THE MICROBEAD-FREE WATERS ACT OF 2015: MODEL FOR FUTURE ENVIRONMENTAL LEGISLATION, OR BLACK SWAN?

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I. INTRODUCTION

Environmental law scholars have long lamented that it has become unthinkable—or at least exceedingly unlikely—for Congress to pass significant new environmental legislation. This is not uniformly the case, as shown by the recent enactment of Public Law 114-114, the Microbead-Free Waters Act of 2015 ("the Act"). Yet, more nuanced questions must be answered before the Act can be hailed as an important break in the legislative logjam. Was the Act insignificant, simply not worth the time and political currency necessary for opponents of environmental regulation to stop? Was it the fortuitous product of a unique confluence of circumstances, a "black swan"?[1] Or could the circumstances surrounding its passage be instructive for future proponents of environmental legislation? This article asserts that the Act addressed a significant environmental issue, and that the strategic building blocks underlying the Act—including an emphasis on public health issues and broad stakeholder support driven by industry concerns about unfair competition and opposition to local legislation—may provide innovative and useful foundations for future efforts to pass environmental legislation.

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1. "Black swans" are "outlier events that do not fit neatly within the bell-shaped curves of probabilities, but which do occur and reoccur in history." Timothy A. Canova, *Black Swans and Black Elephants in Plain Sight: An Empirical Review of Central Bank Independence*, 14 CHAP. L. REV. 237, 239 (2011).

Section II provides background information about the public health and environmental problems posed by microbeads and microplastics, as eventually addressed by the Act. Although plastics have long been recognized as a threat to our waters and aquatic life, only recently have scientists focused on micro-sized plastic particles. A particular class of these particles, known as "microbeads," have become widely used in cosmetic products and are intended to be rinsed down the drain as part of the normal product life cycle. However, microbeads typically cannot be removed in wastewater treatment facilities due to their lightness and exceedingly small size. Once in open waters, microplastics (like all plastics) tend to concentrate toxins, and they are attractive to aquatic life as a food source because they appear to be fish eggs based on their size and shape. After initial ingestion, the accumulated toxins bioconcentrate up the food chain and thereby pose a threat to human health. New research shows that this threat is particularly immediate in the Great Lakes, where microbead concentrations equal or exceed those found in oceans. Rising public awareness of the issue has led to increasing calls for a ban on the use of microbeads. Section III details the history of microbead regulation at the federal and state levels, culminating in the passage of the Act. Finally, Section IV examines the reasons for the remarkably frictionless passage of the Act, and concludes by drawing several suggestions for future proponents of environmental legislation.

II. A LOOMING THREAT TO THE GREAT LAKES

Plastics are an increasing threat to our oceans, freshwater lakes, and streams. A recent World Economic Forum report estimated that each year, at least eight million tons of plastics leak into the oceans—the equivalent of one garbage truck per minute.[2] Assuming a continuing "business-as-usual" scenario, the oceans are expected to contain more plastics than fish by 2050.[3] By most estimates, in fact, plastic is the most common form of anthropogenic debris in our surface waters.[4] It enters these waters in a variety of ways, including through direct release and dumping, storm drainage

2. *The New Plastics Economy: Rethinking the Future of Plastics*, WORLD ECON. FORUM, 7 (Len Neufeld et al. eds., 2016), http://www3.weforum.org/docs/WEF_The_New_Plastics_Economy.pdf.

3. *Id.*

4. Marcus Eriksen et al., *Microplastic Pollution in the Surface Waters of the Laurentian Great Lakes*, 77 MARINE POLLUTION BULL. 177, 177 (2013).

systems, raw sewage overflows from wastewater treatment systems, and atmospheric deposition.[5]

Review of available scientific literature shows that although it has been studied less than plastic contamination in oceans, "plastic debris represents a major environmental challenge for the Great Lakes" as well.[6] Plastic pollution is an increasing concern in the Great Lakes in open water, along shorelines, and in bottom sediments.[7] Recent open-water surveys have revealed surface plastic densities as high as those reported for areas of litter accumulation in oceans.[8] Significant open research questions remain as to the annual inputs of plastic debris to each of the Great Lakes, the rates and mechanisms of plastic degradation, the accumulation of plastic debris in the Lakes and along their shores, and the extent of bioaccumulation of plastics in Great Lakes food webs.[9] Resolving these questions will sharpen our understanding of the extent of the plastic crisis in the Great Lakes. As discussed in more detail below, however, one early indication shows that concentrations of plastic microbeads—the particular problem the Act addresses—are actually higher in some parts of the Great Lakes than corresponding concentrations in oceans.

The ecosystem-level impacts of plastics have been well studied. At the macro-scale, plastics pose a health risk to aquatic animals, including fish, turtles, and birds, due to the possibility of entanglement and ingestion.[10] Plastics serve as a vector for non-native and invasive species,[11] and can be colonized by pathogens.[12] Accumulation along shorelines deters recreational usage by boaters, swimmers, and divers.[13] It may even reduce tourism revenue as a result of beach closures.[14] Although the possible transfer of plastic-absorbed toxins to humans via consumption of aquatic species is "of concern, it has yet to be demonstrated."[15] Historically, attention to

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5. *See*, *e.g.*, *id.*

6. Alexander G.J. Driedger et al., *Plastic Debris in the Laurentian Great Lakes: A Review*, 41 J. OF GREAT LAKES RES. 9, 16 (2015).

