allowed the court to settle the situation by fixing a reasonable fee on Guinness's water use.¹¹ While Guinness's story may be more amusing than directly relevant to current practices in the United States, the situation in the United States is no less dire.

A problematic blend of increasing demand and recurring shortages have struck the traditionally water-rich eastern United States causing heightened conflicts over water allocation. If beer and water use are going to continue to exist in relative harmony, the relationship between the two must be more deeply understood. Breweries require

¹⁰ *Id.*

¹¹ BILL YENNE, *GUINNESS: THE 250-YEAR QUEST FOR THE PERFECT PINT* 19–20 (John Wiley and Sons, Inc. 2007).

certain quantities and qualities of water to continue their valuable business. They also have a responsibility to understand the quantity and quality of their outgoing wastewater and to take steps to ensure that their negative impacts are minimal.

While there are roles for policymakers and average citizens in the formulation and implementation of effective water management techniques in breweries, it is the owners and operators of the breweries themselves who must shoulder the bulk of the adaptation that is necessary for the eastern United States brewing industry to survive and thrive in a future where water can no longer be regarded as infinite. In the United States, breweries, like many other water users, can no longer take unlimited usage for granted in the face of modern water issues.¹² The breweries that will be most successful at this adaptation will be the ones that understand the problems and incorporate the lessons to be learned from the policies and techniques of those U.S breweries that are already reducing their negative impacts on water issues. Such policies and techniques can and should be used to reduce water demand, boost water use efficiency, reduce wastewater quantity, improve wastewater quality, and in some situations, even provide extra streams of income for breweries. Breweries that most effectively reduce their water needs and minimize or eliminate their negative impacts will be best situated for success as water conflict continues to escalate in the eastern United States.

Section II of this paper will outline the basic process of water use in a brewery from input as source water to output as product and

¹² Robert Glennon, *Water Scarcity, Marketing, and Privatization*, 83 Tex L. Rev. 1873, 1873 (2005).

waste. Section III will analyze issues of water intake with separate subsections for sources of water as well as concerns about influent quantity and quality. This section will also address some suggestions for managing intake policies and reducing demand in breweries. Section IV will focus on issues of output, including methods of disposal and problems generated by brewery effluent. Discussion of these output issues concludes with suggestions for improving brewery wastewater management policies and techniques with a special emphasis on innovative techniques already in place in many American breweries.

II. THE LIFE OF WATER IN A BREWERY¹³

The bulk of water in a brewery can be categorized in three separate ways based on use: liquor, process water, and cleaning water. Liquor is an industry term for the water used as an actual ingredient in the beer, process water is used to enact some change on the liquor and is frequently a coolant, and cleaning water is used to clean the brewing equipment.

The brewing process can vary greatly based on the training of the brewer and the style of beer being brewed. Different styles call for different details but the basic process is the same in any American brewery. Liquor is sometimes treated as a first step but that will be

¹³ For a more detailed discussion, see J.S. HOUGH, D.E. BRIGGS & R. STEVENS, *MALTING AND BREWING SCIENCE* 3–9 (Chapman and Hall, Ltd. 1971); Bluegrass Brewing Co., *Our Beer*, "The Basic Brewing Process," <http://www.bbcbrew.com/ontap.php> (last visited Dec. 11, 2008); wikiHow, *How to Brew Commercial Beer*, "Making the Beer," <http://www.wikihow.com/Brew-Commercial-Beer> (last visited Dec. 11, 2008).

discussed in a later section. Liquor is then heated and steeped with grains and drained as sugar-rich water known as wort or sweet-wort. The wort is transferred into a boil kettle where it is heated to a boil and combined with hops and any other additives or adjuncts. A great deal of evaporation can occur during the boil. After boiling, the wort is cooled and moved to a fermenting vessel where live yeast is pitched, or added, to it. Left behind in the boil kettle is a waste substance known as trub that is composed of the loose hops, grain particles, precipitated proteins, and a number of other solids that can collect at the bottom of the tank. After fermentation, the wort officially becomes beer and is aged and conditioned either in another storage tank or directly in the keg or bottle. If any filtration is performed, it is generally done between fermentation and kegging or bottling. Fermentation leaves behind a substance called floc that is composed of precipitated yeast cells and any trub that was not left in the boil kettle.

Cooling large quantities of boiling wort to pitching temperature would take a prohibitively long time without some sort of active cooling process. Most breweries use process water, which is sometimes prechilled in a refrigerator, in a process called counterflow chilling. A counterflow chiller is comprised of a thermally conductive manifold in contact with a second thermally conductive manifold. The boiling wort is passed through one manifold while the process water is passed in the opposite direction through the other manifold. This allows rapid cooling based on very high surface contact without compromising the sanitation of the wort. Cleaning water is then used in a variety of ways to clean all tanks, pipes, pumps, and other equipment in the brewery. Cleaning water can carry with it a variety of cleaning agents, as well as

trub, unwanted floc, and any other substance left behind on the equipment. Any water that did not evaporate along the way then leaves the brewery either as wastewater or as beer.

III. INTAKE ISSUES

A. SOURCES OF BREWERY WATER

Historically, all industries that required large quantities of water had to be located somewhere with direct access to a water supply. Breweries were no exception. Areas such as the Great Lakes region, famous for its beer production, achieved success and notoriety in large part because of their ready access to acceptable quantities of suitable water.¹⁴ As industry grew, particularly in the eastern United States, so did the number of ways that industries, including breweries, received their water. While breweries located on riparian land are, like any other riparian landowner, allowed access to water based on the riparian laws of their jurisdiction, some breweries rely on municipal sources to meet their water needs.¹⁵

One brand that recently made the switch from self-collected water to municipally supplied water is Rolling Rock. In 2006, Anheuser-

¹⁴ Audio: *The Science of Making Great Beer* (National Public Radio broadcast May 16, 2008), available at <http://www.npr.org/templates/story/story.php?storyId=90517078>.

