



STATE FERTILIZER BILLS: THE GREENEST WAY TO A MORE NATURAL LANDSCAPE?

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In the late 1980s and early 1990s, family-filled boats flocked to Tices Shoal in New Jersey's Barnegat Bay each weekend of the summer to clam.¹ Children and parents alike would put on rubber shoes, hop in the shallow water and search for clams on the bottom of the bay, hoping that what they thought was a clam wasn't actually a crab about to snip at their fingers. Today, boats still flock to Tices Shoal, but most go to listen to weekly bands that perform on floating stages. The clam populations in the Barnegat Bay have steadily declined since the 1980s and many attribute this decline to nutrient pollution flowing into the bay from many sources, including runoff from turf fertilizer.

The stereotypical picture of the American Dream is a picture perfect house, a white picket fence and a lush, green lawn. Weekends in American suburbia showcase homeowners spending hours mowing, manicuring, and fertilizing their lawns. However, what these scenes don't show are the adverse effects of the nonpoint source pollution caused by the fertilizer running

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¹ I myself have fond memories of going to Tices Shoal on Saturday afternoons in my family's Wellcraft V20 Steplift.

off these perfect lawns. Because the Federal Clean Water Act focuses mostly on point source pollution, states consider nonpoint source pollution to be the leading cause of water pollution in their waterways.² The United States Environmental Protection Agency (“EPA”) reports that, though each household may contribute only a small amount to the nonpoint source pollution in an area, the cumulative amount of nonpoint source pollution from residential runoff in an area can have a serious adverse effect on water quality.³

Until recently, many thought that the regulation of fertilizer use by individual homeowners would invade too much on personal choice, which would make a fertilizer statute too unpopular for state legislators to pass. However, in an attempt to control the nonpoint source pollution caused by turf fertilizers, legislators in several states have changed this thought pattern by passing statutes that regulate the use of fertilizers by individual households and on public property. Minnesota, Maine, Wisconsin, New York and New Jersey (collectively “the states”) have all passed turf fertilizer laws, and as the most recent piece of legislation, many consider the New Jersey bill to be the toughest statute to date.⁴ Through these bills, the states are trying to cut down on the amount of nutrient pollution and improve the condition of their degraded waterways. For example, the current status of Barnegat Bay in New Jersey was a major factor in passing the New Jersey bill.⁵ The Barnegat Bay is considered to be highly eutrophic due to high levels of phosphorus, nitrogen, and other nutrients in the Bay, and many

² *What is Nonpoint Source Pollution?*, U.S. ENVTL. PROT. AGENCY, <http://water.epa.gov/polwaste/nps/> (last updated Aug. 27, 2012).

³ *Managing Nonpoint Source Pollution from Households*, U.S. ENVTL. PROT. AGENCY, <http://water.epa.gov/polwaste/nps/outreach/point10.cfm> (last updated Aug. 22, 2012).

⁴ *See Governor Chris Christie Takes Action to Protect and Restore Barnegat Bay*, N.J. OFFICE OF THE GOVERNOR (Jan. 5, 2011), <http://www.state.nj.us/governor/news/news/552011/approved/20110105b.html>.

⁵ *Id.*

believe that a major source of this eutrophication is residential fertilizer use.⁶

The states have recognized the severe impact that nutrient pollution can have on an area. For example, the degradation of the Barnegat Bay has contributed to the decline of plant and bird species in the region.⁷ The Bay's degradation is an important economic issue for New Jersey, as estuarine and freshwater wetlands are the most valuable ecosystems in New Jersey, and wildlife-related tourism creates around \$3 billion annually in economic activity for the state.⁸

This article will examine these state turf fertilizer statutes. As the first state to regulate, the Minnesota law has served as the model for each subsequent state fertilizer statute. Conversely, New Jersey, as the most recent state to pass legislation, has been able to model its legislation on the previous state bills. Although each piece of legislation is unique, the majority of the statutes regulate the use and sale of fertilizers containing phosphorus. In addition, most states bills contain prohibitions that apply to all fertilizers, regardless of their phosphorus content, such as prohibitions on applying fertilizers to impervious surfaces. The Maine statute is unique in that it does not restrict the use of phosphorus fertilizers, while New Jersey is the only state that regulates both nitrogen fertilizers and phosphorus fertilizers.

Overall, the states have taken an important step to protect their waterways and address nutrient pollution. As the studies of the Barnegat Bay have shown, degraded waterways have severe economic impacts. Considering the value of the waterways' ecosystems and their tourism revenue, a state has an

⁶ THE TRUST FOR PUB. LAND, A VISION FOR THE FUTURE OF CONSERVATION, BARNEGAT BAY 2020 8–9 (2008), <http://www.tpl.org/sites/default/files/cloud.tpl.org/pubs/local-nj-barnegat-bay-2020.pdf>. Eutrophication is the over-enrichment of water that stimulates the extraordinary growth of algae and phytoplankton in the water and has severely or moderately degraded two-thirds of the United States' estuaries and bays. PEW OCEANS COMM'N, AMERICA'S LIVING OCEANS, CHARTING A COURSE FOR SEA CHANGE 4, 62 (2003).

⁷ THE TRUST FOR PUB. LAND, *supra* note 6, at 9.

⁸ *Id.* at 4.

economic interest in keeping its waterways healthy. Since most lawns contain enough nutrients in their soil already, the states have chosen to regulate the use of fertilizers in a situation in which fertilizer most likely is not even necessary. Further, unlike the agriculture industry, which uses fertilizer to create a useful product and may strongly resist any fertilizer regulation, homeowners are not; therefore, the regulation of lawn fertilizer is a common-sense and cost-effective way to cut down on nutrient runoff.

Therefore, these statutes are important pieces of legislation that are addressing a serious problem: the degradation of waterways by nutrient pollution from nonpoint sources. However, there are portions of these laws that could be improved upon to enable this legislation to further protect vulnerable waterways, and this paper will examine how to strengthen the regulation of turf fertilizers. Most importantly, states have to be more willing to regulate individual homeowners under these statutes, as these statutes will only have an optimal, cumulative impact if everyone reduces their fertilizer use. Although some might feel these statutes intrude too much on personal choice, the benefit of these statutes outweighs any burden imposed on individuals, especially since most lawns do not even need fertilizer to be healthy.

Part I of this paper will discuss the problem of nonpoint source pollution and nutrient pollution in the coastal and inland waters of the United States, using the current situation in Barnegat Bay as an example. Part II of this paper will examine the legislation passed by Minnesota, Maine, Wisconsin, New York, and New Jersey. Part III of this paper will closely analyze the terms of the various legislative approaches to reducing fertilizer pollution, including the strengths and weaknesses of the statutory provisions. Part IV will discuss ways that the statutes could be improved, including ways to increase public awareness and compliance with these statutes, as well as making enforcement of the statutes more effective.

PART I- THE NONPOINT SOURCE AND NUTRIENT POLLUTION PROBLEM

Congress passed the modern Clean Water Act in 1972.⁹ The terms of the Clean Water Act contain many ambitious objectives, with Congress declaring that the legislation's main goal was to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters."¹⁰ Congress further elaborated on the Clean Water Act's objective by stating that the act was meant to achieve "wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water" by 1983 and to eliminate "the discharge of pollutants into" the United States' navigable waters by 1985.¹¹ However, within these broad goals, Congress decided to draw a very significant jurisdictional line in the Act: while "point sources" were regulated under the National Pollutant Discharge Elimination System ("NPDES") program, nonpoint sources are largely unregulated by the statute.¹²

Under the Clean Water Act, a point source is "any discernible, confined and discrete conveyance...from which pollutants are or may be discharged," such as pipes, ditches and tunnels.¹³ Conversely, the statute does not define nonpoint source; therefore, a nonpoint source is simply anything that is not a point source.¹⁴ Since runoff is not discharged from a discrete conveyance, such as a pipe, runoff is not discharged from a point source, and thus, is not regulated under the NPDES program.¹⁵

⁹ CRAIG N. JOHNSTON ET AL., LEGAL PROTECTION OF THE ENVIRONMENT 130 (2005).

¹⁰ 33 U.S.C. § 1251(a) (2012).

¹¹ 33 U.S.C. § 1251(a)(1)-(2).

¹² JOHNSTON, *supra* note 9, at 143.

¹³ *Id.*

¹⁴ See *What is Nonpoint Source Pollution?*, *supra* note 2.

¹⁵ JOHNSTON, *supra* note 9, at 143.

THE NUTRIENT POLLUTION PROBLEM

As the Clean Water Act has been successful at keeping the worst pollution from getting into the nation's waterways with its regulation of point sources through the NPDES program, the importance of controlling nonpoint source pollution has increased.¹⁶ In fact, nonpoint source pollution continues to be the leading source of degraded water quality in the United States.¹⁷ Further, the innumerable sources of nonpoint source pollution, including agricultural and residential fertilizers, insecticides and herbicides, oil and grease from urban runoff, sediment from erosion and bacteria and nutrients from septic systems, livestock and pet wastes, make it difficult to control this ubiquitous source of pollution.¹⁸ Consequently, reducing nonpoint source pollution is a huge challenge in keeping waterways healthy.

Nonpoint source pollution usually occurs when waste items are picked up by rainfall, causing polluted runoff that is eventually deposited in our nation's waters, including inland lakes, rivers and coastal waters.¹⁹ Of these nonpoint source pollutants, scientists believe that nutrient pollution is the main threat to marine life.²⁰ Nutrient pollution has been linked to algal blooms, dead zones, seagrass and kelp bed loss, coral reef

¹⁶ *Id.*

¹⁷ *Managing Nonpoint Source Pollution from Households*, *supra* note 3.

¹⁸ *What is Nonpoint Source Pollution?*, *supra* note 2. For example, the National Academy of Science estimates that every eight months, the amount of oil runoff in waterways in the United States equals the amount of oil spilled in the Exxon Valdez oil spill. See PEW OCEANS COMM'N, *supra* note 6, at 4. Moreover, anthropogenic sources release five times the amount of nitrogen into coastal waters in the Gulf of Mexico and the Atlantic Coast than they did in the preindustrial era. *Id.*

¹⁹ See PEW OCEANS COMM'N, *supra* note 6, at 60.

²⁰ *Id.*

destruction, and diminished biodiversity.²¹ Further, nutrient pollution leads to eutrophication, which is the over-enrichment of water that stimulates the extraordinary growth of algae and phytoplankton in the water and has severely or moderately degraded two-thirds of the United States' estuaries and bays.²² The decomposition of phytoplankton and algae then decreases the amount of oxygen in the waterway, making the water hypoxic.²³ Hypoxic waters cannot support shrimp and fish populations and make these species more susceptible to invasive species, disease, and mortality.²⁴

THE CONDITION OF THE BARNEGAT BAY

The New Jersey legislature passed its recent turf fertilizer bill with the intent to prevent excess fertilizers from getting into New Jersey waterbodies, and in particular, to improve the environmental status of the Barnegat Bay.²⁵ EPA has declared the Barnegat Bay watershed a threatened “estuary of national significance.”²⁶ Many believe that the Barnegat Bay is degraded due to increases in population and changes to land use in the area.²⁷ As a shallow estuary with only three inlets, the Barnegat Bay is particularly susceptible to degradation because the Bay can take up to seventy days to flush itself during the summer months when population in the area peaks.²⁸ Because of this,

²¹ *Id.* at 4, 62.

²² *Id.* at 62.

²³ *Id.*

²⁴ *Id.*

²⁵ *Governor Chris Christie Takes Action*, *supra* note 4. The Barnegat Bay is mostly located within Ocean County, with a small portion in southern Monmouth County and Bass River Township. *Id.*

²⁶ THE TRUST FOR PUB. LAND, *supra* note 6, at 3–4.