7. *Id.* at 9.

8. *Id.* at 14.

9. *Id.* at 16.

10. Christiana M. Boerger et al., *Plastic Ingestion by Planktivorous Fishes in the North Pacific Central Gyre*, 60 MARINE POLLUTION BULL. 2275, 2277 (2010).

11. David K.A. Barnes et al., *Accumulation and Fragmentation of Plastic Debris in Global Environments*, 364 PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOC'Y 1985, 1985 (2009).

12. Driedger et al., *supra* note 6, at 10.

13. S.B. Sheavly & K.M. Register, *Marine Debris & Plastics: Environmental Concerns, Sources, Impacts and Solutions*, 15 J. OF POLYMERS & THE ENV'T 301, 302-03 (2007).

14. L. Jeftic et al., *Marine Litter: A Global Challenge*, U.N. ENV'T PROGRAMME, 13-14 (2009), http://www.unep.org/pdf/unep_marine_litter-a_global_challenge.pdf.

15. Driedger et al., *supra* note 6, at 10.

this issue of plastic contamination in open waters was limited to macro-scale plastics or accumulated debris fields.[16]

More recently, however, some scientists have focused on the impacts associated with plastic "microbeads," one category of plastic microparticles in our waters.[17] Microbeads are small polyethylene (plastic) microspheres commonly used as exfoliates in consumer toiletry products such as facial and body cleansers and toothpastes.[18] Manufacturers and consumers in the cosmetics sector benefited from the inexpensive, widely available microbeads as a substitute for natural exfoliating substances beginning in the mid-1990s.[19] Some disagreement exists over which particle size classes fall under the "microbead" or "microplastic" umbrella; definitions range from particles with diameter less than 5 millimeters ("mm")[20]; to particles less than 1 mm in diameter[21]; to particles between 1 and 5 mm in diameter.[22] Regardless of their size, most such particles typically used in cosmetics are non-biodegradable.[23] Microbeads formed a high concentration of some products; one study indicated that a typical exfoliating shower gel can contain "roughly as much microplastic in the cosmetic formulation as is used to make the plastic packaging it comes in."[24]

By 2012, the global personal care and cosmetic products industry was worth a mammoth 433 billion in U.S. dollars.[25] As a United Nations report explained, "even if a fraction of those products contain small percentages of plastic ingredients, the total emission from this source is still quite significant."[26] Another differentiator between micro- and macroplastic pollution is that no illicit or illegal activity is necessary for plastic microbeads to enter surface waters. On the contrary, washing the microbeads "down the drain" is a fully expected result of their inclusion in products such as rinse-off cosmetics[27] and toothpaste. Absent some unexpected overflow or

16. *See generally* Driedger et al., *supra* note 6.

17. *See generally* Eriksen et al., *supra* note 4.

18. *See generally* Guy Graney, *Slipping Through the Cracks: How Tiny Plastic Microbeads are Currently Escaping Water Treatment Plants and International Pollution Regulation*, 39 FORDHAM INT'L L.J. 1023 (2016); Rachel Doughty & Marcus Eriksen, *The Case for a Ban on Microplastics in Personal Care Products*, 27 TUL. ENVTL. L.J. 277, 278 (2014).

19. Graney, *supra* note 18, at 1025-26.

20. WIS. STAT. § 299.50(1)(e).

21. Doughty & Eriksen, *supra* note 18, at 278.

22. Graney, *supra* note 18, at 1025.

23. H.A. Leslie, *Plastic in Cosmetics*, U.N. ENV'T PROGRAMME 6 (2015), http://apps.unep.org/redirect.php?file=/publications/pmtdocuments/-Plastic_in_cosmetics_Are_we_polluting_the_environment_through_our_personal_care_-2015Plas.pdf [hereinafter UNEP Plastics Report].

24. *Id.*

25. *Id.* at 7.

26. *Id.*

27. The Federal Food, Drug, and Cosmetic Act defines "cosmetic" to mean "articles intended to be rubbed, poured, sprinkled, or sprayed on, introduced into, or otherwise applied

system failure, sanitary sewers then transport the microbeads to municipal wastewater treatment facilities.

Conveyance to wastewater treatment facilities does not resolve the issue, however. Most facilities effectively remove large-scale plastic debris prior to discharge. However, municipal treatment systems are not designed to capture particles as small as the microbeads. Most treatment facilities employ front-end "trash racks" that are far too large to capture microbeads. Advanced filtration systems are often prohibitively expensive, or unable to filter,[28] the microparticles.[29] Even when they are present, screen openings can be coarse (greater than 6 mm) or fine (1.5-6 mm). Many microbeads will not be captured even at facilities with fine screens.[30] In lieu of screens, many facilities employ gravity filtration as the method of primary treatment. Microbeads are not heavy enough to settle out in clarifiers,[31] and therefore tend to pass through these systems.

