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WHO SHOULD WIN THE GARBAGE WARS? LESSONS FROM THE LOW-LEVEL RADIOACTIVE WASTE POLICY ACT

Jane Chuang*

"The garbage problem is not a physical crisis, a resource crisis, or a financial crisis. It is a political and informational problem which needs to be addressed as such."

INTRODUCTION

In the late summer of 1972, the State of New Jersey found itself in the middle of a waste² disposal crisis. Sharkey's Dump, one of the largest landfills in the state, was closing down.³ The dump served more than eighty municipalities as well as various commercial and industrial dumpers in northern New Jersey.⁴ Officials from those locales decried the decision to close the dump and predicted "absolute disaster."⁵ Sharkey's Dump would not be the only New Jersey landfill to close its doors during the 1970s.⁶ Sixty other landfills in the state closed in 1973 alone,⁷ including the East Hanover dump.⁸ This dump, also located in northern New Jersey, closed amid allegations of

1. Judd H. Alexander, In Defense of Garbage 213 (1993).

2. The waste discussed in the Introduction is municipal solid waste ("MSW").

See infra notes 33, 60 and accompanying text for a definition of MSW.

4. *Id*.

5. Id. (quotation marks omitted).

7. Id.

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^{3. 102-}Acre Landfill in Parsippany Is Granted Permission to Close, N.Y. Times, Aug. 11, 1972, at 17. In its decision to close the dump, the New Jersey Public Utilities Commission cited that there was no longer any on-site material to cover the refuse, which rose "as high as 60 feet and extend[ed] as deep as 40 feet" below ground. Id.

^{6.} Stricter environmental laws and the filling up of older, small landfills caused many landfills in New Jersey to close in the mid-1970s. See Dumping Law Facing a Test, N.Y. Times, Feb. 10, 1974, at 69.

^{8.} Fred Ferretti, State to Close Dump in Hanover, N.Y. Times, Mar. 18, 1973, at 77.

environmental violations.⁹ Its operator had petitioned for closure because of overuse—its garbage intake had more than doubled to accommodate waste that had previously gone to Sharkey's Dump.¹⁰

Hackensack Meadowlands Development Commission's ("HMDC") plan to convert the Meadowlands into a "commercialresidential-recreational complex" complete with "clean water and preserved estuarial enclaves 1111 added pressure to the waste disposal crisis.¹² As the Meadowlands site was one of the world's largest garbage dumps, 13 implementing this plan would be no easy feat. Along with cleaning up polluted waterways and supervising the closure of six landfill sites, the HMDC also had to face the political hurdles of developing thirty-two miles of marshland that encompassed parts of fourteen different towns.¹⁴

Additionally, the HMDC had to meet a state law requirement that it provide disposal capacity to 118 New Jersey municipalities. ¹⁵ Faced with this dilemma, the HMDC proposed the creation of the world's largest solid-waste incinerator. 16 This proposal eventually failed due to environmentalists' protests over the air pollution that the incinerator would emit.¹⁷ Instead, in the summer of 1973, the HMDC adopted a resolution that banned out-of-state garbage from the Meadowlands dumps. 18 The New Jersey legislature added to this ban by enacting the 1973 amendments to the Waste Control Act.¹⁹

^{9.} Id.

^{10.} Id.

^{11.} Fred Ferretti, The Key: Getting Rid of That Dump, N.Y. Times, Oct. 1, 1972,

^{12.} Dumping Law Facing a Test, supra note 6 (quoting Bernhardt Lind, then chief of New Jersey's Solid-Waste Management Bureau as saying that "[i]f the court tosses

out the ban next month, we'll have a real crisis").

13. Robert Sullivan, The Meadowlands 93 (1998). For lurid tales and descriptions of the Meadowlands dumps, including their Mob connections and never-ending fires, see id. at 93-106. Today, the Meadowlands is home to Giants Stadium and the Continental Airlines Arena, with a "family entertainment complex with indoor ski slopes, a surfing pool and a mini-Formula One racing oval" called Xanadu in the works. Ronald Smothers, Deal Provides Final Approval for Complex Meadowlands, N.Y. Times, Dec. 4, 2003, at B1.