²⁷ *Id.*

²⁸ *Id.* at 8.

the Barnegat Bay is considered to be highly eutrophic and the nutrient pollution in the waterway is mostly attributed to runoff from residential and commercial fertilizers, as well as the area's urban and industrial lands.²⁹

The degradation of the Barnegat Bay is adversely affecting the bay's water and environmental quality. In addition, the bay's degradation could contaminate the Kirkwood-Cohasey aquifer, which replenishes the bay and provides the region with most of its drinking water. Further, according to research, the degraded status of the bay has contributed to the decline of plant and bird species in the region.³⁰ The Barnegat Bay's degradation is also an important economic issue, as estuarine and freshwater wetlands in this region can produce as much as \$11,802 per acre per year and \$11,811 per acre per year respectively, making these wetlands the most valuable ecosystems in the state.³¹ Further, wildlife-related tourism creates around \$3 billion annually in economic activity for the state, giving New Jersey a financial interest in keeping its waterbodies healthy.³²

Unfortunately, the status of Barnegat Bay is not unique to New Jersey, but rather, is exemplary of the status of many waterways in the United States. In addition to the ecological effects of nutrient pollution, waterways that are degraded, eutrophic, and hypoxic could have serious adverse economic effects on our national, state, and local economies. In light of these adverse effects of runoff and nutrient pollution, as well as the fact that these sources of pollution are mostly unregulated by the Clean Water Act, states should take steps to reduce the amount of nutrient pollution in their respective waterways. Although nutrient pollution has a multitude of sources, fertilizer is a significant source that easily dissolves in and is transported by water.³³ While agricultural fertilizers are significant

²⁹ *Id.* at 8–9.

³⁰ *Id.* at 5–7.

³¹ *Id.* at 4.

³² THE TRUST FOR PUB. LAND, *supra* note 6, at 4.

³³ PEW OCEANS COMM'N, *supra* note 6, at 62.

contributors to nutrient pollution, every American lawn that uses fertilizer contributes to the nutrient pollution of the nation's waterways.³⁴ Further, many lawns are over-fertilized, which means that in many circumstances, these regulations will still allow for healthy, lush lawns.³⁵ Finally, although turf fertilizer controlling measures interfere with a homeowner's private actions, the nutrient pollution problem is severe enough that these arguments should not block regulation. Thus, the regulation of turf fertilizers is a logical place to start an effort to cut down on nonpoint source nutrient pollution.

PART II- STATE RESIDENTIAL FERTILIZER BILLS

Minnesota was the first state to pass a turf fertilizer bill and enacted its Phosphorus Fertilizer Law in 2002.³⁶ The Minnesota law intends to reduce the use of unneeded phosphorus fertilizer and prevent the enrichment of the state's wetlands, lakes, and rivers by nutrient pollution.³⁷ Following Minnesota's lead, Maine was the next state to pass a statute to deter the use of phosphorus fertilizers in 2008.³⁸ The Maine law attempts to cut

³⁴ *Id.* at 60.

³⁵ See *The New American Lawn*, GARDEN CLUB OF AM., http://www.gcamerica.org/_uploads/filemanager/publicationsresource/NewAmericanLawnORIG.pdf (last visited Sept. 29, 2015).

³⁶ MINN. DEP'T OF AGRIC., REPORT TO THE MINNESOTA LEGISLATURE: EFFECTIVENESS OF THE MINNESOTA PHOSPHORUS LAWN FERTILIZER LAW 3 (2007), <http://www.mda.state.mn.us/en/Global/MDADocs/protecting/waterprotection/07phoslawreport.aspx>. The restrictions started to become effective in 2004 and covered the entire state by 2005. *Id.* at 7.

³⁷ MINN. DEP'T OF AGRIC., REPORT SUMMARY: EFFECTIVENESS OF THE MINNESOTA PHOSPHORUS LAWN FERTILIZER LAW 1 (2007), <http://www.mda.state.mn.us/Global/MDADocs/protecting/waterprotection/07phoslawrptsumm.aspx>.

³⁸ ME. REV. STAT. ANN. tit. 38, § 419 (2007). See also *New Fertilizer Law Cuts Back Phosphorus Use*, ME. DEP'T OF ENVTL.

down on the excessive amounts of nutrients, and in particular phosphorus, that are getting into the state's waters and causing a greenish hue and depleted oxygen levels that could lead to fish kills.³⁹

Like Minnesota and Maine, Wisconsin determined that its waterways have been degraded by nutrient pollution.⁴⁰ Recognizing that keeping phosphorus from getting into its waterways, even in small increments, can have a large cumulative effect, the Wisconsin legislature decided to regulate the use of fertilizers containing phosphorus as “a common sense, simple, and cost effective way” to cut back on nutrient pollution.⁴¹ The law became effective on April 1, 2010 and restricts the use, display, and sale of fertilizers containing phosphorus.⁴²

New York also recognized the need to regulate nutrient pollution in the state and passed a law regulating both dishwasher detergents and fertilizers that contain phosphorus on July 15, 2010.⁴³ The New York State Department of

PROT. (Mar. 28, 2008), <http://www.maine.gov/tools/whatsnew/index.php?topic=DEP+News&id=52986&v=Article>.

³⁹ *New Fertilizer Law Cuts Back Phosphorus Use*, *supra* note 38.

⁴⁰ For example, ninety percent of the inland lakes in Wisconsin have been degraded by nutrient pollution. *See, e.g.*, Press Release, Wisconsin Association of Lakes, Bill to Restrict Phosphorus in Lawn Fertilizer (Jan. 12, 2009) (on file with author).

⁴¹ *Id.* The Wisconsin Association of Lakes goes on to state that “[u]sing phosphorus-free lawn fertilizer is one easy way everyone can contribute to better water quality—regardless of where they live.” *Id.*

⁴² WIS. STAT. ANN. § 94.643 (West 2010); *see also Turf Fertilizer: Restrictions on Sale, Use and Display*, WIS. DEP'T OF AGRIC., TRADE & CONSUMER PROT., http://datcp.wi.gov/Environment/Fertilizer/Turf_Fertilizer/index.aspx (last visited Feb. 9, 2014).

⁴³ *Dishwasher Detergent and Nutrient Runoff Law*, N.Y. STATE DEP'T OF ENVTL. CONSERVATION, <http://www.dec.ny.gov/>

Environmental Conservation states that phosphorus runoff has caused algae growths and reduced oxygen levels in New York's waterways and that many areas in New York already have sufficient levels of phosphorus to grow turf without fertilizers, making the regulation of lawn fertilizer an inexpensive and simple way to cut back on nutrient pollution in the state.⁴⁴ Moreover, the department notes that regulating the use of phosphorus fertilizers is more cost-effective than requiring municipalities to build phosphorus control systems.⁴⁵

Prompted by the environmental condition of Barnegat Bay, New Jersey passed a statute that targets nutrient runoff from landscape and lawn fertilizers on January 5, 2011.⁴⁶ Aimed to be part of a plan to address the short- and long-term needs of Barnegat Bay, the Office of New Jersey Governor Chris Christie announced the passage of the statute, calling the bay a 660-square mile ecological gem and stating that the bill contained the nation's strictest standards for the application of fertilizers to lawns.⁴⁷ Further, the Governor's office noted that the

chemical/67239.html?showprintstyles (last visited Feb. 9, 2014). The provisions of this law discussing dishwasher detergent are beyond the scope of this paper. The law also provides that a local government can adopt more stringent standards if it can show "that additional or more stringent standards are necessary to address local water quality conditions." See N.Y. ENVTL. CONSERV. LAW § 17-2105 (McKinney 2012).

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ *Governor Chris Christie Takes Action*, *supra* note 4. The law was one of three pieces of legislation passed by the New Jersey legislature on January 5, 2011, as part of a 10-part comprehensive plan to restore the Barnegat Bay. *Id.* The other two bills passed address soil restoration and stormwater basin repairs. *Id.*

⁴⁷ *Id.* Governor Christie went on to state that "[t]oday marks another turning point for Barnegat Bay, one that ends years of talk and study, and implements an action plan aimed at providing solid solutions to restore environmental health of this incredible New Jersey resource . . . We owe it to future generations to stop the talk and act now." *Id.* The bill "will reduce the amount of

legislation was necessary because the degradation of Barnegat Bay is a threat to the region's economic health.⁴⁸

Seeing the opportunity to regulate fertilizer use as a means to the end of reducing nutrient pollution, most of the states discussed chose to restrict the use of fertilizer on turf. In addition, some of the states also chose to regulate the sale and display of fertilizer. In addition, the states have provided for increasingly more stringent enforcement and penalty provisions. Finally, Minnesota and New Jersey included education provisions in their statutes. Each of these aspects of the statutes will be discussed in turn below.

USE RESTRICTIONS

With the exception of Maine, most of the states regulate fertilizer use. The main use prohibition in these statutes is the use of phosphorus fertilizer on turf, and each of the states has also enumerated exceptions to this use prohibition. In addition, the statutes contain prohibitions on the use of all fertilizers in certain situations. New York and New Jersey also restrict the use of fertilizer near waterbodies. While the measures in other states only regulate phosphorus fertilizers, the New Jersey bill also contains restrictions on the use of fertilizers containing nitrogen.⁴⁹

In reviewing the use provisions of these statutes, it is important to note that Maine is an outlier because it has chosen not to regulate the use of fertilizer. Rather, Maine only regulates the sale and display of phosphorus fertilizer and merely aims to discourage its residents from using lawn fertilizer in situations

nutrients, including nitrogen and phosphorus, that ultimately end up in waters like Barnegat Bay, affecting ecological health.” *Id.*

⁴⁸ Press Release, State of New Jersey Governor Chris Christie, Governor Christie Fulfills Pledge to Clean Up and Restore Barnegat Bay; Announces Comprehensive Plan of Action (Dec. 9, 2010), <http://www.state.nj.us/governor/news/news/552010/approved/20101209b.html>.

⁴⁹ N.J. STAT. ANN. § 58:10A-63 (West 2012).

when the fertilizer is not needed.⁵⁰ In fact, the Maine Department of Environmental Protection has stated that its message to Maine residents is: “*If you are not fertilizing, that is great; if you are fertilizing, consider not fertilizing or if that is not acceptable, switch to P-free.*”⁵¹

Prohibition on the Use of Phosphorus Fertilizer on Turf

The main prohibition in each of the statutes is the use of phosphorus fertilizers on turf. This prohibition has two major elements: prohibiting a person from applying (1) a phosphorus fertilizer to (2) turf.⁵² Most of the states have followed Minnesota’s lead in defining what constitutes a phosphorus fertilizer. Although each state has chosen to define turf in a different manner, all of the states agree that these provisions only apply to nonagricultural lands.⁵³ Minnesota prohibits a person from applying a phosphorus fertilizer to turf.⁵⁴ Wisconsin prohibits any person from intentionally applying “to

⁵⁰ *New Fertilizer Law Cuts Back Phosphorus Use*, *supra* note 37.

⁵¹ UPDATE: PHOSPHORUS-FREE FERTILIZER LAW, ME. DEP’T OF ENVTL. PROT. (on file with author). P-free refers to phosphorus-free fertilizer (emphasis in the original).

⁵² *See, e.g.*, MINN. STAT. ANN. § 18C.60 (West 2013); N.J. STAT. ANN. § 58:10A-62 (West 2011); N.Y. ENVTL. CONSERV. LAW § 17-2103 (McKinney 2012), WIS. STAT. ANN. § 94.643 (West 2010).

⁵³ *See* N.Y. ENVTL. CONSERV. LAW § 17-2101(4) (McKinney 2012) (defining “lawn” or “non-agricultural turf” as “any non-crop land area that is covered by any grass that is covered by any grass species,” but excludes “any form of agricultural production.”); *see also* MINN. STAT. ANN. § 18C.60; N.J. STAT. ANN. § 58:10A-61 (West 2011); WIS. STAT. ANN. § 94.643.