Passage through treatment facilities has led to significant environmental repercussions. Microbeads share many of the chemical and environmental hazards discussed above in the broader context of plastics generally. Microbeads are not inherently dangerous themselves, but like all plastics, they tend to absorb and bioconcentrate toxic substances, including PCBs, pesticides, and oils.[32] In extreme cases, plastic debris has been found to accumulate pollutants such as PCBs at levels 100,000 to 1,000,000 times the levels found in background samples.[33] In turn, this limits biodegradation of organic contaminants, thereby increasing their persistence in the environment.[34] In size and shape, microbeads appear similar to fish eggs and are attractive to aquatic life as a food source for certain organisms. After ingestion the absorbed toxins are

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to the human body or any part thereof for cleansing, beautifying, promoting attractiveness, or altering the appearance, and . . . articles intended for use as a component of any such articles," not including soap. 21 U.S.C. § 321(i).

28. Graney, *supra* note 18, at 1026.

29. *See generally* Emily DeMarco, *Study Finds Wastewater Treatment Plants an Important Source of Plastic Pollution in Rivers*, INSIDE SCI. (Feb. 29, 2016), https://www.insidescience.org/blog/2016/02/29/study-finds-wastewater-treatment-plants-important-source-plastic-pollution-rivers.

30. *See* Jennifer Nalbone, *Unseen Threat: How Microbeads Harm New York Waters, Wildlife, Health and Environment*, OFFICE OF THE N.Y. ATTY. GEN. 7 (May 14, 2014), https://ag.ny.gov/pdfs/Microbeads_Report_5_14_14.pdf.

31. *See* Sara Verrillo, *Microbeads: Tiny Particles Causing Big Problems*, ATL. CTY. UTIL. AUTH. (May 19, 2015), http://www.acua.com/community/blog/microbeads/.

32. *See generally* Chelsea M. Rochman et al., *Ingested Plastic Transfers Hazardous Chemicals to Fish and Induces Hepatic Stress*, 3 SCI. REPORTS 1, Art. 3263 (2013), http://www.nature.com/articles/srep03263.

33. *What We Know About Plastic Marine Debris*, NOAA MARINE DEBRIS PROGRAM, https://marinedebris.noaa.gov/sites/default/files/Gen_Plastic-hi_9-20-11_0.pdf.

34. Driedger, *supra* note 6, at 10.

then concentrated up the food chain,[35] posing a potential threat to human health.

Microbeads pose an immediate and particular threat to the Great Lakes. Until recently, available data related to the abundance of microplastics in the Great Lakes was limited to beach surveys.[36] However, recently-available data show that the concentration of microbeads is even higher in the Great Lakes than in the oceans, with as many as 1.1 million particles of microplastics per square mile in some areas of the Lakes.[37] Scientists found that "[m]icroplastic pellets and fragments were far more abundant than other particle types."[38] Even worse, the beads cannot be effectively removed, because any attempt to do so would necessarily also capture plankton and other essential parts of the food chain.[39] As a result, microbeads will continue to accumulate in the Great Lakes and other aquatic ecosystems until the Act's ban takes effect.

III. MICROBEAD REGULATION

Public awareness of these negative effects resulting from microbeads led to numerous calls for a ban on their use.[40] As with many environmental and public health issues, "[t]he power of information to help drive mitigation activities is considerable."[41] One of the most high-profile efforts is "Beat the Microbead," an informational public relations campaign that included the design of an "app" allowing consumers to check whether personal care products contain microbeads by scanning a bar code.[42] The United Nations Environment Programme threw its support behind the campaign, and ultimately claimed that it "convinc[ed] a number of large multinationals such as Unilever, Johnson & Johnson and the Body Shop to announce their intent to stop using microbeads."[43] The U.N. body also issued a report calling the widespread use of microbeads "[a]n emerging global environmental issue."[44] It recommended taking "a precautionary approach" toward microbead

35. Rochman, *supra* note 32, at 4.
36. Eriksen et al., *supra* note 4, at 178.
37. *Id.* (as converted from density per square kilometer).
38. *Id.* at 179.
39. John Schwartz, *Scientists Turn Their Gaze Toward Tiny Threats to Great Lakes*, N.Y. TIMES (Dec. 14, 2013), http://www.nytimes.com/2013/12/15/us/scientists-turn-their-gaze-toward-tiny-threats-to-great-lakes.html.
40. *See generally* Doughty & Eriksen, *supra* note 18; *see also* Graney, *supra* note 18, at 1027–28.
41. UNEP Plastics Report, *supra* note 23, at 7.
42. *Id.* at 28.
43. *Id.*
44. *Id.* at 9.

management, leading to an eventual phase-out and ban.[45] Smaller-scale grassroots campaigns launched in a variety of states.[46]