^{14.} See Robert Hanley, Meadowland Echoes to Zoning War, N.Y. Times, Jan. 22, 1978, at E5 (describing local residents' opposition to development in the Meadowlands).

^{15.} Hackensack Meadowlands Dev. Comm'n v. Mun. Sanitary Landfill Auth., 316 A.2d 711, 714 (N.J. Super. Ct. Ch. Div. 1974).

^{16.} Ferretti, supra note 11.

^{17.} See Sullivan, supra note 13, at 98.

^{18.} David Bird, Jerseyans Intent on Keeping All Out-of-State Garbage Out, N.Y.

Times, June 24, 1973, at 59.

19. Act of Jan. 2, 1974, ch. 363, 1973 N.J. Laws 962, 962-63 (repealed 1981, amending Waste Control Act, ch. 39, 1973 N.J. Laws 95, 95-97 (codified as amended at N.J. Stat. Ann. § 13:11-1 (West 2003))).

prohibiting the importation of almost all types of wastes from other states.²⁰

These bans prompted legal action from cities in New York and Pennsylvania²¹ that had been sending their garbage to New Jersey landfills.²² City of Philadelphia v. New Jersey²³ centered around the New Jersey legislature's ban, and defined the U.S. Supreme Court's position on the interstate waste disposal issue.²⁴ In Philadelphia, the Supreme Court concluded that waste was an article of commerce for Congress to regulate and that states could not restrict the free flow of waste across state borders under the dormant Commerce Clause.²⁵

Thus began the "Garbage Wars,"²⁶ a series of battles between garbage-importing and garbage-exporting states that have been fought out in America's courts.²⁷ Typically, such battles start when an

^{20.} See Hackensack Meadowlands Dev. Comm'n v. Mun. Sanitary Landfill Auth., 348 A.2d 505, 507 (N.J. 1975).

^{21.} Id. at 505 (naming the cities of Philadelphia and Yonkers as parties); Ronald Sullivan, Jersey's High Court Bans Garbage Dumping From Out of State, N.Y. Times, Nov. 19, 1975, at 47 (noting that Philadelphia, Yonkers, and several Long Island communities were affected by the court's ruling).

^{22.} Dumping Law Facing a Test, supra note 6 (estimating that 20,000 tons of garbage a week from New York City and Philadelphia were brought into New Jersey, about 8% of the total waste dumped in the state); Joseph G. Rush, Trash-Disposal Problem: County-Run Dumps May Be Answer, N.Y. Times, Oct. 28, 1973, at 75 (noting that 300 garbage collectors from New York and eighty from Pennsylvania dumped in New Jersey).

^{23. 437} U.S. 617 (1978).

^{24.} See, e.g., Robert R.M. Verchick, The Commerce Clause, Environmental Justice, and the Interstate Garbage Wars, 70 S. Cal. L. Rev. 1239, 1249 (1997).

^{25.} Philadelphia, 437 U.S. at 621-23. The dormant (or negative) Commerce Clause refers to the doctrine under which states can legislate in areas subject to federal regulation under the Commerce Clause where Congress has not yet acted, as long as such legislation is within the "restraints" of the Commerce Clause. Id. at 623. In broad terms, states cannot pass legislation that violates the purpose of the Commerce Clause, which is to guard the "economic unit" of the nation. Id. (quoting H.P. Hood & Sons, Inc. v. Du Mond, 336 U.S. 525, 537-38 (1949)). Thus, state legislation will be invalid under the dormant Commerce Clause if such legislation amounts to economic protectionism that "blocks the flow of interstate commerce at a State's borders." Id. at 624. See infra text accompanying notes 110-16 for a discussion of the dormant Commerce Clause as used in the MSW context.

^{26.} For a history of the term "Garbage Wars," see Gary Abraham, Concepts of Community in Environmental Disputes: Farmersville and Western New York's Garbage Wars, 7 Buff. Envtl. L.J. 51, 56 n.12 (2000). Although the term "Garbage Wars" was first used to describe the clash "between garbage-importing and garbage-exporting states," it has also been used to describe clashes such as those between developers of waste facilities and the communities they target as locations for those facilities. Id.