⁵⁴ MINN. STAT. ANN. § 18C.60. Maine law defines “fertilizer containing phosphorus” as any fertilizer that contains “more than 0.67% phosphate by weight,” but as discussed above, Maine does not regulate the use of these fertilizers as Minnesota does. ME. REV. STAT. tit. 38, § 419 (2007).

turf fertilizer that is labeled as containing phosphorus or available phosphate.”⁵⁵ New Jersey, except for certain exceptions, flatly prohibits a person from applying a fertilizer that contains any amount of phosphorus.⁵⁶ New York defines phosphorus fertilizer as one containing greater than 0.67 percent of available phosphate by weight, excluding compost.⁵⁷

The second element is the prohibition of the use of phosphorus fertilizers on “turf.” Each state has chosen a different definition of what constitutes turf. Minnesota defines turf as “noncrop land planted in closely mowed, managed grasses including, but not limited to, residential and commercial residential property, private golf courses, and property owned by federal, state, or local units of government, including parks, recreation areas, and public golf courses.”⁵⁸ Minnesota’s definition is not an exclusive list of what falls within the

⁵⁵ WIS. STAT. ANN. § 94.643(2)(a). Section 94.64 of the Wisconsin Code defines fertilizer as:

[A]ny substance, containing one or more plant nutrients, which is used for its plant nutrient content and which is designed for use or claimed to have value in promoting plant growth, except unmanipulated animal or vegetable manures, marl, liming material, sewage sludge other than finished sewage sludge products, and wood ashes.

WIS. STAT. ANN. § 94.64(1)(e) (West 2013). This definition “includes fertilizer materials, mixed fertilizers, custom mixed fertilizers, nonagricultural fertilizers and all other fertilizers or mixtures of fertilizers, regardless of type or form.” *Id.*

⁵⁶ N.J. STAT. ANN. § 58:10A-63(d) (West 2012).

⁵⁷ N.Y. ENVTL. CONSERV. LAW § 17-2101(4).

⁵⁸ MINN. STAT. ANN. § 18C.60 Subd. 1. Person is defined as “an individual, firm, corporation, partnership, association, trust, joint stock company, or unincorporated organization, the state, a state agency, or a political subdivision.” MINN. STAT. ANN. § 18C.005 Subd. 24 (West 2011).

definition of “closely mowed” and “managed grasses,” but the definition does expressly exclude “pasture, hayland, hay, turf grown on turf farms, or any other form of agricultural production.”⁵⁹

The Wisconsin law closely follows the Minnesota law. Turf is defined as land “that is planted in closely mowed, managed grass.”⁶⁰ The definition includes “residential property, golf courses, and publicly owned land,” but excludes “pasture, land used to grow grass for sod, or any other land used for agricultural production.”⁶¹

The New York statute prohibits a person from applying phosphorus fertilizer to a “lawn” or “non-agricultural turf” with few exceptions.⁶² New York broadly defines “lawn” or “nonagricultural turf” as “any non-crop land area that is covered by any grass species,” but excludes “flower or vegetable gardens, pasture, hayland, trees, shrubs, turf grown on turf farms, or any form of agricultural production.”⁶³ Although New York expressly excluded agricultural lands, it does not explicitly define what constitutes turf, and it expressly excludes flower and vegetable gardens from its definition.

New Jersey defines “turf” as land “planted in closely mowed, managed grass.”⁶⁴ Such land includes publicly owned land and residential property, but excludes golf courses and land used in the operation of a commercial farm.⁶⁵

Although these differences in the definition of turf may seem small, they affect what actions are covered by the prohibitions. Each inclusion and exclusion in the definitions reveals what uses the state is (and is not) willing to regulate. As will be discussed in Part III below, these choices show how willing the state is to

⁵⁹ MINN. STAT. ANN. § 18C.60 Subd. 1.

⁶⁰ WIS. STAT. ANN. § 94.643(1)(b).

⁶¹ *Id.*

⁶² N.Y. ENVTL. CONSERV. LAW § 17-2103(1) (McKinney 2012).

⁶³ N.Y. ENVTL. CONSERV. LAW § 17-2101(3).

⁶⁴ N.J. STAT. ANN. § 58:10A-61 (West 2012).

⁶⁵ *Id.*

regulate government and institutional actions, as well as the private actions of individuals.

Exceptions

Each state that regulates the use of phosphorus fertilizers on turf also provides exceptions to this prohibition. While all of the states contain the same two exceptions, both the Minnesota and New Jersey statutes include additional exceptions.

Minnesota allows a person to apply a phosphorus fertilizer to turf at an approved rate if: (1) a laboratory test performed during the previous three years showed that the soil has insufficient phosphorus levels “to support healthy turf growth;” (2) the person is establishing turf during the turf’s first growing season; or (3) the fertilizer is being applied to a golf course “under the direction of a person licensed, certified, or approved by an organization with an ongoing training program approved by the commissioner.”⁶⁶

Wisconsin, New York and New Jersey all included Minnesota’s first two exceptions listed above. Each of these states permits the use of a phosphorus fertilizer to establish grass by seed or sod during the lawn’s first growing season.⁶⁷ Each state also allows a person to use a phosphorus fertilizer if a soil test shows that the soil has a phosphorus deficiency.⁶⁸ None

⁶⁶ MINN. STAT. ANN. § 18C.60 Subd. 2 (West 2013); see MINN. STAT. ANN. § 18C.211 (West 2013); see also *Phosphorus Lawn Fertilizer Law*, MINN. DEP’T OF AGRIC., <http://www.mda.state.mn.us/protecting/waterprotection/phoslaw.aspx> (last visited Jan. 28, 2014).

⁶⁷ WIS. STAT. ANN. § 94.643(2)(b)(1) (West 2010); N.Y. ENVTL. CONSERV. LAW § 17-2103(1)(b) (McKinney 2012). New Jersey allows a person to use a phosphorus fertilizer to establish turf for the first time, as long as the person complies with the Soil Erosion and Sediment Control Act. N.J. STAT. ANN. § 58:10A-63(d)(2) (West 2012).

⁶⁸ WIS. STAT. ANN. § 94.643(2)(b)(2) (test must be performed no more than thirty six months before the application by a laboratory); N.Y. ENVTL. CONSERV. LAW § 17-2103(1)(a). The New Jersey statute specifies that this exception applies if a soil test within the last three years shows that phosphorus fertilizer “is

of the other states, however, chose to include in its statute Minnesota's third exception that applies to the application of fertilizer to golf courses. In fact, as discussed above, New Jersey completely exempted golf courses from its definition of turf.

The New Jersey statute also contains additional exceptions. First, the law allows a person to use a phosphorus fertilizer to reestablish or repair an area of turf.⁶⁹ In addition, the law allows a person to deliver a granular or liquid fertilizer that contains phosphorus "under the soil surface directly to the feeder roots."⁷⁰ Finally, a person can use a manipulated animal or vegetable manure fertilizer that contains phosphorus if the fertilizer doesn't contain "more than 0.25 pounds of phosphorus per 1,000 square feet" and the person otherwise complies with the statute.⁷¹

New Jersey Nitrogen Provisions

New Jersey, unlike the other states, also decided to regulate the use of nitrogen fertilizers. In these restrictions, the New Jersey bill distinguishes between the amount of fertilizer that a "person" can apply and the amount that a "professional fertilizer applicator" can apply.⁷² The nitrogen use provisions are more

necessary for the specific soils and target vegetation . . . pursuant to the associated annual fertilizer recommendation issued by the New Jersey Agricultural Experiment Station at Rutgers, the State University." N.J. STAT. ANN. § 58:10A-63(d)(1).

⁶⁹ N.J. STAT. ANN. § 58:10A-63(d)(3).

⁷⁰ N.J. STAT. ANN. § 58:10A-63(d)(4).

⁷¹ N.J. STAT. ANN. § 58:10A-63(e).

⁷² See N.J. STAT. ANN. § 58:10A-63. The applicable New Jersey statute defines "person" as "any individual, corporation, company, partnership, firm, association, political subdivision, or government entity." N.J. STAT. ANN. § 58:10A-61 (West 2011). "Professional fertilizer applicator" is defined as "any individual who applies fertilizer for hire, including any employee of a government entity who applies fertilizer within the scope of employment." *Id.*

complicated than the phosphorus use provisions, as the nitrogen provisions provide for both a content-based limit and annual rate limit for the amount of nitrogen fertilizer that a person⁷³ or a professional fertilizer applicator⁷⁴ can use. Both professional fertilizer applicators and any other person can exceed the stated limits if establishing turf during the turf's first growing season; however, the person must comply with the standards of the Soil Erosion and Sediment Control Act.⁷⁵ The other exceptions listed for the use of phosphorus fertilizers in the New Jersey do not apply to the use of nitrogen fertilizers.

⁷³ First, the law prohibits a person from applying more than “3.2 pounds of total nitrogen per 1,000 square feet” in a year. N.J. STAT. ANN. § 58:10A-63(a)(1). In addition, the law states that a person cannot:

[A]pply fertilizer containing: (a) nitrogen that is less than 20 percent slow release; (b) nitrogen to turf at a rate of more than 0.7 pounds of water-soluble nitrogen per 1,000 square feet per application; or (c) nitrogen to turf at a rate of more than 0.9 pounds of total nitrogen per 1,000 square feet per application

N.J. STAT. ANN. § 58:10A-63(a)(2). § 58:10A-61 defines “slow release nitrogen” as “nitrogen in a form that is released over time that is not water soluble” and “water-soluble nitrogen” as “nitrogen in a water-soluble form that does not have slow or controlled release properties.” N.J. STAT. ANN. § 58:10A-61.

⁷⁴ First, professional fertilizer applicators cannot apply to turf a nitrogen fertilizer at a rate that exceeds “more than 0.7 pounds of water-soluble nitrogen per 1,000 square feet per application” and “more than one pound of total nitrogen per 1,000 square feet per application.” N.J. STAT. ANN. § 58:10A-63(b)(1). In addition, professional fertilizer applicators are prohibited from applying fertilizer to turf in an amount greater than “4.25 pounds of total nitrogen per 1,000 square feet” in a year. N.J. STAT. ANN. § 58:10A-63(b)(2).

⁷⁵ N.J. STAT. ANN. § 58:10A-63(g).

General Prohibitions

Minnesota, Wisconsin, New York, and New Jersey also included general prohibitions in their statutes that prohibit a person from applying all fertilizers, regardless of phosphorus content (and nitrogen content in New Jersey). The first of these prohibitions is a common sense one: it precludes the use of fertilizer on impervious surfaces. For example, the Minnesota law prohibits any person from applying fertilizer, regardless of whether the fertilizer contains phosphorus, to an impervious surface, which is defined as “a highway, street, sidewalk, parking lot, driveway, or other material that prevents infiltration of water into the soil.”⁷⁶ When there is a release of fertilizer onto an impervious surface, the law requires the person to immediately contain the release and either apply the fertilizer to turf in accordance with the law or place the fertilizer into a container.⁷⁷ Wisconsin, New York, and New Jersey all included a similar provision in their statutes.⁷⁸

Wisconsin, New York, and New Jersey also included a temporal prohibition in their statutes. The Wisconsin statute does not apply to a specific time period, but rather, prohibits a person from applying fertilizer when the ground is frozen.⁷⁹ The New York law prohibits a person from applying any fertilizer to

⁷⁶ MINN. STAT. ANN. § 18C.61 (West 2013).

⁷⁷ *Id.*

⁷⁸ See WIS. STAT. ANN. § 94.643(2)(d) (West 2010); see also N.Y. ENVTL. CONSERV. LAW § 17-2103(3)(b) (McKinney 2012) (listing examples of impervious surfaces such as sidewalks, roadways and parking lots); see also N.J. STAT. ANN. § 58:10A-62(a)(2) (West 2011).