¹⁵ Kevin G. DeMarrais, *Drinking It All In: Pennsylvania Town Loses Rolling Rock to Newark*, NEW JERSEY RECORD, June 14, 2006, at B01; Ron DaParma, *\$2.3M Sewer Bill on Tap for Brewer*, PITTSBURGH TRIBUNE REVIEW, Apr. 28, 2005, available at http://www.pittsburghlive.com/x/pittsburghtrib/s_328748.html; *Brewery Brings Big Thirst to the Banks of the Etowah*, ATLANTA JOURNAL & CONSTITUTION, Apr. 18, 1993, at C4; Peter Panepento, *Beermaker Faces Fluoride's Bitter Taste*, ERIE TIMES-NEWS, Oct. 27, 2002, at 1.

Busch Inc. bought Rolling Rock's producer, the Latrobe Brewing Co., closed the original plant, and moved production to its Newark, New Jersey facility. At this facility, Rolling Rock is made with water from the Wanaque Reservoir which is supplied by the North Jersey Water District Supply Commission.¹⁶ Anheuser-Busch was able to preserve the flavor of Rolling Rock by treating the water used in its production to resemble the water used by Latrobe.¹⁷ Not surprisingly, some brewers claim that the particular water supply to their brewery is a vital element in the flavor of their beer.¹⁸ As particular water supplies grow scarce, breweries will have to be flexible in their demands in order to adapt to the water available to them.

B. CONCERNS ABOUT INCOMING WATER

i. INFLUENT QUANTITY

The issue of water quantity has not been historically problematic in the relatively water-rich eastern United States.¹⁹ Industries that needed water were mainly limited by the specific riparian laws that governed their state. Most states tempered riparian rights with somewhat elastic "reasonable use" principles, which limited riparian use.²⁰ Lately, however, more attention has been paid to water

¹⁶ DeMarrais, *supra* note 15.

¹⁷ *Id.*

¹⁸ See e.g. *Copper Dragon Flying Higher*, YORKSHIRE POST, Mar. 4, 2008 (Copper Dragon managing director Steve Taylor on Embsay Reservoir water); Simone Wilson, *The Beer Flows*, MEMPHIS FLYER, Aug. 7, 2008, at 42 (Ghost River Brewing founder Chuck Skyepeck on Memphis Sands Aquifer water).

¹⁹ Kristin Choo, *Gulp: Litigation won't end the Battles over Depleted Water Resources in Several Regions of the Unites States*, 94 A.B.A. J. 56, 60 (2008).

²⁰ DAVID H GETCHES, *WATER LAW IN A NUTSHELL* 4 (3d ed. West 1997).

quantities in the eastern United States. A combination of drought and increasing population has forced the reevaluation of a policy that allows riparian landowners to simply use what they will so long as the use is reasonable.²¹ As water becomes scarcer, some businesses that rely only tangentially on water may be slightly inconvenienced, but breweries will be utterly crippled without sufficient quantities of water.²² In order to effectively approach any allocation plan involving breweries, the quantities of water needed to brew must first be understood.

Breweries can vary greatly in size and, thus, in water consumption. Some breweries start small, such as the Oregon Trail Brewery, which produced only 300–400 barrels per year in its first years of operation.²³ Others, such as the Anheuser-Busch brewery in St. Louis have an annual capacity of 15.8 million barrels.²⁴ Product output, though, only measures the quantity of liquor that makes it through the brewing process to become beer, thus it is only a rough indicator of the total quantity of water used. Additional water is lost to evaporation, and some quantity is used as process water and cleaning water. Nalco, a global water treatment company, estimates that breweries use about

²¹ Choo, *supra* note 19, at 60.

²² *Id.*

²³ Glenn Tinseth, *Oregon Trail Brewery--Creative Problem Solving Revives a Brewery*, Oregon Trail Brewery, <http://www.oregontrailbrewery.com/history/> (last visited November 8, 2008).

²⁴ Anheuser-Busch Companies, Inc., *Anheuser-Busch - Community - Diversity*, <http://www.anheuser-busch.com/breweryMO.html> (last visited November 8, 2008).

60% of their water for washing, cleaning, and sanitizing.²⁵ Evaporated liquor and process water can vary greatly depending on the equipment and circumstances of the brewing, but the amount is certainly not negligible. In fact, Pittsburgh Brewing once claimed that the Pittsburgh Water and Sewer Authority overcharged it by \$1.4 million between 1996 and 2005 for treatment of wastewater that Pittsburgh Brewing said it lost to evaporation rather than the sewage system.²⁶ A slightly more simplistic calculation can be derived from the usage of the Anheuser-Busch Cartersville, Georgia brewery, which has the capacity of using about 5.6 million gallons of water per day to produce 1.6 million gallons of beer.²⁷ That is a total demand of 3.5 times the output. That may be a good rule of thumb, but the real lesson from all these varying numbers is that any water use plan that involves a brewery must consider the specific needs of that brewery in order to properly account for it.

ii. INFLUENT QUALITY

After sufficient quantities are achieved, the next concern about water coming into a brewery is quality. The necessary quality for process and cleaning water is obviously lower than that necessary for liquor. Due to the fact that most breweries rely on a single source for all their water, this section will focus on the quality needs for liquor. A convenient baseline standard is that any water of sufficient quality to drink will make beer of sufficient quality to drink. Therefore, as long as

²⁵ Nancy Seewald, *Water Treatment: Squeezing out More from Less*, 167 CHEM. WK. 19, 21 (2005).

²⁶ DaParma, *supra* note 15.