A. State and Local Action

It is difficult to deny that the numerous informational and public action campaigns had some effect on the political machinations that followed. By the date of the Act's passage in December 2015, dozens of states had either enacted or were considering microbead bans.[47] In New York, several individual counties had passed bans.[48] Most of the enacted state bans included an exemption for biodegradable plastics, but did not define that term.[49] For example, Wisconsin's law banned "synthetic plastic microbeads," defined to mean "any intentionally added *non-biodegradable*, solid plastic particle measuring less than 5 millimeters at its largest dimension that is used to exfoliate or cleanse in a product that is intended to be rinsed off."[50] This language appears to have been based on the Illinois statute, which contains an essentially identical definition.[51]

California passed a different, more stringent ban that did not exempt biodegradable microbeads.[52] Instead, it defined "plastic microbead" to mean "an intentionally added solid plastic particle measuring five millimeters or less in every dimension,"[53] and banned the inclusion of such microbeads in personal care products (not including prescription drugs).[54] Some groups argued that the "weaker" form of the state bans improperly incentivized

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45. *Id.* at 7.

46. *See, e.g.*, *Take Action: Microbeads*, 5GYRES INSTITUTE, www.5gyres.org/microbeads (last visited Nov. 27, 2016); *Plastic Microbeads: Ban the Bead!*, THE STORY OF STUFF PROJECT, http://storyofstuff.org/plastic-microbeads-ban-the-bead (last visited Nov. 27, 2016).

47. The states of California, Colorado, Connecticut, Illinois, Indiana, Maine, Maryland, New Jersey, and Wisconsin had enacted bans as of late 2015. *See* Cal. Assemb. B. No. 888 (Oct. 8, 2015); Colo. H.B. 15-1144 (Mar. 26, 2015); Conn. S.B. No. 1502 (June 30, 2015) (budget bill containing microbead ban); Ill. Pub. Act 098-0638 (June 8, 2014); Ind. H.B. 1185, Pub. L. 21 (Apr. 15, 2015); Me. S. Paper 33–Legis. Doc. 85 (Mar. 24, 2015); Md. H.B. 216 (May 12, 2015); N.J. S.B. 2178 (Mar. 23, 2015); 2015 Wis. Act 43 (July 1, 2015).

48. Robert Harding, *Another New York County Passes Microbead Ban*, AUBURNPUB.COM: EYE ON NY (Nov. 11, 2015), http://auburnpub.com/blogs/eye_on_ny/another-new-york-county-passes-microbead-ban/article_24d255b4-87db-11e5-bfe9-8b243f452c33.html (noting five counties had passed bans).

49. *See*, *e.g.*, WIS. STAT. § 299.50(1)(e) (2015); 2015 Wis. Act 43.

50. 2015 Wis. Act 43 (emphasis added).

51. *See* 414 ILL. COMP. STAT. 5/52.5(a) (2015).

52. *See* CAL. PUB. RES. CODE § 42361(c) (2015). Some commentators speculated that the passage of the California ban made the Act more palatable to Congress, and even served as a model for its text. *See 'Strong' California Microbead Bill Paved Way for National Ban*, CHEM. WATCH (Jan. 6, 2016), https://chemicalwatch.com/44354/strong-california-microbead-bill-paved-way-for-national-ban.

53. CAL. PUB. RES. CODE § 42361(c).

54. *Id.* §§ 42362, 42361(2) (excluding prescription drugs from the definition of "personal care product").

an undesirable solution: the substitution of theoretically "biodegradable" plastics that would not degrade under ordinary circumstances.[55] Industry officials—and some policy makers—also objected to the state and local bans because they created a "patchwork" regulatory regime, under which the treatment of microbeads varied from state to state and, in extreme cases, even from county to county.[56]

B. The Microbead-Free Waters Act of 2015

In March 2015, Rep. Frank Pallone Jr. of New Jersey introduced the Act in the House of Representatives.[57] The House passed the bill by voice vote in early December.[58] Only a week later, the Senate passed the Act by unanimous consent, without any edits.[59] President Barack Obama signed the bill into law on December 28, 2015.[60]

The Act is striking for its brevity and simplicity, running only a few hundred words. It prohibits "[t]he manufacture or the introduction or delivery for introduction into interstate commerce of a rinse-off cosmetic that contains intentionally-added plastic microbeads."[61] The ban on manufacturing is effective July 1, 2017, and the ban on introduction into interstate commerce takes effect a year later, on July 1, 2018.[62] "Plastic microbead" is further defined to mean "any solid plastic particle that is less than five millimeters in size and is intended to be used to exfoliate or cleanse the human body or any part thereof."[63] Like the California law, the Act makes no exception for biodegradable plastics. The Act also preempts state and local bans on plastic microbeads, to the extent those bans are not identical to the Act.[64]

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55. *See*, *e.g.*, *California Microbead Ban Closes Biodegradable Loophole*, WATER ENV'T FED'N (Oct. 30, 2015), http://stormwater.wef.org/2015/10/california-microbead-ban-closes-biodegradable-loophole/.

56. *See infra* Part IV (explaining industry and policymaker support for the Act based on the elimination of the perceived "patchwork" regime).

57. *Actions H.R. 1321 114th Congress*, LIBR. OF CONG., https://www.congress.gov/bill/114th-congress/house-bill/1321/actions (last visited Nov. 27, 2016).