⁷⁹ WIS. STAT. ANN. § 94.643(2)(c). Wisconsin excludes “manipulated animal or vegetable manure or finished sewage sludge product” from the definition of “fertilizer.” § 94.643(1)(a). However, these items are included in both of Wisconsin’s general prohibitions. A person cannot apply “manipulated animal or vegetable manure, or finished sewage sludge product” either to an impervious surface or when the ground is frozen. § 94.643(2)(c)–(d).

a “lawn or non-agricultural turf between December first and April first, annually.”⁸⁰ New Jersey’s temporal restriction differs depending on who is applying the fertilizer.⁸¹ A professional fertilizer applicator cannot apply a phosphorus or nitrogen fertilizer to turf either “when the ground is frozen” or “before March 1st or after December 1st in any calendar year.”⁸² This time frame changes for a person who is not a professional fertilizer applicator, as the application of a phosphorus or nitrogen fertilizer to turf is prohibited either “when the ground is frozen” or “before March 1st or after November 15th in any calendar year,” which creates more a safety margin for non-professional applicators.⁸³

The New Jersey statute also adds a new climatological restriction. The law prohibits a person from applying fertilizers to turf during or just before a heavy rainfall (as will be defined by the Office of the New Jersey State Climatologist at Rutgers, the State University). There is also additional clarifying language that prohibits fertilizer applications “when soils are

⁸⁰ N.Y. ENVTL. CONSERV. LAW § 17-2103(3)(a).

⁸¹ The New Jersey statute defines “professional fertilizer applicator” as “any individual who applies fertilizer for hire, including any employee of a government entity who applies fertilizer within the scope of employment.” N.J. STAT. ANN. § 58:10A-61 (West 2011).

⁸² N.J. STAT. ANN. § 58:10A-62(b) (West 2011). § 58:10A-61 defines “fertilizer” as:

[A] fertilizer material, mixed fertilizer or any other substance containing one or more recognized plant nutrients, which is used for its plant nutrient content, designed for use or claimed to have value in promoting plant growth, and sold, offered for sale, or intended for sale; except that it shall not include unmanipulated animal or vegetable manures, agricultural liming materials, wood ashes, or processed sewage wastewater solids.

N.J. STAT. ANN. § 58:10A-61.

⁸³ N.J. STAT. ANN. § 58:10A-62(a)(3).

saturated and a potential for fertilizer movement off-site exists.”⁸⁴

Waterbody Provisions

The New York and New Jersey laws contain a prohibition that was not found in the previous states’ fertilizer laws, as both states have chosen to regulate the use of fertilizer near waterways. By including these provisions, both states appear to be trying to prevent the direct application of fertilizer into waterways. However, New York and New Jersey have written these provisions differently. Specifically, the New York law is broader, prohibiting the use of any fertilizer near waterways, while New Jersey’s provisions only apply to the use of fertilizer containing phosphorus or nitrogen.

The New York statute prohibits a person, with limited exceptions, from applying any fertilizer to “any lawn or non-agricultural turf on any real property within twenty feet of any surface water.”⁸⁵ A person can apply fertilizer in the area if: (1) the turf is separated from the water by a “natural vegetative buffer” that is both continuous and ten feet or more in width; (2) the person uses a drop spreader, deflector shield or spreader guard; or (3) the application is during the first growing season of a newly established lawn or non-agricultural turf.⁸⁶

The New Jersey statute also contains restrictions for applying fertilizer near a “waterbody,” which the law defines as “a surface water feature, such as a lake, river, stream, creek, pond, lagoon, bay or estuary.”⁸⁷ The New Jersey law expands the buffer zone found in the New York statute by prohibiting a person from applying a fertilizer containing phosphorus or nitrogen to turf located “within 25 feet of any waterbody.”⁸⁸ Like New York, there are exceptions to this prohibition. A

⁸⁴ N.J. STAT. ANN. § 58:10A-62(a)(1).

⁸⁵ N.Y. ENVTL. CONSERV. LAW § 17-2103(3)(c).

⁸⁶ *Id.*

⁸⁷ N.J. STAT. ANN. § 58:10A-61.

⁸⁸ N.J. STAT. ANN. § 58:10A-63(f)(1) (West 2012).

person can apply a phosphorus or nitrogen fertilizer up to 10 feet from a waterbody if the person uses “a drop spreader, rotary spreader with a deflector or targeted spray liquid.”⁸⁹ In addition, a professional fertilizer applicator can use a phosphorus or nitrogen fertilizer to apply a “rescue treatment,” which is defined as a fertilizer treatment that meets the nitrogen restrictions discussed above, is used on turf that is ten to twenty-five feet from a waterbody, and is applied only “once a year.”⁹⁰

SALE AND DISPLAY PROVISIONS

Although it seems like a logical place to start an effort to reduce the use of phosphorus fertilizers, Minnesota chose not to regulate the actual sale of fertilizer. Maine, however, made sale and display restrictions the hallmark of its law. Wisconsin, New York, and New Jersey followed Maine’s lead and included similar provisions in their fertilizer statutes. However, as the provisions described below show, while states have been willing to regulate the sale and display of phosphorus fertilizer, no state has decided to flat out prohibit the sale of these fertilizers.

The Maine law regulates the sale of fertilizer containing phosphorus by requiring any retail store that sells such fertilizers after January 1, 2008 to post a sign approved by the Maine Department of Environmental Protection.⁹¹ The sign must explain to consumers that because it adversely effects water quality, it is not appropriate to use fertilizer containing phosphorus on turf or nonagricultural lawns except when a test shows the soil has a phosphorus deficiency or the person is “establishing a new lawn or turf, including . . . at a sod farm, or for reseeded or overseeding an existing lawn or turf.”⁹² These

⁸⁹ *Id.*

⁹⁰ N.J. STAT. ANN. § 58:10A-63(f)(3).

⁹¹ ME. REV. STAT. ANN. tit. 38, § 419(2)(B) (2007).

⁹² *Id.* The law gives the following additional sign requirements and definition for retail store:

The sign required by this paragraph must be positioned between 4 and 7 feet above the floor and prominently posted

sign requirements do not apply to fertilizers that will be used in flower or vegetable gardens or on agricultural crops.⁹³ The situations that must be listed on the signs mirror the use exceptions in Minnesota, Wisconsin, New York, and New Jersey. In addition, the exception for flower and vegetable gardens mirrors the exception that New York later included in its definition of turf.

The Wisconsin statute sale provisions are interesting, in that whether or not a person can sell a phosphorus fertilizer depends on the seller's knowledge of the buyer's intent. The law provides that a person cannot sell a phosphorus fertilizer unless the seller knows that the purchaser is going to use the fertilizer to establish grass during its first growing season, to cure a phosphorus deficiency in the soil, or for agricultural production, including for application to a sod farm or a pasture.⁹⁴ The law further provides that sellers cannot display phosphorus fertilizers, but the seller can post a sign that states phosphorus fertilizers can be used to establish grass during the first growing season or if the soil has a phosphorus deficiency.⁹⁵

The New York statute also regulates the sale and display of phosphorus fertilizer. The law states that a retailer must display phosphorus fertilizers separately from other non-phosphorus fertilizers.⁹⁶ Further, a retailer must post a sign next to phosphorus fertilizers that states:

Phosphorus runoff poses a threat to water quality. Therefore, under New York law, phosphorus-containing fertilizer may only be applied to lawn or non-agricultural turf when:

where fertilizers containing phosphorus for use on lawns or turf are displayed. For purposes of this paragraph, "retail store" means a commercial establishment that sells fertilizer on the store premises for use off the premises.

Id.

⁹³ ME. REV. STAT. ANN. tit. 38, § 419(3)(B).

⁹⁴ WIS. STAT. ANN. § 94.643(3) (West 2010).

⁹⁵ WIS. STAT. ANN. § 94.643(4).

⁹⁶ N.Y. AGRIC. & MKTS. LAW § 146-g(a) (McKinney 2012).

- (1) A soil test indicates that additional phosphorus is needed for growth of that lawn or non-agricultural turf; or
- (2) The fertilizer is used for newly established lawn or non-agricultural turf during the first growing season.⁹⁷

Through these signage provisions, New York, like the other states, is educating the consumer by requiring signs that inform the consumer of the fertilizer law, as well as reducing the amount of phosphorus fertilizer purchased in the state by regulating the display of these fertilizers.

New Jersey has taken a similar approach by having both labeling and sale requirements. Under the statute, only fertilizers with a certain nitrogen content that complies with the use provisions can be sold.⁹⁸ In addition, a store cannot sell fertilizer that contains any phosphorus to a consumer unless: (1) a soil test shows a phosphorus deficiency; (2) the consumer is establishing turf for the first time; or (3) the consumer is re-establishing or repairing turf.⁹⁹ A consumer is defined as an individual who purchases fertilizer for personal use and not for business purposes.¹⁰⁰ Thus, these sale prohibitions only apply to individuals buying fertilizer for their homes.

ENFORCEMENT AND PENALTY PROVISIONS

Although enforcement and penalty provisions are often considered to be the “teeth” of any statute, both the Minnesota and Maine statutes include minimal or non-existent enforcement and penalty provisions. The Minnesota law provides that a violation of its turf fertilizer statute is a petty misdemeanor that the local government can enforce under its

⁹⁷ N.Y. AGRIC. & MKTS. LAW § 146-g(b). This sign must be at a minimum of “eight and one-half inches by eleven inches in size.” *Id.*

⁹⁸ N.J. STAT. ANN. § 4:9-15.13a(a) (West 2013).

⁹⁹ N.J. STAT. ANN. § 4:9-15.13a(b).

¹⁰⁰ N.J. STAT. ANN § 4:9-15.13a(d).

existing authority,¹⁰¹ while the Maine law does not include any penalty or enforcement provisions at all for stores that fail to comply with the law's sale and display requirements.¹⁰²

Wisconsin went a different direction and included penalty provisions for violations of its law. Under the Wisconsin statute, a first time violator is subject to a fine of up to \$50.¹⁰³ For a second or any subsequent violation, the violator is subject to a fine ranging from \$200–\$500.¹⁰⁴

New York followed Wisconsin's lead, but decided to include more robust penalty provisions. Under the New York statute, the Commissioner of the Department of Environmental Conservation can assess fines "after a hearing or opportunity to be heard."¹⁰⁵ In New York, the fines for "any person" and for the owners of a household are different. For violations by any person, the violator is subject to a civil penalty up to \$500 for the first violation and up to \$1,000 for any subsequent violations.¹⁰⁶

For violations non-professional actors, however, the penalties are lower. Penalties for violations by "[a]ny owner or owner's agent, or occupant of a household" include a written warning and educational materials for his or her first violation, a civil penalty of up to \$100 for a second violation and up to \$250 for any subsequent violations.¹⁰⁷ Further, an owner or owner's agent is exempt from violations committed by occupants of households, therefore exempting from liability the owners of

¹⁰¹ MINN. STAT. ANN. § 18C.62 (West 2013).

¹⁰² See ME. REV. STAT. ANN. tit. 38, § 419 (2007).

¹⁰³ WIS. STAT. ANN. § 94.643(5) (West 2010). The enforcement of these provisions is governed by WIS. STAT. ANN. § 93.22 (West 2013).

¹⁰⁴ WIS. STAT. ANN. § 94.643(5).

¹⁰⁵ N.Y. ENVTL. CONSERV. LAW § 71-1945(1)–(2) (McKinney 2012).

¹⁰⁶ N.Y. ENVTL. CONSERV. LAW § 71-1945(1).