^{27.} See C & A Carbone, Inc. v. Clarkstown, 511 U.S. 383 (1994) (invalidating the town of Clarkstown, New York's flow control ordinance, which would have prevented a private waste management company from exporting MSW); Or. Waste Sys., Inc. v. Dep't of Envtl. Quality, 511 U.S. 93 (1994) (rejecting Oregon's use of higher fees for garbage tipping for out-of-state waste); Fort Gratiot Sanitary Landfill, Inc. v. Michigan Dep't of Natural Res., 504 U.S. 353 (1992) (striking down Michigan's county-by-county ban on imported waste); City of Philadelphia v. New Jersey, 437

importing state passes legislation banning or limiting garbage imports, and the skirmish continues when lawsuits are brought to invalidate the same.²⁸ Often, private waste disposal companies who have contracts with garbage-exporting states, rather than the states themselves, bring the lawsuits.²⁹ Despite courts' consistent invalidation of garbage import ban legislation under the dormant Commerce Clause, importing states continue to wage the war to control interstate waste flow.³⁰

This Note examines the struggle between the states, and poses an answer to the question: Who should win the Garbage Wars? For an analytical framework, this Note looks to the Low Level Radioactive Waste Policy Act of 1980 ("LLRWPA")³¹ and its 1985 amendments ("LLRWPAA" or "Amendments").³² Like municipal solid waste ("MSW"),³³ low-level radioactive waste ("LLRW") has been experiencing its own disposal crisis.³⁴ In the context of LLRW, however, importing states appear to have won the Garbage Wars by gaining the power to control interstate waste flow.³⁵ Their success, however, was not won through any deft outmaneuvering of the Supreme Court's dormant Commerce Clause jurisprudence, but rather through congressional intervention.³⁶

U.S. 617 (1978); Waste Mgmt. Holdings, Inc. v. Gilmore, 252 F.3d 316 (4th Cir. 2001) (describing Virginia laws regulating MSW importation in response to New York's MSW exporting plan); Gov't Suppliers Consolidating Servs., Inc. v. Bayh, 975 F.2d 1267 (7th Cir. 1992) (examining laws passed by Indiana that made dumping out-of-state MSW more expensive). See *infra* text accompanying notes 101-256 for a discussion of those cases.

^{28.} See infra text accompanying notes 101-256.

^{29.} See infra text accompanying notes 257-75 (examining the parties who brought suit and explaining how states can use the market participant exception to regulate public waste disposal facilities).

^{30.} See All Things Considered: Michigan Politicians Attempt to Find Ways to Restrict the Import of Out-of-State Trash (Nat'l Pub. Radio broadcast, Oct. 28, 2003) (describing proposed Michigan laws that would restrict trash imports by prohibiting certain items from being deposited into Michigan landfills); Gary Heinlein, Landfill Bills Head to Finale; the Legislation Would Produce Stiff Rules for Imports, Face Challenge in Court, Detroit News, Oct. 15, 2003, at E1 (anticipating a court battle over Michigan's new interstate waste legislation). These Michigan laws were invalidated by a federal district court under the dormant Commerce Clause doctrine in February 2004. See generally Nat'l Solid Wastes Mgmt. Ass'n v. Charter County of Wayne, No. 03-60188, 2004 U.S. Dist. LEXIS 1868, at *1 (E.D. Mich. Feb. 3, 2004).

^{31.} Pub. L. No. 96-573, 94 Stat. 3347 (codified as amended at 42 U.S.C. §§ 2021b-2021d (2000)).

^{32.} Low-Level Radioactive Waste Policy Amendments Act of 1985, Pub. L. No. 99-240, 99 Stat. 1842 (1986) (codified as amended at 42 U.S.C. §§ 2021b-2021j).

^{33.} MSW is also called garbage or trash. U.S. Environmental Protection Agency, Municipal Solid Waste in the United States: 2000 Facts and Figures 5 (2002) [hereinafter U.S. EPA, MSW 2000]. For more information about MSW, see *infra* note 60 and accompanying text.

^{34.} For a summary of the LLRW crisis by Justice O'Connor, see New York v. United States, 505 U.S. 144, 149-53 (1992).

^{35.} See infra note 329 and accompanying text.