²⁷ *Brewery Brings Big Thirst to the Banks of the Etowah*, ATLANTA JOURNAL & CONSTITUTION, Apr. 18, 1993, at C4.

the incoming water meets the guidelines mandated in the Safe Drinking Water Act,²⁸ the resulting beer will be safe to drink as long as there is no catastrophic flaw in the brewing process itself. Breweries acquiring their water from municipal systems in some jurisdictions have the additional protection of case law which demands that the public, including breweries, be provided with water that is reasonably pure and wholesome²⁹ or that reasonable care, vigilance, or prudence is taken by the municipal provider to ensure the water it provides is pure.³⁰ In fact, the brewing process generally makes water safer due to the sustained boil, the production of alcohol, and the addition of hops, which has natural antimicrobial properties.³¹ Even before humankind came to understand modern microbiology, people discovered that boiled drinks such as beer were safer to drink than possibly contaminated communal water sources.³²

Making potable beer, however, is rarely the aspiration of any respectable brewery. A brewery can only sell its beer if it meets certain taste standards. Thus, “quality water is the key to quality beer.”³³ Once potability is achieved, the remaining quality concerns of a

²⁸ 42 U.S.C.A. §§ 300(f) *et seq.* (1996).

²⁹ *Seiden v. Passaic Valley Water Comm’n*, 199 A. 420, 422 (Dist. Ct. N.J. 1938); *Canavan v. City of Mechanicville*, 128 N.E. 882, 882 (N.Y. 1920).

³⁰ *Boguski v. City of Winooski*, 187 A. 808, 812 (Vt. 1936); *Hamilton v. Madison Water Co.*, 100 A. 659, 663 (Me. 1917); *see City of Salem v. Harding*, 169 N.E. 457, 460 (Ohio 1929).

³¹ NPR Talk of the Nation, *supra* note 14.

³² *Standage*, *supra* note 1, at 21-22.

³³ Debra Lynn Vial, *A Toast to Saving Highlands Water*, N. J. RECORD, Apr. 1, 2004, at A1.

brewery can be divided into things it wants to keep out of the water and things it wants to have in the water. Two common additives that can negatively affect the taste of beer are fluoride and chloramine. Fluoride is commonly added to municipal water systems for dental reasons, because it helps prevent cavity formation if taken steadily in very low doses. Even in small doses, however, fluoride can adversely affect the flavor of beer by imparting a slight bitter taste.³⁴ In some styles, this slight flavor may be overpowered by other flavors, but more subtle beers may be significantly affected by fluoride concentrations. Chloramine is a water treatment additive, which is a mixture of chlorine and ammonia intended to disinfect treated water for a longer period of time than basic chlorine.³⁵ While basic chlorine can simply be boiled off in the brewing process, chloramine remains in solution and, according to Paul Gatza of the Institute for Brewing Studies in Boulder, Colorado, imparts a plastic taste to the finished product.³⁶ Even basic chlorine can present problems. If chlorine concentrations are too high, stainless steel, a common material in breweries, corrodes in some chlorinated waters.³⁷

The next step in analyzing the quality of brewing water concerns the presence of desirable substances. As water flows through and over natural geological formations, it can pick up quantities of various

³⁴ Peter Panepento, *Fluoride in Water Leaves Bitter Taste for Erie, Pa., Brewery*, ERIE TIMES-NEWS, Oct. 27, 2002.

³⁵ Joe Malinconico, *Amid the Drought, Newark Brewer Taps into New Water Supply*, THE STAR-LEDGER (Newark, N.J.), Mar. 8, 2002, at 1.

³⁶ *Id.*

³⁷ J.S. HOUGH, D.E. BRIGGS & R. STEVENS, *MALTING AND BREWING SCIENCE* 191 (Chapman and Hall, Ltd. 1971).

minerals that take the form of dissolved salts.³⁸ The presence of certain salt ions such as sodium, chloride, sulfate, calcium, and magnesium as well as mineral effects on water's pH, or acidity, are of particular concern to breweries.³⁹ One brewing text details the plethora of effects these minerals can have:

[T]he kind of salts and their individual concentrations have a profound effect upon the brewing process. In mashing, enzyme activity and stability is influenced and therefore the yield extract. At the same time, the pH level and concentration of phosphates in the mash and derived wort are strongly affected by particular salts. Extraction of hop-bitter substances and precipitation of tannins and proteins are influenced by both the pH level of the wort and the concentration of salts. Fermentation and growth of the yeast may be enhanced or inhibited.⁴⁰

Some breweries, such as the Copper Dragon Brewery in England, want a certain mineral profile. These breweries therefore prioritize remaining on the same water supply to maintain their historic flavor.⁴¹ Other breweries, such as Ghost River Brewing in Memphis, Tennessee, prefer a soft, or low mineral content, water supply in order to provide a blank slate from which to build their own mineral profile.⁴² By understanding these desirable and undesirable additives, policymakers can more

³⁸ *Id.* at 170-171.

³⁹ STEPHEN SNYDER, *THE BREWMASTER'S BIBLE* 88 (HarperPerennial 1997).

⁴⁰ Hough, *supra* note 37, at 191.

⁴¹ *Copper Dragon Flying Higher*, *Yorkshire Post* (Mar. 4, 2008).

⁴² Simone Wilson, *The Beer Flows*, *Memphis Flyer* 42 (Aug. 7, 2008).

adequately account for the needs of breweries when formulating adaptive water management plans that may affect those breweries.

C. SUGGESTIONS FOR MANAGING INTAKE WATER

i. WHAT A BREWERY CAN DO

If a brewery is to maintain a sufficient supply of incoming water for its unique needs, it cannot be complacent about quantity and quality. Breweries must be proactive in attending to their use of water in such a way that those breweries remain more of a benefit than a burden in the eastern United States. Three things a brewery can do with regards to its intake of water are to reduce its consumption, enact programs that will offset its consumption, and treat its own incoming water rather than relying on others to do so.