¹⁰⁷ N.Y. ENVTL. CONSERV. LAW § 71-1945(2).

property from the action of their tenants.¹⁰⁸ By providing for lower penalties for homeowners, New York is showing a reluctance to regulate and enforce against individual, residential actors, as opposed to professional lawn care companies.

Under the New Jersey statute, “any municipality, county, local soil conservation district or local health agency” can enforce the statute and any regulation or rules adopted under the statute, and a local soil conservation district is able to seek an injunction to prevent or prohibit a violation of the statute.¹⁰⁹ Like New York, the New Jersey statute contains different penalty provisions depending on the status of the actor, but New Jersey distinguishes between “professional fertilizer applicators” and any other “person.” A “professional fertilizer applicator” is “any individual who applies fertilizer for hire, including any employee of a government entity who applies within the scope of employment.”¹¹⁰ As a first time violator, a professional fertilizer applicator is subject to a \$500 civil penalty, and can be fined up to \$1,000 for any subsequent violations.¹¹¹ In addition, if a professional fertilizer applicator is continually violating the terms of the statute, each day of the violation is a separate offense.¹¹² In comparison, any person is subject to a penalty that will be established by municipal ordinance.¹¹³ Like New York, New Jersey is showing a reluctance here to impose serious penalties on individual property owners and a preference for regulating commercial actors, which is more in-line with traditional government regulation.

¹⁰⁸ *Id.*

¹⁰⁹ N.J. STAT. ANN. § 58:10A-65(c) (West 2012).

¹¹⁰ N.J. STAT. ANN. § 58:10A-61 (West 2011).

¹¹¹ N.J. STAT. ANN. § 58:10A-65(a).

¹¹² *Id.*

¹¹³ N.J. STAT. ANN § 58:10A-65(b).

EDUCATION PROVISIONS

Mandatory education can be a mechanism through which the states increase public awareness of both the adverse effects of fertilizers and how the public can curtail its fertilizer use. If they had more information, the argument goes, the public would voluntarily cut down on the amount of phosphorus and nitrogen getting into a state's waterways. Despite the "low-hanging fruit" nature of public ad campaigns, only Minnesota and New Jersey included education provisions in their statutes.

The Minnesota law's education provision directs the Minnesota Department of Agriculture to create consumer information on the use restrictions and recommend best practices for phosphorus lawn fertilizers and other residential and urban sources of phosphorus.¹¹⁴ The law also directs the Department of Agriculture to encourage research on the effects of phosphorus turf fertilizer on stormwater quality in urban areas and publish a report by 2007 on the effectiveness of the phosphorus fertilizer restrictions.¹¹⁵ The Department of Agriculture completed this report, which is discussed in Part IV below, on March 15, 2007.¹¹⁶

Like Minnesota, the New Jersey bill requires a public education program. First, the statute directs the New Jersey Agricultural Experiment Station at Rutgers, the State University ("NJAES") to develop a public education program that covers, among other topics, nutrient pollution and best management practices for fertilizer use.¹¹⁷ In addition, the statute requires NJAES to create informational posters for retail display and

¹¹⁴ MINN. STAT. ANN. § 18C.60 Subd. 3 (West 2013).

¹¹⁵ MINN. STAT. ANN. § 18C.60 Subd. 4.

¹¹⁶ REPORT TO THE MINNESOTA LEGISLATURE, *supra* note 36. See Part V of this paper for more information on this report.

¹¹⁷ N.J. STAT. ANN. § 58:10A-66(a) (West 2012). Specifically, the law provides that the public education program should cover, but is not limited to, "nutrient pollution, best management practices for fertilizer use, soil testing, proper interpretation of fertilizer label instructions, and the proper use and calibration of fertilizer application equipment." *Id.*

make any other literature it develops available on the NJAES website.¹¹⁸

The New Jersey statute also mandates a training program for professional fertilizer applicators, requiring them to attend trainings and be certified by NJAES before they apply any fertilizer. A professional fertilizer applicator can become certified by either obtaining a “fertilizer application certification” or by training “under the direct supervision of a certified professional fertilizer applicator” before applying a fertilizer to turf.¹¹⁹ The statute also outlines requirements for the certification program. The statute states that the training of professional fertilizer applicators should cover, among other things, the environmental impacts of fertilizer runoff and nutrient pollution, the applicable laws and regulations, best management practices that will be developed by NJAES, the proper calibration and use of fertilizer application equipment and how to correctly interpret fertilizer labels.¹²⁰ In addition, the law provides that NJAES should have an examination for the certification program¹²¹ and make available on its website a current list of certified professional fertilizer applicators.¹²²

PART III. STRENGTHS AND WEAKNESSES

Minnesota, Maine, Wisconsin, New York and New Jersey have all chosen a particular way to regulate phosphorus fertilizers in its respective state. Almost all of the states have chosen to regulate the use of fertilizer, while some also regulate its sale and display. In addition, the states differ in their enforcement and penalty provisions, and only Minnesota and New Jersey have included education provisions. Each of these

¹¹⁸ *Id.*

¹¹⁹ N.J. STAT. ANN. § 58:10A-63(c)(1) (West 2012).

¹²⁰ N.J. STAT. ANN. § 58:10A-64(a) (West 2012).

¹²¹ N.J. STAT. ANN. § 58:10A-64(c).

¹²² N.J. STAT. ANN. § 58:10A-63(f).

features of the statutes will be discussed in turn below, including a discussion of any weaknesses of these provisions.

USE PROVISIONS

In deciding to regulate the use of phosphorus fertilizer (and nitrogen in New Jersey), Minnesota, Wisconsin, New York, and New Jersey have all made choices on the structure of these provisions. Each state has decided who, what, where, and when to regulate, as well as when to allow exceptions to these prohibitions. While some of these decisions make sense, some of the provisions could be improved upon.

Who is Regulated?

Each state has included prohibitions for when a “person” applies fertilizer to turf. Under these general provisions, anyone who applies fertilizers, including individual homeowners, must comply with the use prohibitions and can be enforced against. However, as will be discussed in more detail below in the enforcement and education portions of this section, just because an individual can be liable under the statute does not mean that he or she will know about the provision, have an incentive to comply with it, or will ultimately face an enforcement action.

Both New York and New Jersey have chosen to deviate from this general “any person” regulatory regime and treat two categories of actors differently than any “person.” New York has done this by creating lesser penalties for owners, owner’s agents, and occupants of households.¹²³ In doing so, New York has made institutional applicators of fertilizers more liable than homeowners and has shown its reluctance to regulate individual homeowners or landscape professionals hired by homeowners to care for their lawns.¹²⁴

New Jersey, on the other hand, has taken an entirely different approach. Through its statute, New Jersey has put a higher burden on professional fertilizer applicators by requiring them to either become certified or to receive training and work

¹²³ N.Y. ENVTL. CONSERV. LAW § 71-1945(1)–(2) (McKinney 2012).

¹²⁴ N.Y. ENVTL. CONSERV. LAW § 71-1945(2).

under a certified professional fertilizer applicator.¹²⁵ In deciding to create this requirement, New Jersey has placed both an educational burden on professional fertilizer applicators and an administrative burden on NJAES, who has been charged with running the certification program.¹²⁶ Moreover, the New Jersey statute imposes specific penalties for violations by professional fertilizer applicators, while leaving the penalties for other “persons” in the state up to local ordinances.¹²⁷

While the New Jersey bill was not passed without a debate between the proponents of the bill and the lawn care industry,¹²⁸ New Jersey decided to depart from the models of other state bills and more strictly regulate professional fertilizer applicators. While it is unknown at this time whether the structure of the New Jersey bill will be more effective than other states, the lawn care industry has expressed its frustration with

¹²⁵ N.J. STAT. ANN. § 58:10A-63(c)(1).

¹²⁶ N.J. STAT. ANN. § 58:10A-63(c)–(d).

¹²⁷ N.J. STAT. ANN. § 58:10A-65(a)–(b) (West 2012).

¹²⁸ Kirk Moore, *Fertilizer Debate Puts NJ Environmentalists Against Lawn Care Groups*, ASBURY PARK PRESS (Oct. 7, 2010), <http://www.app.com/article/CN/20101007/STATE/101007020/>. For example, the New Jersey Green Industry Council (“NJGIC”) stated that the New Jersey statute is “a bad bill that will create big problems” and will have a “severe economic impact on green industry businesses and the NJ economy” by imposing excessive fines. *New Jersey – Oppose S. 1411 and A. 2290*, PLANET (2005–2010), <http://www.congressweb.com/PLN/TakeAction/Background/LetterGroupID/71>. In addition, NJGIC believes the Bill will create an inferior NJ specific fertilizer. *Id.* PLANET, which stands for “Professional Landcare Network,” has stated that it would like a statute that sets lower, more “reasonable fines” for violating the law. *Id.* PLANET also states that NJGIC and other stakeholders want a bill that will preempt local ordinances, set “reasonable buffer distances”, and allow towns to expand these buffers if necessary and regulate the content of fertilizers based on agronomic recommendations. *Id.*

the certification program and the higher penalty provisions.¹²⁹ However, by creating these standards for professional fertilizer applicators, New Jersey has taken an important step toward actually changing behavior in the state, by targeting at least a segment of applicators for real enforcement.

By instituting a professional fertilizer applicator training program, New Jersey is treating professional fertilizer applicators in the state like professionals in other fields that have stringent educational and training requirements. This has put real teeth into the statute by providing for such hefty fines for the professional fertilizer applicators in its state, which the other states lack. Besides New York's regulation of institutional applicators and New Jersey's regulation of professional fertilizer applicators, a "person" does not have much of an incentive to comply with the provisions of these statutes in any of these states.

What to Regulate?

In deciding to regulate the use of fertilizer, Minnesota, Wisconsin, New York, and New Jersey have each made decisions on what actions it wants to regulate. All of these states have chosen to regulate the use of fertilizers containing phosphorus and have followed Minnesota by prohibiting a person from applying fertilizer that contains phosphorus to turf.¹³⁰ The two outlier states are Maine, which chose not to regulate the use of fertilizer at all, and New Jersey, which chose to regulate fertilizers that contain nitrogen as well.¹³¹

¹²⁹ Jill P. Capuzzo, *The Cost of Green Grass*, N.Y. TIMES, Apr. 22, 2012, at RE9, http://www.nytimes.com/2012/04/22/realestate/new-jersey-in-the-region-new-law-complicates-lawn-care.html?_r=0.

¹³⁰ MINN. STAT. ANN. § 18C.60 (West 2013). See also MINN. DEP'T OF AGRIC., *Minnesota Phosphorus Lawn Fertilizer Law*, *supra* note 66; MCKINNEY'S CONSOL. LAWS OF N.Y. ANNOTATED, BOOK 17 1/2 ENVTL. CONSERV. LAW § 17-2103(1) (Supp. 14).

¹³¹ N.J. STAT. ANN. § 58:10A-62(a)(3) (West 2011); see ME. REV. STAT. ANN. tit. 38, § 419 (2007).

Use of Phosphorus Fertilizer on Turf

Minnesota, Wisconsin, New York, and New Jersey have all regulated the use of phosphorus fertilizers on turf. As discussed above, there are two elements to this prohibition: (1) what is a phosphorus fertilizer and (2) what is turf. While New York allows a person to use a fertilizer that has less than 0.67 percent phosphorus in all situations, the other states do not regulate based on phosphorus content.¹³² For instance, New Jersey has completely banned the use of all fertilizers that contain phosphorus, except in certain situations, which are described below in the exceptions subsection.¹³³ Because one of the main arguments for these statutes is that even a small reduction of phosphorus use can have a big impact on waterways, New Jersey's complete ban on the use of phosphorus fertilizers may be the most protective provision.

Generally, all of the states' definitions for turf include mowed and managed grass, but exclude any kind of agricultural production.¹³⁴ Most of the provisions also include publicly

¹³² N.Y. ENVTL. CONSERV. LAW § 17-2101(4) (McKinney 2012).