^{36.} Congress passed the LLRWPA and LLRWPAA in response to the LLRW

By the late 1970s, only three out of the original six LLRW dumps remained in operation,³⁷ despite an increasing demand for LLRW disposal.³⁸ Because their host states were unhappy to be saddled with near permanent responsibility for the entire nation's LLRW, they threatened to close all three of the LLRW dumps in 1978.³⁹ This dire situation prompted Congress to pass the LLRWPA in 1980, which gave states the authority to form regional compacts to handle the disposal of LLRW.⁴⁰ Once in a compact, states could ban LLRW coming from outside their compact region.⁴¹ The LLRWPA thus allowed states hosting LLRW disposal facilities to sidestep the dormant Commerce Clause jurisprudence that would otherwise prevent them from regulating the importation of LLRW.⁴²

Commentators have recommended that Congress end the MSW Garbage Wars using measures similar to the LLRWPA and its Amendments.⁴³ In fact, since the late 1980s, Congress has been considering legislation that would allow states to regulate interstate MSW.⁴⁴ The current incarnation of such legislation before the 108th Congress includes measures to ban⁴⁵ or impose certain restrictions⁴⁶ on imports of out-of-state MSW. This Note assesses the strengths and

crisis. See Deborah M. Mostaghel, The Low-Level Radioactive Waste Policy Amendments Act: An Overview, 43 DePaul L. Rev. 379, 385-86 (1994).

- 37. See id. at 385. Between 1962 and 1971, the Atomic Energy Commission licensed six LLRW disposal facilities at Sheffield, Illinois; Maxey Flats, Kentucky; West Valley, New York; Beatty, Nevada; Richland, Washington; and Barnwell, South Carolina. Id. at 385 & n.46. The sites at Sheffield, Illinois; Maxey Flats, Kentucky; and West Valley, New York closed in the 1970s. William F. Newberry, The Rise and Fall and Rise and Fall of American Public Policy on Disposal of Low-Level Radioactive Waste, 3 S.C. Envtl. L.J. 43, 46 (1993). See infra text accompanying notes 302-13 for further discussion.
- 38. See Maxwell Branson, Comment, Should Maine Ship Its Low-Level Radioactive Waste to Texas? A Critical Look at the Texas Low-Level Radioactive Waste Disposal Compact, 49 Me. L. Rev. 515, 524-25 (1997).
- 39. In fact, two of the LLRW dumps closed for short time periods in 1979. See id. at 526-27 & nn.73-77.
 - 40. See Mostaghel, supra note 36, at 386.
 - 41. Id.
- 42. See Branson, supra note 38, at 529-30 (noting that the LLRWPA allowed states to exclude LLRW from outside their compact region); infra notes 339-41 and accompanying text (describing how the Ninth Circuit invalidated the State of Washington's ban on out-of-state LLRW).
- 43. Kirsten Engel, Reconsidering the National Market in Solid Waste: Trade-Offs in Equity, Efficiency, Environmental Protection, and State Autonomy, 73 N.C. L. Rev. 1481, 1551-60 (1995); Michael R. Harpring, Comment, Out Like Yesterday's Garbage: Municipal Solid Waste and the Need for Congressional Action, 40 Cath. U. L. Rev. 851, 888-91 (1991).
- 44. James E. McCarthy, Cong. Research Serv., Rep. IB10002, Solid Waste Issues in the 106th Congress (Apr. 27, 2000), available at http://www.ncseonline.org/nle/crsreports/waste/waste-27.cfm?&CFID=10040316&CFTOKEN=22283373.
 - 45. Solid Waste Compact Act, H.R. 418, 108th Cong. (2003).
- 46. Solid Waste Interstate Transportation Act of 2003, H.R. 1730, 108th Cong. (2003).

weaknesses of such legislation in light of the results of the LLRWPA and its Amendments. The aftermath of the LLRW Wars has been notoriously unpleasant due to the difficult process of siting disposal locations,⁴⁷ suggesting that importing states should not be so eager to win the Garbage Wars because it may be a Pyrrhic victory. States need a holistic solution to solve their waste disposal woes that addresses not only their concerns about the waste disposal crisis, but also the practical difficulties of siting.