Just as any other finite resource must have its consumption reduced when scarcity rears its head, so must water consumption by breweries that use a large quantity of it. There are a number of strategies currently employed by breweries to conserve water, however, the list of current techniques is by no means exhaustive of possible future techniques. The most common sense techniques are simply to make sure that equipment is well maintained so as to be free of leaks and to turn off water supplies when not in use. Breweries could also reuse some of the water they take in. Obviously liquor cannot be reused because it becomes the final product, but process water and cleaning water can be reused under certain conditions. Process water used for cooling, for example, can be reused to spray down dirty equipment or even to become the liquor for the next batch

since it is already pre-heated.⁴³ Cleaning water should be used to rinse several surfaces before it is put down the drain. Treating and recycling this water, along with efficient use of cleaning agents and techniques, can also reduce the amount of cleaning water used.⁴⁴ Many breweries will do these things simply because it saves them money, but it will also help them to adapt to water use plans that require less industrial intake.

Additionally, breweries could engage in voluntary water audits. These may be cost-prohibitive for some smaller breweries, but the larger breweries would almost certainly benefit from them. A water audit is a process by which a team of water lawyers and technical analysts survey the supplies, needs, and options that a business has in order to find creative methods and solutions that will help conserve water, boost efficiency of water use, and secure additional or alternate supplies.⁴⁵ Staudenmaier suggests that many western United States businesses would benefit by incorporating water audits into their planning,⁴⁶ but perhaps those in the East, especially those as water-reliant as breweries, could benefit from them as well.

In addition to reducing their total consumption, breweries can offset some of their consumption by participating to some degree in the preservation or restoration of the watershed from which they draw their water. Two of America's biggest brewing companies, Anheuser-

⁴³ See wikiHow, *How to Brew Commercial Beer*, "Making the Beer," <http://www.wikihow.com/Brew-Commercial-Beer> (last visited December 11, 2008).

⁴⁴ Seewald, *supra* note 25.

⁴⁵ Staudenmaier, *supra* note 5, at 16-17.

⁴⁶ *Id.* at 17.

Busch and MillerCoors, have information on their websites concerning their community involvement in the field of watershed conservation and restoration. Anheuser-Busch lists fifteen separate groups with whom it partners in conservation efforts ranging from wetlands preservation with Ducks Unlimited to environmental education grants through the Anheuser-Busch-owned SeaWorld.⁴⁷ They also tout their Anheuser-Busch Water Council, which was created in 2002, as a team of water specialists from different sections of the company who monitor water related issues and set water related objectives for various areas of the company.⁴⁸ MillerCoors has comparable information on its website describing its watershed conservation measures to reduce its daily impact and its more stringent water use and reuse policies.⁴⁹

Smaller breweries with fewer financial resources are also doing their part to preserve and restore the waters on which they rely. The New Belgium Brewing Company has crafted a detailed scheme of environmental consciousness and conservation, which includes a

⁴⁷ Anheuser-Busch Companies, Inc., *Anheuser-Busch - Environment - Wildlife and Habitat*, <http://www.ourpledge.com/Environment/WildlifeandHabitat.html> (last visited Nov. 8, 2008).

⁴⁸ Anheuser-Busch Companies, Inc., *Anheuser-Busch - Environment - Water Conservation - AB Water Council*, <http://www.ourpledge.com/Environment/ABWaterCouncil.html> (last visited (Nov. 8, 2008)).

⁴⁹ MillerCoors LLC, *Water Use and Preservation - MillerCoors*, <http://www.millercoors.com/what-we-believe/healthy-environments/water-use-preservation.aspx> (last visited Nov. 8, 2008).

number of watershed issues.⁵⁰ In addition to general statements about stewardship beliefs, the New Belgium website includes a section devoted to water conservation and treatment strategies. It highlights their partnership with “1% For The Planet”, an organization whose member companies donate 1% of their sales to be distributed to various environmental nonprofits.⁵¹ The company also highlights general public advocacy and education attempts. The website also includes a section discussing what consumers can do to reduce their impact, by recommending a series of lifestyle choices, such as drinking tap water rather than bottled water.

Finally, in order to reduce its stress on the system, a brewery can utilize methods of treating its own water to match the necessary quality standards for any given beer. This will allow municipal sources to make treatment decisions without having to consider as many industrial demands, as well as allow the brewery to accept water from whatever available water source rather than demanding water from a specific, and perhaps scarce, source simply because of its mineral profile. Breweries can purify or use brewing salts to treat the water they receive. Purification can include the addition of disinfectants such as chlorine, chlorine dioxide, and ozone in order to use water that has not been pretreated by a water company.⁵² A side benefit of on-site

⁵⁰ New Belgium Brewing, *Sustainability*, <http://www.newbelgium.com/sustainability.php> (last visited July 13, 2009).

⁵¹ 1% For the Planet, *Home*, <http://www.onepercentfortheplanet.org/en/aboutus/> (last visited July 17, 2009).

⁵² Ted Goldammer, *Water Treatments Used in Beer: Microbiological Control*, “Chemical Treatment”,

disinfection is that breweries can relieve themselves of the sometimes costly process of removing the disinfectants added by others. As discussed earlier, basic chlorine will boil off in the brewing process, but removing chemicals like chloramine can be very costly.⁵³ A brewery's treatment can also include the addition of brewing salts, which alter the mineral profile of the water to the appropriate levels for the particular beer being brewed. One common method of salting is Burtonizing, which is the addition of calcium sulphate to harden the water and achieve the distinctively sharp flavor of beers originating from Burton-on-Trent in England.⁵⁴

Intake management policies like the ones discussed above can make breweries more efficient in the short term. They also provide long-term benefits with respect to changing water situations. Setting a precedent of adaptation has a dual effect of acclimating the owners and operators of the breweries to forthcoming challenges as well as legitimizing their consideration in future adaptation plans. When policymakers sit down to create water management plans, the demands of an industry that has proven its responsibility should be taken more seriously than the demands of an industry that has remained stagnant in the face of necessary change.

ii. WHAT OTHERS CAN DO

As suggested by beer's popularity across the United States, the average beer consumer has a significant interest in securing the survival

http://www.beer-brewing.com/beer-brewing/brewing_water/microbiological_control.htm (last visited Dec. 11, 2008).