58. 114 CONG. REC. H9022 (Dec. 7, 2015).

59. 114 CONG. REC. S8861 (Dec. 18, 2015).

60. LIBR. OF CONG., *supra* note 57.

61. 21 U.S.C. § 331(ddd)(1) (2015). Note that the Federal Food Drug and Cosmetic Act, which the Act amends, defines only "cosmetic" and not "rinse-off cosmetic." 21 U.S.C. § 321(i) (2009). This has the potential to create ambiguity in the case of microbead-containing products that are arguably not "rinsed off."

62. Microbead-Free Waters Act of 2015, Pub. L. No. 114-114, 129 Stat. 3129, § (2)(b).

63. 21 U.S.C. § 331(ddd)(2)(A).

64. Microbead-Free Waters Act, § (2)(c).

In some circles the Act's simplicity was cause for criticism.[65] For example, the Act's definition of a "microbead" as a particle of certain size "intended to be used to exfoliate or cleanse the human body," might perhaps be read to exclude microbeads used for some other reason, such as lubrication. Yet had the Act included broader provisions to, for example, limit the usage of plastic bags, one can surmise that it would never have seen the floor, let alone passed both houses of Congress.

VI. IMPLICATIONS FOR FUTURE ENVIRONMENTAL REGULATION

Legal scholars expressed surprise at the Act's easy passage, with one even calling it a "Christmas miracle."[66] Representative Pallone provided a more mundane explanation for the Act's surprisingly easy route to becoming law: "There was a lot of support, and there wasn't much opposition."[67] The reasons for this deserve closer examination, given the dismal fate of proposed environmental legislation over the past three decades.

Much ink has been spilled lamenting the difficulty of passing new environmental legislation in the modern era. This has not always been the case, of course. During the "environmental law revolution" of the 1970s, Congress enacted more than a dozen major federal environmental laws, including the National Environmental Policy Act (1970),[68] the Clean Air Amendments (1970),[69] the Federal Water Pollution Control Act Amendments (1972),[70] the Federal Environmental Pesticide Control Act (1972),[71] the Endangered Species Act (1973),[72] the Safe Drinking Water

65. *E.g.*, Graney, *supra* note 18, at 1032 (The Act "is limited to [addressing] adulterated cosmetics, leaving non-cosmetic sources of microbeads, most notably many pharmaceuticals, outside the scope of federal regulation."). Of course, the Act is also necessarily limited to addressing microbeads in the U.S. To the extent they remain in use in other countries, their release to international waters will continue.

66. Dan Farber, *A Minor Christmas Miracle from Congress*, LEGAL PLANET (Dec. 25, 2015), http://legal-planet.org/2015/12/25/a-minor-christmas-miracle-from-congress/.

67. John Schwartz, *Ban on Microbeads Proves Easy to Pass Through Pipeline*, N.Y. TIMES (Dec. 22, 2015), http://www.nytimes.com/2015/12/23/science/ban-on-microbeads-proves-easy-to-pass-through-pipeline.html?_r=0.

68. National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852 (1970) (codified as amended at 42 U.S.C. §§ 4321-4347 (2012)).

69. Clean Air Amendments of 1970, Pub. L. No. 91-604, 84 Stat. 1676 (1970) (codified as amended at 42 U.S.C. §§ 7401-7671q (2012)).

70. Federal Water Pollution Control Act Amendments of 1972, Pub. L. No. 92-500, 86 Stat. 816 (1972) (codified as amended at 33 U.S.C. §§1251-1387 (2012)).

71. Federal Insecticide, Fungicide, and Rodenticide Act, Pub. L. No. 92-516, 86 Stat. 973 (1972) (codified as amended at 7 U.S.C. §§ 136(a)-(y) (2012)).

72. Endangered Species Act of 1973, Pub. L. No. 93-205, 87 Stat. 884 (1973) (codified as amended at 16 U.S.C. §§1531-44 (2012))

Act (1974),[73] the Resource Conservation and Recovery Act (1976),[74] the Toxic Substances Control Act (1976),[75] and the Comprehensive Environmental Response, Compensation, and Liability Act (1980).[76] Few subject matter areas have ever seen such a burst of legislative activity.

In the decades that followed, Congress amended some of these laws but passed few new ones.[77] Most commentators regard the Clean Air Act Amendments of 1990 as the last significant environmental legislation to get through Congress.[78] The "legislative stalemate" that has persisted since then has largely been chalked up to partisan divisions:

> Commentators characterize the current climate in Congress on environmental issues as "gridlocked," "deadlock[ed]," "dysfunction[al]," "broken," the subject of "considerable, self-imposed inertia," and "highly inhospitable to the enactment of major environmental legislation." There are no signs from Congress that indicate the current gridlock over environmental policy will end within the foreseeable future. In fact, the odds of enactment of any significant federal environmental legislation only seem to diminish with the installation of each new Congress.[79]

Complaints about gridlock are by no means limited to the twenty-first century, nor to advocates of increased environmental protection: as early as 1986, at a judicial conference of the District of Columbia Circuit, a commentator favoring deregulation lamented that "there is virtually no chance of serious reform of the health, safety, and environmental statutes in the Congress. . . . I think that's deplorable. . . . [and] there is plenty of fault . . . to go around."[80]

In response to this perceived Congressional dereliction of duty, commentators and other policy makers examined various

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73. Safe Drinking Water Act, Pub. L. No. 93-523, 88 Stat. 1660 (1974) (codified as amended at 42 U.S.C. § 300f (2012)).