Part I presents a history of the modern American MSW disposal crisis, the Garbage Wars, and the LLRWPA and its Amendments. Part I ends by laying out the process of siting and discussing how economics, equity, and psychology impact this process. Part II delves into the conflict between importing states' desire to control interstate MSW disposal and the problems that resulted from such control in the parallel LLRW context. Part II first outlines the state concerns that the Garbage Wars make apparent. It then describes H.R. 418 and H.R. 1730, two interstate MSW bills currently before Congress, both of which propose to give states the power to control interstate MSW flow. Lastly, Part II showcases the failure of the LLRWPA, which responded to states' concerns in the LLRW context by giving them the power to control interstate LLRW flow.

Part III sets out the lessons of the LLRWPA and its Amendments and applies them to the Garbage Wars context in a critique of H.R. 418 and H.R. 1730. Part III also uses the lessons from the LLRW context to propose workable legislation for interstate waste flow and then analyzes such legislation's effectiveness in a typical Garbage War scenario. Finally, this Note argues that importing states should not win the Garbage Wars until congressional solutions can address not only states' concerns about the waste disposal crisis, but also the underlying issue of developing new disposal sites.

I. THE ROAD TO CRISIS

To develop the best resolution for the Garbage Wars, one must first understand why the conflict began. As the Introduction reveals, the driving force behind the Garbage Wars is the MSW disposal crisis. ⁴⁸ Part I documents the many facets of this crisis. Part I.A. describes the development of the modern American MSW disposal crisis. Part I.B. summarizes the history of the Garbage Wars by reviewing cases that apply the Supreme Court's dormant Commerce Clause jurisprudence

^{47.} See E. William Colglazier & Mary R. English, Low-Level Radioactive Waste: Can New Disposal Sites Be Found?, 53 Tenn. L. Rev. 621, 622-23 (1986); Michael B. Gerrard, Fear and Loathing in the Siting of Hazardous and Radioactive Waste Facilities: A Comprehensive Approach to a Misperceived Crisis, 68 Tul. L. Rev. 1047, 1050-51 (1994) [hereinafter Gerrard, Fear and Loathing]. For a definition of siting, see infra text accompanying note 346.

^{48.} See supra notes 2-30 and accompanying text.

to interstate MSW laws. Part I.C. describes the background behind the LLRWPA and its Amendments, drawing parallels between the LLRW and MSW disposal crises. Part I.D. explains the process of landfill siting, an important underlying issue in the Garbage Wars that must account for a complex amalgam of economics, environmental justice, and psychology.

A. The Modern Municipal Solid Waste ("MSW") Crisis

The road to the Garbage Wars begins with the modern MSW crisis. Problems with MSW have occurred throughout the history of civilization. In the fifth century B.C., Athens addressed its MSW troubles by requiring that garbage be disposed of in dumps a mile away from the city.⁴⁹ The Roman Empire had the first garbage men, who collected the garbage thrown into the streets by Roman citizens for disposal in local dumps.⁵⁰ One of the first garbage disposal crises was caused by the gladiatorial games, which produced more than five thousand animal and human carcasses each day.⁵¹ The Romans solved this disposal challenge by dumping the bodies in open pits located at the town outskirts.⁵²

The modern American MSW disposal crisis developed with the growth of the nation. As cities developed and populations grew larger, the need for collection services became acute as garbage piled up in streets, yards, and alleyways.⁵³ Although foraging animals and the natural decomposition helped dispose of certain types of waste, waste disposal was becoming a noticeable problem by the late nineteenth-century.⁵⁴ The effects of the Industrial Revolution exacerbated this problem.⁵⁵ Not only did industrial jobs bring huge numbers of people to cities, resulting in a concentrated production of waste, but the jobs also resulted in the manufacture of many new products that would later enter the waste stream.⁵⁶

The twentieth century brought an even more damaging development—disposable products.⁵⁷ The composition of American garbage began to change.⁵⁸ The mostly organic make-up of waste

^{49.} Alexander, *supra* note 1, at 2; Katie Kelly, Garbage: The History and Future of Garbage in America 16 (1973). Sadly, among the items thrown away in these early dumps were unwanted babies. *Id.*

^{50.} Kelly, *supra* note 49, at 16-17.