⁵³ Malinconico, *supra* note 35.

⁵⁴ *NPR Talk of the Nation*, *supra* note 14.

of the brewing industry. In addition, the size of the industry makes it worth preserving for its economic impact. In order to ensure that breweries continue to have access to the water necessary to produce beer, there are measures that can be taken by those outside the industry itself. Consumers can have an impact on breweries' water use and therefore the survival of the brewing industry in two main ways. First, consumers can influence water policy through their own day-to-day actions. Consumers can also have a public impact by encouraging legislators to enact legislation that will positively affect the relationship between water and breweries.

Many of the day-to-day actions people can take to influence water policy may seem small when viewed as individual impacts, but the aggregate effect of many private citizens can make significant differences. One simple action is to reduce personal water consumption as much as possible. This, of course, produces positive effects, not only on the brewing industry, but on the water management scheme as a whole. Reducing personal water consumption will also lighten the overall demand on water sources and allow high-demand industries, like breweries, to withdraw what they need to produce without placing an undue strain on the overall system. The Environmental Protection Agency has created a water use program called WaterSense, which is analogous to the EnergyStar program concerning energy use.⁵⁵ By selecting fixtures and products with

⁵⁵ Environmental Protection Agency, *WaterSense*, <http://www.epa.gov/owm/water-efficiency/index.htm> (last visited December 11, 2008).

WaterSense labeling, consumers can greatly reduce their individual demand for water.⁵⁶

Another activity the average beer consumer can do is to make informed and responsible choices when selecting a beer. This end could be advanced greatly by the implementation of an eco-labeling plan. Eco-labeling is a generally voluntary plan whereby businesses, such as breweries, can manufacture their product in such a manner as to meet standards set by a third-party certifying agency. The agency would then provide some marking on the label of the product to inform consumers that those standards have been met.⁵⁷ An example of this technique is the Green Seal certification program in the United States. Through standards developed for various industries, Green Seal creates an opportunity for customers to make informed choices about products based on the impact of that product's creation both on the water system and the environment as a whole.⁵⁸ Standards are not yet available for breweries in particular, but standards are frequently developed for new industries.⁵⁹ By creating a demand for beer made in a manner that is responsible in its water use practices, consumers can influence market forces which will encourage breweries to develop and implement efficient uses of the water those breweries take in.

⁵⁶ *Id.*

⁵⁷ See Renate Gertz, *Eco-Labeling—A Case for Deregulation?*, 4 *LAW., PROBABILITY & RISK* 127 (2005).

⁵⁸ Green Seal, *Green Seal: About Green Seal*, <http://www.greenseal.org/about/index.cfm> (last visited December 11, 2008).

⁵⁹ Green Seal, *Green Seal Certification and Standards - Green Seal Environmental Standards*, <http://www.greenseal.org/certification/environmental.cfm> (last visited December 11, 2008).

Legislation, as an expression of the public will, can also have an impact on the intake issues surrounding the brewing industry at federal, state, and local levels. The barest basic requirements of breweries are met by the same legislation and resulting regulations that require safe drinking water for public use.⁶⁰ Additional actions, however, can be taken to ensure more than minimum quality standards are met. To encourage efficient water use in breweries, legislation could contemplate any number of creative measures rather than relying on litigation to solve problems. David R.E. Aladjem, the chair of the Water Resources Committee in the ABA Section of Environment, Energy and Resources, expressed a need for such contemplation by saying, "More and more, we're not going to be able to solve [water resource management issues] with litigation. We're going to have to be very creative and collaborative to try to adjust our efforts and strategies to the changing circumstances."⁶¹

For example, tax credits could be given to breweries that create and implement efficient water use plans such as the ones discussed above or penalties could be imposed on those with particularly wasteful habits. Water use criteria can be enforced by exercising the "regulated riparianism" doctrine already in place in about half of the Eastern states. This doctrine allows "reasonable use" withdrawals only with the possession of a time-limited permit, though the rules can vary from state to state.⁶² The public trust doctrine could also be modified from its traditional role as a protective measure against misuse of water

⁶⁰ 42 U.S.C.A. §§ 300f *et seq.* (West 2009).

⁶¹ Choo, *supra* note 19, at 57.

⁶² *Id.* at 60.

resources⁶³ to a more proactive role such as facilitating public funding of water audits for those high water use businesses that cannot afford them privately. Legislators could encourage or even mandate economic conservation measures such as “increasing-block” charging by water companies which would make each unit of water more expensive than the one before it, thus placing a premium rather than a discount on high volume uses.⁶⁴

There is no end to the creative measures that could be implemented to increase efficient water use, and these creative solutions will only become more necessary in the eastern United States as the issue of water use becomes more pressing.

IV. OUTPUT ISSUES

A. DISPOSAL METHODS

The two methods a brewery can use to dispose of its wastewater are municipal system disposal and private disposal. Unless the brewery owns riparian rights, it is unlikely that it has any private disposal site available. This leaves most breweries, especially those that rely on municipal supplies, dumping their wastewater into municipal sewer systems. For smaller breweries, this process differs little from a high use residential user. Larger breweries, however, can find themselves running into problems with the quantities and qualities of the waters they are disposing of in the municipal sewer system.⁶⁵ In

⁶³ Getches, *supra* note 20, at 148-9.