¹³³ N.J. STAT. ANN. § 58:10A-63 (West 2012).

¹³⁴ The states have chosen to define turf as follows:

- Minnesota: Turf is defined as “noncrop land planted in closely mowed, managed grasses including, but not limited to, residential and commercial residential property, private golf courses, and property owned by federal, state, or local units of government, including parks, recreation areas, and public golf courses” and excludes “pasture, hayland, hay, turf grown on turf farms, or any other form of agricultural production.” MINN. STAT. ANN. § 18C.60.

- Maine: The statute states that fertilizer containing phosphorus is inappropriate to use on turf or nonagricultural lawns, but the statute does not define these terms. ME. REV. STAT. ANN. tit. 38, § 419(2)(B).

- Wisconsin: Turf is defined as land “that is planted in closely mowed, managed grass” and includes publically owned land, golf courses and residential property, but excludes “pasture, land used to grow grass for sod, or any other land used for

owned land and golf courses.¹³⁵ Two states, however, chose to exempt some fairly broad categories. New York explicitly exempts flower and vegetable gardens and New Jersey explicitly exempts golf courses and commercial farms.¹³⁶ With these definitions, each state has exhibited the general intent to regulate the use of fertilizer on lawns and not regulate any type of agricultural production.

Each state has taken a slightly different stance on the regulation of golf courses. Whether golf courses are regulated is potentially a huge issue because golf courses are large expanses of well-maintained turf and either contain or are located near waterways. Minnesota and Wisconsin regulate all golf courses, regardless of ownership.¹³⁷ New York does not provide any guidance on whether golf courses are included in its definition of turf, and New Jersey has chosen to completely exempt golf

agricultural production.” WIS. STAT. ANN. § 94.643(1)(b) (West 2010).

- New York: “Lawn” or “nonagricultural turf” is defined as “non-crop land area that is covered by any grass species,” but excludes “flower or vegetable gardens, pasture, hayland, trees, shrubs, turf grown on turf farms, or any form of agricultural production.” N.Y. ENVTL. CONSERV. LAW § 17-2101(3).

- New Jersey: “Turf” is defined as land “planted in closely mowed, managed grass,” which included publicly owned land and residential property, but excludes golf courses and commercial farm operations. Golf courses are included in a provision that states that only professional fertilizer applicators can apply fertilizer to a golf course. N.J. STAT. ANN. § 58:10A-61 (West 2011).

¹³⁵ See MINN. STAT. ANN. § 18C.60.

¹³⁶ N.Y. ENVTL. CONSERV. LAW § 17-2101(3); N.J. STAT. ANN. § 58:10A-61.

¹³⁷ MINN. STAT. ANN. § 18C.60; WIS. STAT. ANN. § 94.643(1)(b).

courses, although professional fertilizer applicators are the only ones authorized to apply fertilizers to golf courses.¹³⁸

Despite its otherwise stringent provisions, the New Jersey bill provides less protection for its waterways than the other state statutes due to the golf course exemption, and New Jersey should strongly consider revoking this exemption. The main element of each state's definition of turf is mowed and manicured grass.¹³⁹ Golf courses clearly fit within this definition. In addition, most golf courses are either close to waterways or have some water features and use a great deal of fertilizer. Thus, regulating the use of fertilizer on golf courses could have a huge impact on water quality and golf courses should be included in the definition of turf.

Exceptions

In establishing their exceptions to the use of phosphorus fertilizers, Minnesota, Wisconsin, New York, and New Jersey all have included two exceptions in their statutes, with some slight variations. First, each state allows a person to use a phosphorus fertilizer if a soil test shows that the soil is deficient in phosphorus.¹⁴⁰ Second, the states allow a person to use a phosphorus fertilizer if the person is establishing turf during the turf's first growing season.¹⁴¹ Since poor turf health and barren land can lead to erosion and poor water quality,¹⁴² these exceptions will allow a person to either fix a soil deficiency that

¹³⁸ N.Y. ENVTL. CONSERV. LAW § 17-2101(3); N.J. STAT. ANN. § 58:10A-61.

¹³⁹ N.Y. ENVTL. CONSERV. LAW § 17-2101(4); MINN. STAT. ANN. § 18C.60; N.J. STAT. ANN. § 58:10A-61; WIS. STAT. ANN. § 94.643.

¹⁴⁰ MINN. STAT. ANN. § 18C.60 Subd. 2; WIS. STAT. ANN. § 94.643(2)(b)(2); N.Y. ENVTL. CONSERV. LAW § 17-2103(1)(a) (McKinney 2012); N.J. STAT. ANN. § 58:10A-63(d)(1) (West 2012).

¹⁴¹ MINN. STAT. ANN. § 18C.60 Subd. 2; WIS. STAT. ANN. § 94.643(2)(b)(1); N.Y. ENVTL. CONSERV. LAW § 17-2103(1)(b); N.J. STAT. ANN. § 58:10A-63(d)(2).

¹⁴² REPORT TO THE MINNESOTA LEGISLATURE, *supra* note 36.

will prevent a healthy lawn from growing or will allow a person to establish a healthy turf area.

However, except for New York, the states have written the first exception to allow a person to apply a phosphorus fertilizer to turf if a soil test shows a phosphorus deficiency any time in the last *three* years. Seemingly, this would allow a person who has had a soil test on his or her property that shows a phosphorus deficiency to apply fertilizer on his or her property for up to next three years, which will allow the person to introduce a large amount of nutrient pollution into the environment. Therefore, states should provide for a smaller time period for this exception, as long as the shorter time period will allow for the phosphorus deficiency to be cured. States could perhaps do this by mirroring the second exception for establishing lawns and limiting the exception to one growing season.

New Jersey also provides some additional exceptions to its prohibitions on the use of phosphorus fertilizers; the most important of which is the exception that allows a person to use a phosphorus fertilizer to reestablish or repair an area of turf.¹⁴³ The New Jersey statute does not further discuss or define what would constitute repairing, which might create confusion in the bill's implementation and lead to a loop-hole in the bill for the use of fertilizers. However, the statute allows the New Jersey Department of Environmental Protections to adopt rules and regulations to implement the statute, and therefore, the state could address this issue by further clarifying what constitutes repairing.

¹⁴³ N.J. STAT. ANN. § 58:10A-63(d)(3). The other phosphorus fertilizer exceptions in the New Jersey statute are as follows. First, a person can apply phosphorus fertilizer to deliver a granular or liquid fertilizer that contains phosphorus “under the soil surface directly to the feeder roots.” N.J. STAT. ANN. § 58:10A-63(d)(4). The second allows a person to use a manipulated animal or vegetable manure fertilizer that contains phosphorus if the fertilizer doesn't contain “more than 0.25 pounds of phosphorus per 1,000 square feet” and the person otherwise complies with the statute. N.J. Stat. Ann. § 58:10A-63(e).

Geographic Restrictions

In each of its statutes, the states have also decided where to regulate the use of fertilizers; specifically on impervious surfaces and those areas close to waterbodies.

Impervious Surfaces

Minnesota, Wisconsin, New York, and New Jersey all prohibit any person from applying fertilizer, regardless of whether the fertilizer contains phosphorus, to an impervious surface, and require that any accidental releases must be immediately contained and either applied to turf in accordance with the fertilizer law or placed into a container.¹⁴⁴ Clearly, regulating the use of fertilizers on impervious surfaces is common sense, as the fertilizer will not be absorbed into the surface and will be moved by water as runoff into waterways. However, as logical as these provisions seem, they do have some flaws. First of all, the regulations will be hard to enforce, as the relevant authority would have to catch the person either applying fertilizer or see the remnants of a fertilizer application on the impervious surface.

Secondly, it is hard to see how the general public would become aware of these provisions. Although most of the statutes have provisions intended to educate the public about nutrient pollution, most of these provisions relate to the display of phosphorus fertilizers and do not require any statement regarding the prohibition on applying fertilizer to impervious surfaces. Likewise, Minnesota and New Jersey's public education programs focus on creating informational materials that discuss nutrient pollution and best management practices, but the provisions do not explicitly require any discussion of the impervious surface prohibition.¹⁴⁵ Therefore, as will be discussed below in the Public Awareness section of Part IV, the major flaw of the impervious surface prohibition is the huge risk that the public will be unaware of the provision, while the

¹⁴⁴ MINN. STAT. ANN. § 18C.61 (West 2013); N.Y. ENVTL. CONSERV. LAW § 17-2101(3)(b); WIS. STAT. ANN. § 94.643(2)(d); N.J. STAT. ANN. § 58:10A-62(a)(2) (West 2011).

¹⁴⁵ N.J. STAT. ANN. § 58:10A-66(a) (West 2012).

statutes provide no mechanism for curing this lack of public awareness. If people are never aware of the law, the states will never benefit from a reduction of nutrient pollution resulting from compliance.

Waterbodies

Both the New York and New Jersey laws—the two most recent state turf fertilizer laws—regulate the use of fertilizer near waterways, with certain exceptions.¹⁴⁶ In New York, a person can apply fertilizer near waterways if there is “a continuous natural vegetative buffer” at least ten feet wide between the lawn and the surface water and the person uses a drop spreader, deflector shield or spreader guard,¹⁴⁷ or if it is the first growing season of a newly established lawn or non-agricultural turf.¹⁴⁸ In New Jersey, a person can apply a phosphorus or nitrogen fertilizer in the area that is between 10 and 25 feet from a waterbody if the person uses “a drop spreader, rotary spreader with a deflector or targeted spray liquid.”¹⁴⁹ Further, a professional fertilizer applicator can apply a phosphorus or nitrogen fertilizer in the 25-foot “buffer zone” as a rescue treatment once a year.¹⁵⁰

¹⁴⁶ As stated above, New York prohibits a person from applying any fertilizer to a lawn or non-agricultural turf that is within twenty feet of surface water, with certain exceptions. N.Y. ENVTL. CONSERV. LAW § 17-2103(3)(c). In the New Jersey statute, a person is prohibited from applying a nitrogen or phosphorus fertilizer to turf that is within 25 feet of a water way. N.J. STAT. ANN. § 58:10A-63(f)(1).

¹⁴⁷ N.Y. ENVTL. CONSERV. LAW § 17-2103(3)(c).

¹⁴⁸ *Id.*

¹⁴⁹ N.J. STAT. ANN. § 58:10A-63(f)(1).

¹⁵⁰ N.J. STAT. ANN. § 58:10A-63(f)(3). A rescue treatment is defined as fertilizer treatment that meets the nitrogen restrictions discussed above and is applied only “once a year to an area between 10 and 25 feet of a waterbody.” *Id.*

At first glance, these prohibitions make sense because they are meant to prevent fertilizer from being applied directly into the waterway. Allowing an applicator to use a drop spreader or targeted spray closer to water will enable the applicator to better aim the fertilizer and help prevent the fertilizer from going into the water instead of onto the turf; however, this exception does not prevent any fertilizer that has not been absorbed by the turf from flowing directly into the waterway, either when it rains or when the turf is watered. In this way, New York's exception that allows an application if there is a vegetative buffer makes sense and is potentially more effective, as the vegetative buffer may be able to absorb any excess fertilizer.

In addition, except for the exceptions discussed above, New York prohibits the application of any fertilizer near waterways, while New Jersey's restrictions only prohibit the use of phosphorus or nitrogen fertilizers near waterways. New York has the wiser provision here. The danger involved in applying fertilizer near waterways is, either, that fertilizer will be applied directly into the waterway or will be taken into the waterway rather easily, either by rain or when the turf is watered. The latter is analogous to the application of fertilizer to an impervious surface, where the fertilizer will not be absorbed and will be taken directly into the water. In this way, New York followed its own lead in prohibiting the application of all fertilizers to these areas near waterways.