^{51.} Id. at 17-18.

^{52.} Id. at 17.

^{53.} See Alexander, supra note 1, at 4; Kelly, supra note 49, at 24.

^{54.} Alexander, supra note 1, at 3-4.

^{55.} U.S. Environmental Protection Agency, RCRA Orientation Manual I-1 (2003) [hereinafter U.S. EPA, RCRA Manual].

^{56.} Alexander, supra note 1, at 4-6; U.S. EPA, RCRA Manual, supra note 55, at I-

^{57.} Alexander, supra note 1, at 6-7; Stephen R. Chapman, Environmental Law and Policy 167 (1998).

^{58.} Alexander, supra note 1, at 6-7.

became supplanted by discarded packaging, disposable products, and other by-products of the industrial age.⁵⁹ Today, MSW includes materials such as paper, yard trimmings, food scraps, plastics, metals, glass, wood, leather, rubber, and textiles, as well as products such as containers and packaging, nondurable goods such as paper, and durable goods such as appliances.⁶⁰

By the mid-1960s, garbage had become a serious problem:⁶¹ It was not only unsightly and unpleasant, but also adversely affected human health and the environment.⁶² In 1967, a New Jersey court took possession of Point Breeze dump because of uncontrollable fires that caused air pollution.⁶³ Similarly, the Meadowlands dumps burned for years on end,⁶⁴ resulting in smoke so severe that it caused traffic accidents.⁶⁵ In 1968, a fire at the Kenilworth Dump in Washington, D.C. killed a seven-year old boy.⁶⁶ The sheer volume of garbage generated had also become daunting⁶⁷—for example, in 1968, a New

^{59.} Id.

^{60.} U.S. EPA, MSW 2000, *supra* note 33, at 5. MSW does not include "construction and demolition debris, municipal wastewater treatment sludges, and non-hazardous industrial wastes" even though these materials can be disposed of in MSW landfills. *Id.*

^{61.} See Robert V. Percival et al., Environmental Regulation: Law, Science, and Policy 165 (4th ed. 2003) (noting Congress's concern over the growth of MSW and its adoption of the Solid Waste Disposal Act of 1965).

^{62.} William E. Small, Third Pollution: The National Problem of Solid Waste Disposal 37-40 (1970) (describing the illnesses experienced by sanitation workers because of their exposure to garbage); U.S. EPA, RCRA Manual, *supra* note 55, at II-6 (noting risks of ground water contamination, air pollution, and fires or explosions). Despite their more wholesome reputation, MSW landfills can be just as toxic as hazardous waste landfills. *See* Gerrard, *Fear and Loathing*, *supra* note 47, at 1071.

^{63.} Walter H. Waggoner, Court Takes Over Smoky Dump in Jersey City and Bars Public, N.Y. Times, Jan. 24, 1967, at 35. Explosive methane gas and the practice of open burning to reduce waste volumes were probably the cause of such landfill fires. See Smoke Causes Traffic Jam, N.Y. Times, June 20, 1941, at 9 (describing how dumps would burn waste to make room); To Take Up Dump Fires, N.Y. Times, Mar. 14, 1954, at 72 (describing how private dumps burned waste in open fires); Stewart Ain, East Hampton to Dig Up Old Dump, N.Y. Times, Oct. 11, 1992, at LI13 (describing how methane gas could build up to explosive levels in landfills).

^{64.} Sullivan, *supra* note 13, at 94-95.

^{65.} Meadowland Golf Course Is Part of Garbage Proposal, N.Y. Times, May 15, 1975, at 92 (noting that landfill fires in 1973 emitted smoke cover on the New Jersey Turnpike that caused a dozen fatal traffic accidents).

^{66.} See Small, supra note 62, at 14. The dump conducted open burns of garbage to reduce waste and its fire spread out of control while the boy happened to be playing in the dump with some friends. Id. The young were not the only victims of dump fires; so were the old. Recluse, 75, Dies in Dump Fire, N.Y. Times, Feb. 26, 1953, at 2 (stating that a 75-year-old man who lived in a shack on a dump burned to death).