⁶⁴ OECD Observer, *Pricing Water*, http://www.oecdobserver.org/news/fullstory.php/aid/939/Pricing_water.html (last visited Dec. 11, 2008).

⁶⁵ See *Springer v. Joseph Schlitz Brewing Co.*, 510 F.2d 468 (4th Cir. 1975).

some circumstances legal repercussions may arise as a result of excessive dumping into municipal systems. Such legal repercussions are generally governed by some combination of local ordinances, federal laws, and contractual obligations between the brewery and the operator of the sewage system.⁶⁶ Private disposal can carry its own set of legal obligations as well. The Clean Water Act of 1972⁶⁷ established, amongst other things, a mandate that the Administrator of the Environmental Protection Agency promulgate water quality standards (WQS) for specific bodies of water.⁶⁸ These WQS's must then be used to maintain an updated water quality management (WQM) plan.⁶⁹ This plan must establish the quantity and type of effluent that is allowed to be dumped into a given body of water.⁷⁰ Industries such as breweries are held to those limitations on any private effluent disposal in which they engage.

As the financial and ecological cost of wastewater disposal becomes more of a factor in the eastern United States, many breweries are finding creative methods of improving their wastewater disposal techniques. These techniques are being used both for private and municipal disposal and will be discussed in depth in a later section.

B. CONCERNS ABOUT OUTGOING WATER

Regarding brewery effluent, quantity is rarely a concern in and of itself. With the exception of possible flooding concerns, the quantity of water discharged is generally problematic only in conjunction with

⁶⁶ *See id.*

⁶⁷ 33 U.S.C.A. §§ 1251 *et seq.* (West 2009).

⁶⁸ 40 C.F.R. §130.3 (2009).

⁶⁹ *Id.*

⁷⁰ 40 C.F.R. §130.6 (2009).

the qualities it carries with it. For example, Joseph Schlitz Brewing Company found itself in legal trouble in 1975, when a farmer sued Schlitz for negligently overloading the municipal sewage treatment system and causing damage to the farmer's riparian lands.⁷¹ In that case, Schlitz was releasing quantities of pollutants in excess of the amount allowed by a city ordinance but was allowed to continue doing so as long as it paid the appropriate fines and maintained a plan to reduce its pollution. The court found it to be liable for its negligence only if its officers or employees knew or had reason to know that its pollution quantities would overload the municipal treatment plan and cause damage to downstream riparian landowners.⁷² Interestingly, the court also stated that Schlitz would certainly be liable had it simply dumped this sewage directly into a stream, but its contract with the municipal sewage system granted it additional legal protections because the burden of treating the water had been transferred to the municipal system.⁷³

The measure of pollution used in the Schlitz case was biochemical oxygen demand (BOD), and because that is a common measure for the polluting properties of brewery effluent, it is worthy of a brief discussion here. BOD is not a single pollutant but rather a way of expressing the aggregate effect of a number of separate pollutants.⁷⁴ The EPA states on its website that BOD "measures the amount of

⁷¹ *Springer*, 510 F.2d at 470.

⁷² *Id.* at 476.

⁷³ *Id.* at 474 (quoting *Carmichael v. City of Texarkana*, Ark., 116 F. 845, 849 (8th Cir. 1902)).

⁷⁴ EPA, *EPA > OWOW > Monitoring and Assessing Water Quality*, <http://www.epa.gov/volunteer/stream/vms52.html> (last updated Nov. 30, 2006).

oxygen consumed by microorganisms in decomposing organic matter” and “the chemical oxidation of inorganic matter.”⁷⁵ A more technical definition is “the loss of oxygen in mg/l in solution from a closed sample at 18.3°C for five days.”⁷⁶ American systems generally measure BOD in ppm rather than mg/l. In lay terms, BOD is a measure of how much dissolved oxygen will be consumed by the processes going on in the wastewater. The problem with effluent with a high BOD is that the water will be depleted of oxygen, which can cause stress, suffocation, and death to downstream organisms that rely on the oxygen content of the water.⁷⁷ Because the brewing process involves the use of large quantities of organic materials such as grains, hops, and yeast, the effluent also tends to contain large amounts of organic material making organically derived BOD a significant issue in the wastewater of many breweries.⁷⁸

C. SUGGESTIONS FOR MANAGING OUTGOING WATER

In searching for techniques that can reduce a brewery’s impact on its watershed in the eastern United States, it can be helpful to look at solutions that breweries are already enacting in both the East and in the West, where scarcity has historically forced a more careful hand. Learning from the specific examples, as well as the general spirit of ingenuity in some of these current techniques, can help the brewing

⁷⁵ *Id.*

⁷⁶ Hough, *supra* note 37, at 175.

⁷⁷ EPA, *supra* note 74.

⁷⁸ W. Driessen & T. Vereijken, *Recent Developments in Biological Treatment of Brewery Effluent*, 1-2, March 2-7, 2003, available at <http://www.environmental-expert.com/Files%5C587%5Carticles%5C3041%5Cpaques24.pdf> (last visited Dec. 11, 2008).

industry in the East adapt to changing water conditions and needs. In analyzing these techniques, it is useful to break these suggestions down into generally useful disposal techniques and real world examples from existing breweries.

i. GENERAL DISPOSAL TECHNIQUES

One of the most obvious techniques that a brewery can implement to reduce its effluent is to reduce its intake. Quite simply, the more efficient a brewery is with its water resources, the less it will have to take in to meet production, and the less it will have to dispose of as effluent. As an addition or alternative to simple reduction of use, breweries can also treat their effluent in order to reduce the demand that they place on a municipal sewage system or directly on an ecosystem if they dispose of their wastewater privately. This reduction of impact will only become more important as water use and disposal policies become stricter.