74. Resource Conservation and Recovery Act of 1976, Pub. L. No. 94-580, 90 Stat. 2795 (1976) (codified as amended at 42 U.S.C. §§ 6901-6992k (2012)).

75. Toxic Substances Control Act, Pub. L. No. 94-469, 90 Stat. 2003 (1976) (codified as amended at 15 U.S.C. §§ 2601-92 (2012)).

76. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Pub. L. No. 96-510, 94 Stat. 2767 (1980) codified as amended at 42 U.S.C. §§ 9601-75 (2012)).

77. *See*, *e.g.*, Safe Drinking Water Act Amendments of 1986, Pub. L. No. 98-616, 98 Stat. 3221 (codified at 42 U.S.C. § 201 (2012)).

78. *See*, *e.g.*, David W. Case, *The Lost Generation: Environmental Regulatory Reform in the Era of Congressional Abdication*, 25 DUKE ENVTL. L. & POL'Y F. 49, 60 (2014).

79. *Id.* at 60-61 (internal citations omitted).

80. Proceedings of the Forty-Seventh Annual Judicial Conference of the District of Columbia Circuit, Williamsburg Lodge, Williamsburg, Va., May 18-20, 1986, 114 F.R.D. 419, 517 (1987).

alternative regulatory strategies that can broadly be categorized as market-based regulatory instruments, voluntary or self-regulatory policies, contractual or collaborative decision-making, and direct regulatory efforts undertaken by the Environmental Protection Agency (EPA).[81] Most of these efforts have obtained limited success at best, and have been highly controversial. This made the Act's smooth sailing all the more surprising.

The confluence of growing scientific understanding, broad stakeholder support from the grassroots and from industry, and the growing number of state bans all likely contributed to the genesis of the Act. It was introduced in the House on March 4, 2015.[82] After a period of no activity, the Act sailed through both houses of Congress with no real opposition, passing in the House by voice vote and in the Senate by unanimous consent.[83] "This is a great bill, and it shows that we can pass smart environmental legislation here in Washington," said one senator during floor discussion of the bill.[84] Although the easy passage can partly be explained by the absence of any real opposition, a closer examination reveals several positive traits, the emphasis of which may provide a useful foundation for future efforts to pass environmental legislation. The Act was tightly focused and of modest scope, it attracted a broad coalition of stakeholder support, and it included a focus on public health risks in addition to environmental concerns. Crafting future environmental legislation to fit these constraints will significantly increase the chances of success.

A. Focus and Scope

As described in some detail above, plastics are the leading cause of anthropogenic pollution in our rivers and lakes. The Act makes no effort to address that situation in its entirety; instead, it contains simple and direct language closely focused on one clearly delineated aspect of the problem. It simply prohibits "the manufacture or the introduction or delivery for introduction into interstate commerce of a rinse-off cosmetic that contains intentionally-added plastic microbeads."

Admittedly, this specific focus perhaps opens the Act up to criticism that it should have addressed a broader spectrum of plastics issues, that its lack of specific definitions will undermine its effectiveness, or even that it contains ambiguities that will open the

81. *See* Case, *supra* note 78, at 72-89 for an examination of these reform efforts.

82. LIBR. OF CONG., *supra* note 57.

83. 161 Cong. Rec. S8861 (daily ed. Dec. 18, 2015); 114 Cong. Rec. H9022 (daily ed. Dec. 7, 2015).

84. 161 Cong. Rec. S8861 (daily ed. Dec. 18, 2015) (statement of Sen. Gillibrand).

door to state or local regulation in the interstitial spaces.[85] These criticisms are emblematic of a fundamental tradeoff: had the Act encompassed the broader plastics problem more fully, the likelihood of its easy passage would correspondingly decrease.

B. Broad Stakeholder Support

As discussed above, campaigns such as "Beat the Microbead" assisted in raising public awareness in support of a microbead ban. This, in itself, is not a surprise. "Although latent, public support for environmentalism has undeniably become embedded in American politics. . . . [H]owever . . . public concern for the environment affects the political process mainly when the public is activated by an environmental crisis or when the public believes that existing institutions designed to protect the environment are under threat."[86] In this instance, spurred by the scientific community and the grassroots efforts to oppose the ban, Congress perceived a sufficient crisis to act.