When to Regulate: What are the temporal and climatological requirements?

Wisconsin, New York, and New Jersey impose temporal or climate-related requirements on the application of fertilizer. Wisconsin prohibits a person from applying fertilizer to turf "when the ground is frozen."¹⁵¹ New York prohibits a person from applying fertilizer from December first to April first each year.¹⁵² New Jersey prohibits a professional fertilizer applicator from applying a phosphorus or nitrogen fertilizer from December first to March first or "when the ground is frozen,"¹⁵³

¹⁵¹ WIS. STAT. ANN. § 94.643(2)(c) (West 2010).

¹⁵² N.Y. ENVTL. CONSERV. LAW § 17-2103(3)(a).

¹⁵³ N.J. STAT. ANN. § 58:10A-62(b) (West 2012).

and any other person from applying a phosphorus or nitrogen fertilizer “before March 1st or after November 15th” or “when the ground is frozen.”¹⁵⁴ Finally, the New Jersey statute adds a new prohibition that prohibits a person from applying fertilizers to turf during or just before a heavy rainfall or “when soils are saturated and a potential for fertilizer movement off-site exists.”¹⁵⁵

Much like the impervious surface prohibitions, one can see the reasoning for applying these restrictions in states where the ground will freeze in the winter. Since fertilizer will not be absorbed by soil at these times, and thus, has the potential to be taken as runoff directly into waterways, it makes sense for states to prohibit the use of fertilizers at these times. Further, stating that the prohibition applies both when the ground is frozen and during specified calendar dates, as New Jersey does, provides more guidance on when the prohibition applies than Wisconsin does by merely stating “when the ground is frozen,” or New York does by simply giving dates, since the ground may be frozen outside of the specific time period. Further, the New Jersey prohibition on applying fertilizer before a heavy rainfall makes sense, in that it is intended to keep fertilizers from being directly carried into waterways, much like the fertilizers would if the ground were frozen.

Like the impervious surface prohibitions, these provisions may have a serious flaw in that the public may not be aware of them. Professional fertilizer applicators in New Jersey will be aware of the prohibitions through their training program, but there are no provisions in the Wisconsin, New York, and New Jersey statutes to inform the general public about these prohibitions. No matter how much a provision makes sense or how effective it may appear to be, a prohibition loses its potency if no one knows they should be following it. While some people may follow a prohibition simply because it exists or because they are aware of the dangers of nutrient pollution and over-

¹⁵⁴ N.J. STAT. ANN. § 58:10A-62(a)(3).

¹⁵⁵ N.J. STAT. ANN. § 58:10A-62(a)(1). What constitutes a heavy rainfall will be defined by the Office of the New Jersey State Climatologist at Rutgers, the State University. *Id.*

fertilization, everyone needs to be aware of these prohibitions and effects in order to change public behavior.

SALE AND DISPLAY RESTRICTIONS

The decision to regulate the sale and display of phosphorus and/or nitrogen fertilizers is a smart and seemingly effective way to regulate the use of fertilizers. By regulating fertilizer retailers, the states have chosen to regulate entities who are both easy to enforce against and who can conveniently educate the public about nutrient pollution and fertilizer use. In terms of enforcement, the states have put a much smaller administrative burden on themselves in regulating retailers than they have in trying to regulate the use of each person in the state. In terms of education, the states have smartly pinpointed a way to easily and effectively reach the end user of the regulated fertilizers.

However, the situation in Maine shows that these provisions, as they are currently written, are not enough to educate the public and change behavior.¹⁵⁶ Even though the vast majority of stores are complying with the Maine statute, the Maine Department of Environmental Protection has reported that many Maine residents are still unaware of the law and are confused about the effects of phosphorus fertilizers.¹⁵⁷ Consequently, although regulating the sale and display of phosphorus fertilizer appears to be a simple way to both reduce nutrient pollution and educate consumers, the provisions are not effective enough to accomplish these goals. Thus, states should consider either using these provisions in connection with other provisions aimed at reducing nutrient pollution and

¹⁵⁶ As discussed above, the Maine bill only regulates the sale and display of phosphorus fertilizers and does not prohibit the use of fertilizers containing phosphorus. ME. REV. STAT. ANN. tit. 38 § 419 (2007).

¹⁵⁷ UPDATE: PHOSPHORUS-FREE FERTILIZER LAW, *supra* note 49. For example, retailers in Maine have stated that many customers have been “unaware of the new law and its intended purpose,” as well as “unaware that organic fertilizers containing phosphorus were just as harmful to the lakes and streams as chemical fertilizers.” *Id.*

educating the public or revise the provisions to completely ban the sale of the regulated fertilizers. The latter is discussed in Part IV below. As Maine demonstrates, merely posting a sign at a store that discourages the use of phosphorous fertilizers is unlikely to have much of an impact on the actual use of fertilizer.

ENFORCEMENT

Each of the states has chosen to provide an enforcement and penalty scheme for its fertilizer statutes. As will be discussed more in Part IV below, it will be difficult for governments to detect and enforce individual violations. Further, both Minnesota and Maine have minimal or no penalty provisions, while Wisconsin, New York, and New Jersey all have adopted penalty provisions that increase in severity with subsequent violations.¹⁵⁸ By increasing the penalty provisions of their statutes, Wisconsin, New York, and New Jersey appear to be trying to coerce compliance with their fertilizer statutes through the threat of penalties. New York is placing the penalty burden mostly on institutional applicators, like the local government, while New Jersey is placing the burden on professional fertilizer

¹⁵⁸ Wisconsin provides for a fine of up to \$50 for first time violators and of \$200-\$500 for subsequent violations. WIS. STAT. ANN. § 94.643(5) (West 2010). The enforcement of these provisions is governed by § 93.22. WIS. STAT. ANN. § 93.22 (West 2010). In New York, a person is subject to up to \$500 for the first violation and up to \$1,000 for any subsequent violations, while an owner or owner's agent, or occupant of a household receives a written warning and educational materials for his or her first violation, is subject to a civil penalty of up to \$100 for his or her second violation, and up to \$250 for any subsequent violations. N.Y. ENVTL. CONSERV. LAW § 71-1945 (McKinney 2010). In New Jersey, professional fertilizer applicators are subject to a civil penalty of \$500 for their first violations and up to a \$1,000 fine for any subsequent violations, while any person besides a professional fertilizer applicator or a fertilizer retailer is subject to a penalty that will be established by municipal ordinance. N.J. STAT. ANN. § 58:10A-65 (West 2012). In New Jersey professional fertilizer applicators can also be charged for a separate offense for each day of a continual violation. *Id.*

applicators. Both states have chosen to regulate these entities more than homeowners. New Jersey in particular has targeted the landscape industry, especially by allowing each day of a continuing violation to be a separate offense. Since New Jersey is requiring professionals in its state to be trained and responsible for their actions, its penalty provisions are arguably the strongest.

However, it is hard to see how these penalty provisions will encourage compliance by homeowners. All of the states appear to be extremely reluctant to enforce against and impose penalties on individual homeowners. This is an unwise position for the states to take. Although the states are trying to reach the proper balance between protecting water quality and diminishing personal freedom, these laws will only be effective cumulatively if individuals change their behavior and reduce the amount of their contribution to nutrient pollution. As the enforcement and penalty provisions are currently written, individual homeowners have little incentive to comply with the provisions, as the threat of enforcement is so low. Because New Jersey has at least taken the step of more strictly regulating professional fertilizer applicators, its enforcement and penalty provisions have the most teeth. However, even New Jersey should either amend its enforcement provision to provide for higher penalties for violations by individual homeowners or add other provisions or mechanisms that will induce individuals to comply with its statute.

EDUCATIONAL REQUIREMENTS

Only Minnesota and New Jersey included educational provisions in their statutes. Both states provide for a public education program that requires informational posters. The Minnesota law directs the Minnesota Department of Agriculture to create consumer information discussing the use restrictions and recommending the best practices for phosphorus fertilizers and other urban, residential sources of phosphorus.¹⁵⁹ The New Jersey bill requires the NJAES to create a public education program that focuses on nutrient pollution and best management practices for fertilizer use, provides informational

¹⁵⁹ MINN. STAT. ANN. § 18C.60 Subd. 3 (West 2013).

posters for retail display, and publishes information on its website.¹⁶⁰ In addition, the New Jersey statute requires NJAES to create a training program for professional fertilizer applicators.¹⁶¹

Since education is a way for states to increase public awareness of the adverse effects of nutrient pollution and how the public can reduce its fertilizer use, all states should include educational provisions in their statutes. Providing for public education could be an easy, effective way for states to cut down on the amount of phosphorus and nitrogen getting into their waterways. Although Minnesota and New Jersey were wise to include public education requirements in their statutes, these provisions should be improved upon in order to effectively educate the public, which is discussed in Part IV below. Further, other states should follow New Jersey's training requirement for professional fertilizer applicators. Since these professionals apply fertilizer as their livelihood, they should be educated on the adverse effects of and the best management practices for applying fertilizer. Other professions have training and education requirements, and it is only logical to apply similar requirements to the lawn care industry.

PART IV. RECOMMENDATIONS FOR REFORM

Nutrient pollution is a major problem for waterways. Therefore, it is important to look at the effectiveness of these turf fertilizer statutes and the areas where the statutes can be improved upon. Part III above discussed how the individual provisions of the existing statutes could be amended to increase the effectiveness of the statutes. However, each statute could also be improved by providing for measures to increase public awareness, to encourage compliance, and to make enforcement more efficient.

¹⁶⁰ N.J. STAT. ANN. § 58:10A-66(a) (West 2012).

¹⁶¹ N.J. STAT. ANN. § 58:10A-64 (West 2012).

ARE THESE STATUTES WORKING?

Because Minnesota and Maine were the first states to pass turf fertilizer statutes, both states have assembled data on the effectiveness of their statutes. Under its statute, the Minnesota Department of Agriculture was directed to evaluate and assemble a report on the statute's effectiveness by January 15, 2007.¹⁶² The Minnesota Department of Agriculture completed the report, entitled *Effectiveness of the Minnesota Phosphorus Lawn Fertilizer Law* (the "Report"), on March 15, 2007.¹⁶³ The Report made findings concerning the results of the law, including the following:

Phosphorus-free lawn fertilizer has not increased consumer costs, is widely available, and is dominating the market;

Minnesotans applied 48% less phosphorus to turf between 2003 and 2006;

Local governments issued warnings but did not bring any enforcement actions under the law;

There is no data showing any changes in water quality;

The law has resulted in educating the public about nutrient pollution; and

Further research on the law's effect must be done.¹⁶⁴

Although the Report shows that the law has not been enforced or resulted in any changes in water quality, the Report accounts for these findings, stating that the lack of enforcement is consistent with the law's intent to reduce the use of phosphorus lawn fertilizer through education and making phosphorus-free fertilizer available to consumers.¹⁶⁵ The Report also noted that measuring water quality is difficult due to variable run-off rates and the numerable phosphorus sources besides fertilizer.¹⁶⁶ Finally, the Report discussed the need for further research, especially into any negative, unintended

¹⁶² MINN. STAT. ANN. § 18C.60 Subd. 4.

¹⁶³ REPORT TO THE MINNESOTA LEGISLATURE, *supra* note 36.

¹⁶⁴ *Id.* at 25.