The first stage to treating brewery wastewater is pretreatment. Pretreatment is a physical process aimed at removing relatively large particles, such as grains, scrap fragments, bottle caps, or any other large solids that may have mixed with the water. Pretreatment can consist of a simple screening or filtration process.⁷⁹ After large particles are removed, the water is moved to a grit chamber where smaller particles are removed and the water is prepared for any additional main treatment.⁸⁰ This preparation can involve aeration and the

⁷⁹ Nick J. Huige, *Brewery By Products and Effluents*, in *HANDBOOK OF BREWING* 655, 702 (Fergus G. Priest, Graham G. Stewart eds., 2d ed., CRC Press 2006).

⁸⁰ *Id.*

addition of buffering chemicals or flocculating agents that coagulate suspended solids into large enough particles that they can either be filtered out or will naturally drop out of solution.⁸¹ Sometimes biological pretreatment is done using systems of bacterial cultures that remove the most easily metabolized originators of BOD.⁸² These systems are capable of reducing BOD by up to 60 or 70 percent.⁸³ Sometimes this is all the treatment the water needs, but other times it is sent to main treatment to reduce the more difficult pollutants that create BOD.⁸⁴

Large amounts of BOD can be removed in biological main treatments, which can be either aerobic or anaerobic.⁸⁵ Aerobic treatment techniques focus on supplying a medium on which biological mass can grow and maximizing both the surface contact with the water and the aeration of the water to supply the biological mass with ample nutrients to metabolize organic pollutants.⁸⁶ These systems can include rotating sheets or paddles, beds, and baffled shafts.⁸⁷ Anaerobic treatment techniques focus less on complex machinery and more on complex biological systems. In these techniques, three separate types of bacteria need to be cultured to perform a chain of functions that take non-aerated wastewater and reduce the BOD by a complex series of metabolic processes that result in methane production.⁸⁸ Some of

⁸¹ *Id.*

⁸² *Id.*

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ Huige, *supra* note 79, at 703-704.

⁸⁶ *Id.* at 703.

⁸⁷ *Id.*

⁸⁸ *Id.* at 704.

the advantages of anaerobic systems over aerobic systems are lower energy consumption due to their lack of moving parts, the usefulness of the methane byproduct as an energy source, smaller space requirements, and less sludge (biomass) production. The disadvantages include comparatively slow bacterial growth rates, more sensitive bacterial systems, and a lower rate of BOD removal.⁸⁹ Sometimes aerobic systems are used after anaerobic ones to balance some of the comparative advantages and disadvantages.⁹⁰ Biological treatment of effluent can produce a new problem with solid waste disposal of the resultant sludge, but that is beyond the scope of this paper. A more easily disposed of biomass byproduct can be obtained, however, by using certain strains of yeast and other fungi that can potentially reduce the BOD of a brewery's wastewater by up to 98 percent.⁹¹

ii. EXISTING DISPOSAL TECHNIQUES

The specific techniques being used to treat and dispose of brewery effluent are quite diverse and because there is no single industry standard, they can be modified based on the needs of individual breweries. Some have incorporated some version of one of the techniques outlined above, and others have come up with entirely original methods that are highly tailored to a specific situation. Understanding both the application of established techniques as well as the uses of creative original techniques will be a necessary step in fashioning useful techniques for the unique issues that exist and will continue to develop in the eastern United States.

⁸⁹ *Id.*

⁹⁰ *Id.* at 705.

⁹¹ Huige, *supra* note 79, at 707.

The Stone Brewing Company in Escondido, California has implemented a common treatment method with some customized twists. Stone moved to its current location in 2005 and quickly found it was producing too much wastewater for the Escondido municipal sewage system to handle. The city limited Stone to 25,000 gallons of wastewater per day, and the brewery had to pay large sums of money to truck the rest to a San Diego wastewater plant.⁹² In order to relieve itself of this costly burden, Stone built an \$850,000 aerobic bacterial treatment facility that will render its water suitable for the municipal sewage system. Stone does not want to just turn its water over to the sewers though. An additional stage of filtration would allow the brewery to use recycled wastewater to water its onsite landscaping, a process that currently consumes up to 5,000 gallons of potable water per day. If all goes well, Stone will even have enough treated wastewater to sell its leftovers to a nearby hospital that is under construction and in need of a source of water for its landscaping.⁹³

The reuse of appropriately treated wastewater has enormous potential to reduce the total amount of water used in the East, ease burdens on municipal sewage systems, and provide additional streams of income to breweries as they become suppliers rather than just consumers of water. Standing Stone Brewing in Ashland, Oregon, is considering starting a private hot water district to supply nearby businesses with the hot water that it produces. It makes five times more hot water than its onsite restaurant can use, and supplying hot

⁹² Angela Lau, *Brewery Will Start Treating Wastewater*, THE SAN DIEGO UNION-TRIBUNE, Aug. 2, 2008.

⁹³ *Id.*

water to adjoining businesses, if implemented, could provide extra income for Standing Stone as well as reducing water use and energy costs of participating businesses.⁹⁴

At its Jacksonville, Florida brewery, Anheuser-Busch came up with a profitable solution to its wastewater disposal problems by taking the concept of wastewater reuse to the next level. Rather than selling the actual wastewater, Anheuser-Busch is using its wastewater to create a profitable product: grass.⁹⁵ Nutri-Turf Inc. is a subsidiary of Anheuser-Busch that operates 1,000 acres of grass fields and a series of retention ponds near the Jacksonville brewery. After an initial filtration inside the brewery, the wastewater is dumped out onto Nutri-Turf's fields where the nutrients that give it a high BOD serve to fertilize the grass. The water then filters down to retention ponds where solids settle out, and specially grown aquatic vegetation render it suitable for release into Thomas Creek and the Broward River. Anheuser-Busch saves over one million dollars in disposal costs annually and Nutri-Turf grows sod for golf courses and state Department of Transportation construction projects, as well as feed grasses for cattle.⁹⁶ Nutri-Turf also contributes to the broader issue of watershed conservation by operating a wildlife preserve on its 900 acres of wetlands and conducting educational wildlife education programs.⁹⁷ This sort of ingenuity is going to prove vital in managing the water assets of the

⁹⁴ John Foyston, *Dining Brew News Benefit at Amnesia*, THE OREGONIAN (Portland, OR), Jan. 14, 2005, at 23.