Perhaps surprisingly (at least at a surface level), industry organizations also supported the ban. The American Chemistry Council called it a "sensible, national standard to phase out solid-plastic microbeads from rinse-off personal care products across America," and "commend[ed]" Congress for its passage.[87] During a hearing before the House Subcommittee on Health and the House Committee on Energy and Commerce, three different witnesses—Rep. Joseph R. Pitts of Pennsylvania;[88] Mr. Dan Wyant, Director of the Michigan Department of Environmental Quality;[89] and State Sen. Linda Greenstein of the New Jersey Legislature[90]—testified to concern over a "patchwork" of state and local regulations. State Sen. Greenstein testified:

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85. *See, e.g.*, Michael A. Siragusa, Local Law 3-2015: *County Attorney Opinion – Preemption* (Feb. 3, 2016) (formal opinion of Erie County, New York County Attorney, arguing that the Act does not preempt the County's microbead ban until at least 2018), http://www2.erie.gov/law/sites/www2.erie.gov.law/files/uploads/letter%20to%20j%20mills%20re%20preemption.pdf.

86. Cary Coglianese, *Social Movements, Law, and Society: The Institutionalization of the Environmental Movement*, 150 U. PENN. L. REV. 85, 112 (2001).

87. Allyson Wilson, *Bipartisan Legislation to Remove Microbeads from Personal Care Products Signed into Law*, AM. CHEMISTRY COUNCIL (DEC. 28, 2015), https://www.americanchemistry.com/Media/PressReleasesTranscripts/ACC-news-releases/Bipartisan-Legislation-to-Remove-Microbeads-from-Personal-Care-Products-Signed-into-Law.html.

88. *Examining Microbeads in Cosmetic Products: Hearing Before the Subcomm. on Health of the H. Comm. on Energy and Commerce*, 114th Cong. 35 (2015) (statement of Sen. Greenstein).

89. *Id.* at 34.

90. *Id.* at 35.

> So what we are going to have is that, as the industry moves forward, they will be saying, "Well, make an exception for the biodegradables," even though they don't really exist now, as I understand it, "Make other exceptions." And I think we are going to see a real patchwork, as you heard. I do agree with that. So I think it is very important, especially on something like this where we do have a lot of buy-in from the industry, to see if we can get a Federal law. I think that would work best.[91]

A spokesman for Sen. Kirsten Gillibrand similarly indicated that industry supported the Act due to "concerns about a patchwork of state regulations."[92] Another industry representative hailed the emplacement of "one uniform policy across the country."[93]

Although some industry organizations identified the passage of state-level bans as a problem, some companies supported even those measures. For example, industry titan Johnson & Johnson approached a Colorado legislator and asked her to bring forward a microbead ban.[94] In part, this may have been due to concerns that some companies would obtain a competitive advantage from continuing to use the inexpensive microbeads while other, more socially responsible, companies phased them out. This too, is not unprecedented, in fact, some public choice theorists[95] believe that almost all public regulation is really "private-interest rent-seeking in disguise."[96] By that way of thinking, environmental regulations can be reduced to tools of "subgroups of the regulated industry attempting to burden their rivals,"[97] or perhaps in the case of the Act, to ensure that no rival enjoys a perceived competitive advantage (the continued use of microbeads).

C. Classification as a "Health" Bill

In a variety of ways, the Act was positioned as a public health bill rather than as an environmental protection bill. Since 1973, Congress has assigned and attached one "Policy Area term" that

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91. *Id.*
92. Schwartz, *supra* note 67.
93. *Id.*
94. Amy Crowfoot, *Colorado Legislature Discusses Battle Against Microbeads*, 9NEWS.COM (Feb. 10, 2015, 6:15 PM), http://www.9news.com/news/politics/colo-legislature-discusses-battle-against-microbeads/134360151.
95. Public choice theory "sees politics as a market" that underproduces public goods such as clean water, and is biased toward the provision of private goods to concentrated interest groups. *See generally* Jonathan Wiener, *On the Political Economy of Global Environmental Regulation*, 87 GEO. L.J. 749, 752 (1999).
96. Wiener, *supra* note 95, at 754.
97. *Id.* at 755.

best describes the entire measure to every introduced bill or resolution. "Health" and "Environmental Protection" are among the thirty-two available policy terms.[98] Per the Congressional website, every bill or resolution is assigned a single "Policy Area term," which best describes the entire measure.[99] The Policy Area term assigned to the Act was "Health," not "Environmental Protection," which is another option.[100]

This classification was appropriate. As described above, microbeads pose perhaps an even greater concern for human health than do ordinary plastics.[101] Like other plastics, microbeads bioconcentrate pathogens and other chemicals hazardous to public health.[102] However, unlike many macro-scale plastics, microbeads are easily ingestible by aquatic organisms and therefore have a greater potential to be concentrated up the food chain to humans.[103] The identification of these public health aspects of the issue may well have eliminated—or at least rendered surmountable—the ordinary partisan blockade to new environmental legislation.

D. Strategies in Action: The TSCA Reform Bill

Examination of another successful environmental legislation effort gives credence to the effectiveness of the above strategies. In 2016, Congress passed a bill reforming the Toxic Substances Control Act ("TSCA"), the cornerstone of chemical regulation in the U.S.[104] The TSCA reform bill has been described as "the culmination of a multiyear, multi-Congress effort" and "the first consequential update of [TSCA] in 40 years."[105] On May 24, the House approved the compromise package by an overwhelming 403-12 vote.[106] The Senate quickly followed suit via a voice vote.[107]

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98. *Policy Areas — Field Values*, LIBR. OF CONG., https://www.congress.gov/help/field-values/policy-area (last visited Nov. 27, 2016).