^{67.} By 1960, MSW had grown to 88 million tons per year. Percival et al., *supra* note 61, at 164-65. This was equivalent to 2.7 pounds of waste per day per person. *Id.* In contrast, people generated half a pound of waste per day in 1910. *Id.* at 164.

York City garbage strike buried the city in 100,000 tons of garbage after nine days.⁶⁸

New environmental laws put pressure on older landfills to close.⁶⁹ In 1976, Congress passed the Resource Conservation and Recovery Act ("RCRA").⁷⁰ Subtitle D of RCRA⁷¹ required the United States Environmental Protection Agency ("EPA") to develop standards for MSW landfills.⁷² Landfills that did not meet the EPA's standards had to be closed or upgraded.⁷³ In 1984, Congress passed amendments to RCRA that tightened controls on MSW landfills with stricter design and siting standards, obligatory groundwater monitoring, and corrective action.⁷⁴ In addition, states had to develop permitting schemes to make sure that MSW landfills met EPA criteria.⁷⁵ As a

^{68.} Emanuel Perlmutter, Cleanup Is Begun by 1,400 Workers, N.Y. Times, Feb. 11, 1968, at 1.

^{69.} See Percival et al., supra note 61, at 164-65 (describing how stricter environmental standards have contributed to the declining number of MSW landfills).

^{70.} Pub. L. No. 94-580, 90 Stat. 2795 (1976). RCRA was an amendment to the Solid Waste Disposal Act of 1965 ("SWDA"). Percival et al., *supra* note 61, at 165. The SWDA gave federal aid for state waste management plans. *Id.* RCRA allowed MSW, but not hazardous waste, to be disposed of in Subtitle D landfills. *Id.* at 220. Hazardous waste from small quantity generators, however, was exempted from this prohibition and could still be disposed of in Subtitle D landfills. U.S. EPA, RCRA Manual, *supra* note 55, at II-7.

^{71. 42} U.S.C. §§ 6941-6949 (2000).

^{72.} Section 4004(a) of RCRA provided:

Not later than one year after the date of enactment of this section, after consultation with the States, and after notice and public hearings, the Administrator shall promulgate regulations containing criteria for determining which facilities shall be classified as sanitary landfills and which shall be classified as open dumps within the meaning of this Act.

^{§ 4004(}a), 90 Stat. at 2815; see also Û.S. EPA, RCRA Manual, supra note 55, at II-5.

^{73. 42} U.S.C. § 6945(a) (prohibiting open dumps); see also U.S. EPA, RCRA Manual, supra note 55, at II-5.

^{74.} Percival et al., supra note 61, at 221-22 (describing how section 4010(c) of RCRA required EPA to revise the standards for Subtitle D facilities). The EPA revised the technical criteria for MSW landfills in 1991. U.S. EPA, RCRA Manual, supra note 55, at II-6. The criteria restricted landfill placement near floodplains, wetlands, seismic impact zones, and airports. Id. at II-7. In addition, the EPA established minimum operating standards that prohibited open burning while requiring daily cover and controls over disease vectors and explosive gas. Id. To meet new design criteria, landfills were required to have liners and a leachate collection system. See id. Landfill operators had to monitor groundwater conditions and clean up any contamination. See id.; cf. Percival et al., supra note 61, at 222 (noting that some small municipal landfills may be exempt from groundwater monitoring requirements). Lastly, the EPA designated procedures for closure of the landfill once it reached capacity. See U.S. EPA, RCRA Manual, supra note 55, at II-7.

^{75.} Percival et al., supra note 61, at 222. Such permitting systems allowed states to approve or reject landfills if they did not incorporate Subtitle D standards. See id.

result, thousands of landfills closed⁷⁶ and new landfills became harder to site.⁷⁷

The environmental laws revolutionized landfill management by requiring such measures as daily cover of waste, methods to control explosive gas, and liners to prevent leachate from polluting groundwater. The days of open dumps and open burns were over. While the changes in landfills were beneficial to health and clean air, they created a different problem. Landfills filled up three times faster than they had in the past. Because of the daily cover requirement, the bacteria that helped waste decompose could not survive. The daily cover itself took up space in landfills. In addition, the prohibition of open burns eliminated one of the methods that reduced waste mass in landfills.