⁹⁵ Matt Cristy, *Brewer Enjoys Watching This Grass Grow*, JACKSONVILLE BUSINESS JOURNAL, Aug. 29, 1997.

⁹⁶ *Id.*

⁹⁷ Cristy, *supra* note 95.

eastern United States. All companies are interested in finding ways of saving money. Finding ways of opening new revenue streams by selling waste products, especially in businesses like brewing that produce large quantities of a particular waste product, provides the financial motivation that may be necessary to effectively manage natural resources before shortage crises become even more widespread.

While large companies like Anheuser-Busch are capable of implementing these multiphase projects because of their large supplies of capital, smaller companies have the advantage of being more flexible and adaptive, which allows them to implement highly customized comprehensive water management plans. One example of such a customized plan can be seen at Anderson Valley Brewing Company in Boonville, California.⁹⁸ Employee Peter Suddeth says it tries to find as many ways as possible to use its water before that water becomes waste. These methods include reusing cooling water for cleaning the equipment, cleaning the brewery floor, or even using the hotter process water as preheated liquor for a future brew.⁹⁹ Once Anderson Valley has to call its water waste, it implements physical filtration and settling before moving the wastewater to a series of three ponds that treat the water with specifically cultured organisms. This process begins with bacteria in pond one and progresses to frogs, fish, algae, and even an egret in pond three.¹⁰⁰ The water is then used to irrigate onsite pastures.¹⁰¹ Those irrigated pastures are then used for a population of

⁹⁸ Jerome Goldstein, *Sustainable Water Supplies with Wastewater Recycling*, BIOCYCLE, Jan. 2006, at 24.

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

shire horses that Anderson Valley uses to boost its tourism revenues with onsite tours and carriage rides.¹⁰²

New Belgium has similarly customized water use techniques that also include a methane capture device on its biological treatment ponds.¹⁰³ By capturing the methane produced by anaerobic bacterial treatment, the brewery can fuel a combined heat and power engine that provides both heating and electricity for the brewery and can offset up to 15 percent of the brewery's energy costs while running at capacity.¹⁰⁴ As energy costs rise worldwide, turning wastewater into a source of energy will be an increasingly attractive policy for many breweries. Wastewater treatment facilities that can simultaneously lower a brewery's sewage disposal costs and lower their heating and energy costs will need to come into wider use in the eastern United States as the population becomes more aware of the fact that clean water and available energy are neither infinite in supply nor eternally cheap.

V. CONCLUSIONS

The issues of water conservation, preservation, and allocation are not easy ones to work through. Traditionally these problems have been of a secondary concern in the water-abundant eastern United States, but as demand for and conflict over water grows, so does the concern for ensuring adequate supplies. As a major consumer of clean

¹⁰² Anderson Valley Brewing Company, *The AVBC Shire Horses*, <http://www.avbc.com/tour/shires.html> (last visited Nov. 8, 2008).

¹⁰³ New Belgium Brewing, *Sustainability*, <http://www.newbelgium.com/sustainability> (last visited Nov. 8, 2008).

¹⁰⁴ *Id.*

water and a major producer of wastewater, the beer industry is deeply entrenched in the water concerns of America. The eastern United States can benefit from the examples of many breweries in the West where scarcity has already forced a heightened awareness of the issues confronting water supply and disposal.

Many of the quantity and quality specifics of incoming water have enormous effects on the beer that a brewery produces, and there are steps that can be taken both by the breweries themselves and by the public to ensure that breweries receive adequate supplies of water in order to supply the nation with adequate supplies of beer. By taking conservation measures to reduce consumption, boost efficient use, offset consumption, and treat water on-site, breweries can reduce their demand on the water supply. The public can help to ensure the ability of the eastern United States' water systems to support breweries by personally conserving water, making informed and responsible consumer choices with regards to a brewery's water use practices, and supporting legislators and legislation that favors efficient water management programs in breweries.

Breweries also produce enough wastewater to pose a significant threat to the water sources into which they dump their effluent. While some breweries will actively seek out ways to reduce the impact of their wastewater simply because they feel a sense of responsibility, others will not heed the impacts of their effluent until there is a financial incentive. Fortunately for all involved, many financial incentives are available to make breweries control the impact of their wastewater. Eastern breweries can take notes from a number of western breweries as well as some of the more progressive eastern

breweries. Simply reducing consumption can have its benefits. Adventurous breweries can even develop customized strategies for turning their waste into profit by reusing water, selling the water itself, selling a product of the wastewater's reuse or even its treatment.

In the years to come, pressing issues of water demand in the eastern United States will create tension in and around the brewing industry, which consumes enormous quantities of water and has the potential to put out a great deal of pollution. An understanding of the issues surrounding a brewery's water use, as well as an effective implementation of plans based on that understanding, must be found both by the operators of those breweries and by the general public, which has an interest in the continued operation of the American brewing industry. As water resources become scarcer, industries that cannot adapt to changing water conditions and needs will be at a marked disadvantage when competing with those that can. The brewing industry must be preserved, because while there is no doubt that water is necessary to the continued existence of individual human beings, beer is necessary to the survival of civilization.