99. *Id.*

100. *H.R.1321 - Microbead-Free Waters Act of 2015*, LIBR. OF CONG., https://www.congress.gov/bill/114th-congress/house-bill/1321 (last visited Nov. 27, 2016).

101. *See* Rochman et al., *supra* note 32; *see generally infra*, Section II.

102. *See infra*, Section II.

103. *Id.*

104. *See*, *e.g.*, Darren Goode & Alex Guillen, *Chemical Safety Reform Passes After 'Perfect Storm,'* POLITICO (June 7, 2016, 7:19 PM), http://www.politico.com/story/2016/06/chemical-reform-took-advantage-of-perfect-storm-224031; Juliet Eilperin & Darryl Fears, *Congress Is Overhauling an Outdated Law That Affects Nearly Every Product You Own*, WASH. POST (May 19, 2016), https://www.washingtonpost.com/politics/congress-poised-to-pass-sweeping-reform-of-chemical-law/2016/05/18/0da5cd22-1d30-11e6-9c81-4be1c14fb8c8_story.html.

105. *Shimkus Leads Landmark Update of Chemical Safety Law*, OFFICE OF REP. JOHN SHIMKUS, (May 24, 2016), https://shimkus.house.gov/media-center/press-releases/shimkus-leads-landmark-update-of-chemical-safety-law.

106. *Actions H.R.2576 114th Congress*, LIBR. OF CONG., https://www.congress.gov/bill/114th-congress/house-bill/2576/actions (last visited Nov. 27, 2016).

107. *Id.*

President Obama quickly signed the bill, having already called it "a historic advancement for both chemical safety and environmental law."[108] Generally, the newly reformed law gives EPA more authority to obtain information about chemicals, eliminates certain requirements that made it difficult for EPA to regulate chemicals in commerce, and requires EPA to assess certain high-risk chemicals in commerce.[109] In several respects, the effort to pass the TSCA reform bill mirrored the strategies that led to the Act.

First, as did the Microbead-Free Waters Act, the TSCA compromise package emphasized the public health benefits of the legislation in addition to the environmental benefits. The House Committee on Energy and Commerce prepared a lengthy committee report on the draft bill,[110] and then issued a short fact sheet on the compromise text.[111] The emphasis on public health reflected in the committee documents directly reflects the original version of TSCA enacted in 1976, which renders EPA responsible to take certain regulatory actions with respect to chemicals in commerce that "present an unreasonable risk of injury to health or the environment."[112]

Second, the compromise package attempted to build broad stakeholder consensus to eliminate a patchwork approach:

> Preemption under the compromise text begins with a general rule (subject to later provisions saving certain state laws) that states and local governments may not (1) duplicate federal information developments requirements, (2) restrict a chemical that EPA's scientific risk evaluation found does not present an unreasonable risk, EPA has published risk management regulation; or required notification for a significant new use or a new chemical.[113]

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108. OFFICE OF MGMT. & BUDGET, EXEC. OFFICE OF THE PRESIDENT, STATEMENT OF ADMINISTRATION POLICY: SENATE AMENDMENT TO H.R. 2576 – TSCA MODERNIZATION ACT OF 2015 (2016) (announcing that "[t]he Administration strongly supports the bipartisan, bicameral efforts to reform the Toxic Substances Control Act").

109. *See* The Frank R. Lautenberg Chemical Safety for the 21st Century Act, *amending* 53 U.S.C. §§ 2601-2697; *see also Highlights of Key Provisions in the Frank R. Lautenberg Chemical Safety for the 21st Century Act*, U.S. ENVTL. PROT. AGENCY, https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/highlights-key-provisions-frank-r-lautenberg-chemical (last visited Nov. 27, 2016).

110. H.R. REP. NO. 114-176 (2015).

111. COMM. ON ENERGY AND COMMERCE, *TSCA Reform – Compromise Text*, https://rules.house.gov/sites/republicans.rules.house.gov/files/114/PDF/HR2576SA-OJCR-Summ.pdf [hereinafter TSCA Compromise Text].

112. *See*, *e.g.*, Toxic Substances Control Act, 15 U.S.C. § 2601 (2012).

113. TSCA Compromise Text, *supra* note 111.

Public choice theorists may formulate darker motives for this consensus, but that does not reduce its effectiveness. Thus, the recent breakthrough in TSCA reform shares some of the same characteristics that gave rise to the success of the Act.

V. CONCLUSION

The passage of the Act reveals that Congress can indeed pass smart environmental legislation. But it doesn't come easily, as decades of failure have shown. The Act need not be a "black swan," a blip in an otherwise unbroken stretch of legislative failure; the success of the TSCA reform bill has already shown that much. Proponents of future environmental legislation can benefit from the Act's example by setting a reasonable scope and focus; by building a broad stakeholder coalition that includes, rather than demonizes, industry; by eliminating "patchwork" regulation to the extent possible; and by emphasizing the public health aspects of proposed legislation.