¹⁶⁵ *Id.*

¹⁶⁶ *Id.* at 15.

consequences of the law, such as poor turf health that can lead to erosion and decrease water quality.¹⁶⁷

Maine also reported on its statute's effectiveness, but to a lesser extent than Minnesota. The Maine Department of Environmental Protection reported that a 2009 statewide survey showed that 88 percent of retail stores had posted the sign required by the legislation, and stores that were not in compliance were given a sign.¹⁶⁸ Further, the department reported that 94 percent of surveyed stores were carrying phosphorus-free fertilizer, and that distributors and retailers in the state have been supportive of the legislation.¹⁶⁹ However, the department also stated that many consumers are still unaware of the law and are confused by the difference between fertilizers containing phosphorus, phosphorus-free fertilizers, and organic fertilizers.¹⁷⁰

Based on the finding of the Report, Minnesota has shown that these laws have cut down on the amount of phosphorus getting into the state's waterways in a way that has not burdened consumers. Since the Report also stated that there was no data showing any changes in water quality and that further research on the law's effect must be done,¹⁷¹ it may be some time before we are able to see just how effective these laws have been in reducing fertilizer use and nutrient pollution and whether New Jersey's decision to regulate both nitrogen and phosphorus will be more successful than the other states in improving water quality. However, simply because the data is not available to prove that water quality has been improved does not necessarily equate to a decision that these laws are ineffective, as any reduction in nutrient pollution is a positive step towards improving the health of waterways. Further, as the precautionary principle implies, in regulating the environment, it is often better to take precaution and implement regulations

¹⁶⁷ *Id.*

¹⁶⁸ UPDATE: PHOSPHORUS-FREE FERTILIZER LAW, *supra* note 49.

¹⁶⁹ *Id.*

¹⁷⁰ *Id.*

¹⁷¹ REPORT TO THE MINNESOTA LEGISLATURE, *supra* note 36.

than not regulate due to a lack of information supporting the regulation.

Moreover, the Maine study shows that even though phosphorus free fertilizer is available and stores are displaying informational posters, the public is still unaware of the effects of nutrient pollution and how using a different fertilizer can help reduce this pollution. As a result, along with regulating fertilizer use, states must do a better job of increasing public awareness and education. Without knowledge of the adverse effects of fertilizers and of the statutes themselves, individual users are unlikely to change their behavior. This is especially true if states are going to follow Minnesota's lead and rely on education rather than enforcement to change people's fertilizer habits.

PUBLIC AWARENESS

As discussed above, many of the state statutes are intended to increase public awareness of nutrient pollution and the adverse effects of fertilizer on waterways. Although providing informational posters on retail displays and posting information on the internet is a logical place to start in trying to raise public awareness, the states need to do a better job of educating the public to ensure that their residents are at least informed about the choices they are making. A lot of people simply do not know the consequences of fertilizing their lawns and at least a portion of these people would change their behavior if they knew of the regulations. Education is an easy way to cut down on the use of fertilizers without directly interfering with or controlling personal choice.

The question then becomes: what other steps can states take to increase public awareness? The states have smartly chosen to regulate the sale and display of fertilizers. However, states could further capitalize on the opportunity to reach the end user of fertilizers by having the relevant state agency, like the Department of Agriculture or NJAES, run information tables or seminars at fertilizer retailers in their states or at any seasonal events in the state that may coincide with times when people usually apply fertilizer. In addition, states could implement an educational program in their schools to make children aware of the effects of fertilizers, which might change their actions in the future as adults and may change their parents' present actions.

ENCOURAGING COMPLIANCE

The next step after increasing public awareness is to make people want to comply with these statutes. As the Minnesota Department of Agriculture has stated, the intent of the Minnesota statute is to induce compliance with the law, and thus reduce the use of phosphorus lawn fertilizer, through both education and the availability of phosphorus-free lawn fertilizers.¹⁷² In addition, Maine has merely aimed to discourage the use of phosphorus lawn fertilizers,¹⁷³ and Wisconsin, New York, and New Jersey have all adopted higher penalty provisions, presumably in an attempt to encourage compliance through the threat of penalties. However, there may be other ways that states can further induce compliance with these laws and reduce nutrient pollution in their states.

One sure way to ensure that people comply with these provisions is to simply ban the sale of phosphorus (and nitrogen in New Jersey) fertilizers. If these fertilizers were not available, people would not be able to use them. As the statutes show, even the states that have been bold enough to step into the realm of regulating individual fertilizer use have not been willing to take this step. Presumably this is because the states believe this would be too much of a regulatory intrusion on personal choice or an infringement of commerce. In addition, because there are situations when a person may need to use phosphorus fertilizer to prevent erosion, such as if the soil is phosphorus deficient, a state will most likely be unwilling to completely ban the sale of these fertilizers. However, even if a state is unwilling to institute an outright ban, there may be other less drastic measures that it could implement.

For instance, due to public welfare concerns, some laws now require certain over-the-counter medications to be sold “behind the counter” so that consumers have to request and sign for the medicine. States could implement a similar program for fertilizer and make phosphorus fertilizer be sold behind the counter so the consumer would have to specifically ask and sign for the phosphorus fertilizer. This could have two beneficial

¹⁷² *Id.*

¹⁷³ *New Fertilizer Law Cuts Back Phosphorus Use*, *supra* note 37.

effects. First, making a consumer sign for these fertilizers is a way to make the consumer at least aware of the regulations and may be an opportunity to educate the consumer about nutrient pollution and over-fertilization. Second, by having a list of consumers who purchased phosphorus fertilizer, the government would have a list of people it could target its enforcement measures against if violations were to occur.

States could also take this registry system one step further. Wisconsin and New Jersey have both put in their statutes provisions that prohibit a retailer from selling phosphorus fertilizer unless the consumer will use the fertilizer for one of the listed exceptions. Instead of putting the burden of knowing why the consumer is buying phosphorus fertilizer on the retailer, a state could make the consumer disclose which exception applies to his or her use when the consumer is purchasing and signing for the product. Again, this will ensure that the consumer knows about the fertilizer statute and the allowable uses for phosphorus fertilizer, and will also provide the government with a list of people to target for compliance enforcement.

Finally, states should think of ways that they can induce compliance, such as by exploring ways to provide incentives to homeowners who use natural landscaping. For example, in New Jersey property taxes are extremely high, so a state may want to explore a way to provide a tax credit or deduction to a homeowner if he or she uses natural landscaping and reduces his or her fertilizer use. In connection with this, New Jersey could include, as part of its professional fertilizer applicator training, a mechanism for landscapers to become trained and certified as “natural landscapers.” This would allow landscapers to market themselves as environmentally friendly and use the “green” movement to their advantage. Landscapers, even if there is not a program run by the state, may want to take some kind of action along these lines and use the trendiness of being environmentally friendly to their advantage.

Improving Enforcement

Finally, the statutes, as currently written, make it difficult for governments to enforce their provisions. By imposing higher penalties on professional fertilizer applicators, New Jersey has made at least a portion of individual users of fertilizer in the state knowledgeable about and liable for their use of fertilizers. Other states could follow New Jersey’s lead and give more teeth

to their respective fertilizer laws by making landscape professionals more liable.

Although New York and New Jersey may have an easier time enforcing against institutional applicators and professional fertilizer applicators, catching individual violators of this bill could be difficult for local governments. Particularly, the fact that these provisions are so difficult to enforce against individual users shows that the states are reluctant to enforce against homeowners. Regulating and enforcing against individuals is an invasion on personal choice, and a law that heavily regulates individual homeowners would likely be unpopular and lack support, which could make a state reluctant to pass such provisions.

However, this reluctance also cuts into the potential effectiveness of these statutes. Since the states have already taken a large step in passing these statutes, they should take the next step and think of ways to improve how these statutes can be enforced against homeowners. Further, a counter argument to the position that these regulations are an invasion on personal choice is that using fertilizing on your lawn, in a way that is unnecessary most of the time, is a personal choice and luxury that many waterways and the general public cannot afford. Degraded waterways have potentially disastrous effects, not only on ecosystems, but also on the economies of regions that rely on these waterways. Society often feels that regulating personal conduct that hurts society as a whole is tolerable—the fact that this is an environmental regulation should not change this.

Unfortunately, declaring that states have to be more willing to enforce against individuals is one thing, but thinking of ways a government could effectively enforce these provisions is another hurdle all together. One obvious way to force compliance is to increase the penalty provisions of the statutes. As they are written now, individual homeowners have little liability even if they are caught violating the provisions. If there were higher penalty provisions, individuals would be more likely or willing to comply. Increased penalty provisions could also have another beneficial side effect. Any proposal to impose high penalties for violations by individuals would likely generate a lot of media attention, which would serve as a mechanism to educate the public about nutrient pollution and the regulations.

Local governments also may have an incentive to enforce against individual homeowners. By ensuring that their residents

are complying with the phosphorus fertilizer regulations, towns may be able to better comply with water quality and stormwater standards without implementing costly technology upgrades. In addition, having healthier waterways and being seen as “green” may have other secondary benefits for a town.

PART V. CONCLUSION

The public benefit of regulating turf fertilizer outweighs any burden that these statutes might place on individuals. Therefore, the states have all taken an important step in trying to improve water quality, which will help protect the ecosystems and local economies that rely on these waterways. Further, Minnesota, Maine, Wisconsin, New York, and New Jersey have provided models for other states to follow in drafting a turf fertilizer statute.

Using the states’ statutes as a starting point and noting that these statutes could be improved to achieve an ideal statute, states should pass turf fertilizer statutes that contain use restrictions, which prohibit the use of certain nitrogen fertilizers and all phosphorus fertilizers on turf. In addition, for a gold level statute, states should include golf courses in the definition of turf and regulate golf courses in the same manner as all other types of turf. As to the exceptions to the use provisions, states should include exceptions to allow the use of phosphorus fertilizer to establish a lawn for the first time or if the soil has a phosphorus deficiency, but the time period for the soil test exception should be limited to one growing season. The owner could then get a soil test the next year to see if the deficiency is still present. Finally, any exception for “repairing” turf should provide more clarification for what this exception applies to.

As to the general use restrictions in an ideal statute, states should include the impervious surface and waterway restrictions. The waterway restrictions should apply to all fertilizers, contain at least a ten-foot buffer zone, and remove the exception for targeted application. For states where the ground freezes, the state should ban the use of all fertilizer during a certain time period and when the ground is frozen. States should also provide a provision similar to the New Jersey provision that prohibits the application of fertilizer before a heavy rain storm or when soils are saturated. States should also

include provisions that ensure the public is aware of all of these prohibited uses.

In regards to sale provisions, states should continue to regulate the sale and display of fertilizer by requiring informational signs. If states are unwilling to completely ban the sale of regulated fertilizer, states should make the regulated fertilizer available only “behind the counter” so consumers have to ask for and sign for the fertilizer. States could also require consumers to certify that their use fits within one of the allowable uses of the statute. States should also limit the amount of fertilizer consumers can buy at one time, so that consumers cannot stockpile and continue to use the regulated fertilizer for uses that the statute does not allow.

As to enforcement, a gold standard statute would highly regulate lawn care professionals. In addition, states must be more willing to enforce against individuals, both by making enforcement more efficient and by providing higher penalties for individual homeowners. States should encourage local governments or community groups to increase enforcement. Further, states should think of ways to incentivize compliance, such as by providing tax benefits for homeowners who use natural landscaping.

Finally, for an effective program, states must institute a public education program. The program should cover, among other things, nutrient pollution, best management practices, and the provisions of the statute. State agencies could provide information, or have seminars at local fertilizer retailers, or at seasonal events such as garden shows or coastal festivals. States could also include nutrient pollution and the adverse effects of fertilizer in their school curriculum.

Overall, these statutes are a major step towards improving water quality. Minnesota, Maine, Wisconsin, New York, and New Jersey have all shown a willingness to regulate the residential use of fertilizer, and other states should follow their lead. However, for an ideal statute, states have to be more willing to regulate the fertilizer use of homeowners, as these statutes will only reach their goal if everyone reduces their fertilizer use. Although some might feel these statutes intrude too much on personal choice, the benefits of these statutes outweigh any burden imposed on individuals.