Together, closing landfills, increasing amounts of waste,⁸⁴ and rising tipping fees⁸⁵ created the modern waste disposal crisis—one

77. Paula C. Murray & David B. Spence, Fair Weather Federalism and America's Waste Disposal Crisis, 27 Harv. Envtl. L. Rev. 71, 74-76 (2003) (noting the difficulty of siting landfills). For a definition of siting, see infra text accompanying note 346.

79. See U.S. EPA, RCRA Manual, supra note 55, at II-5, II-7 (describing RCRA's prohibitions against open dumps and open burns).

80. Alexander, supra note 1, at 19.

81. Id. The daily cover prevented the bacteria from receiving the oxygen it needed to survive. Id.

82. Id. at 19-20.

83. *Id.* at 19.

84. The generation rate in the U.S. increased from 2.7 pounds a day per person in 1960 to 4.5 pounds a day in 2000. See U.S. EPA, MSW 2000, supra note 33, at 5.

^{76.} In 1991, when the EPA released the new Subtitle D standards, it estimated that 3000 landfills would close between 1991 and 1996. Of the 6000 landfills open at the time, 2400 remained open by the year 1996. *Id.*

^{78.} U.S. EPA, RCRA Manual, supra note 55, at II-7. Daily cover helps prevent fires, keeps garbage from being blown away, and protects against animals and insects. See Carol Badaracco Padgett, Lids for Landfills, Waste Age, Feb. 2003, at 54-55. It involves covering waste deposited in a landfill with materials such as dirt, foam, tarps, or finely crushed glass. Id. at 54. Leachate is the result of rain water that filters through waste and leaches out the chemicals. See U.S. EPA, RCRA Manual, supra note 55, at II-7. In Woburn, Massachusetts, leachate formed a "toxic soup" that caused childhood leukemia. See Percival et al., supra note 61, at 166. For more details on the laws that changed landfill management, see supra notes 69-77 and accompanying text.

^{85.} Alexander, supra note 1, at 154. Tipping fees are "fee[s] charged for the unloading or dumping of material at a landfill, transfer station, recycling center, or waste-to-energy facility, usually stated in dollars per ton." 2 U.S. Environmental Protection Agency, Decision Maker's Guide to Solid Waste Management, at A-7 (1995) [hereinafter U.S. EPA, Decision Maker's Guide]. Tipping fees may also refer to tipping fee taxes that states can impose on waste disposal facilities, also usually stated in dollars per ton. See Chaz Miller, Editorial, Trash Taxes, Waste Age, Apr. 2003, at 122 (describing and criticizing tipping fee taxes). Such tipping fee taxes can be highly lucrative for states. See Landfill Surcharge Increased \$4 to \$7.25/Ton, BioCycle, Aug. 2002, at 18 (announcing that Pennsylvania had raised its tipping fee surcharge to help finance environmental programs and a \$1.3 billion budget gap).

dominated by worries about capacity.⁸⁶ These fears, however, were not quite justified. On a national level, capacity for landfill space abounded.⁸⁷ Although many landfills were closing, much larger regional landfills operated by private companies replaced them.⁸⁸ These regional landfills not only had more capacity, but could also charge lower tipping fees.⁸⁹ The main problem was siting new facilities.⁹⁰ Through phenomena dubbed NIMBY ("Not In My Backyard"), LULU ("Locally Undesirable Land Use"), or BANANA ("Build Absolutely Nothing Anywhere Near Anything"),⁹¹ public opposition often successfully blocked the development of new disposal capacity.⁹²

As landfills became harder to site, local governments turned increasingly to interstate resources to take care of their garbage disposal needs. Accordingly, waste imports increased by 141% between 1993 and 2001. Vot only could communities realize cost savings from the lower tipping fees at out-of-state landfills, but such landfills were sometimes located closer than an in-state landfill. Also, if their state faced a lack of garbage disposal capacity, they could avoid the NIMBY problems of siting a new landfill by using one already sited in another state.

The regionalization of the waste disposal market further reinforced the trend towards interstate MSW transfers.⁹⁷ As small local landfills closed, waste disposal companies developed their own system of large regional landfills.⁹⁸ They disposed of waste in their own facilities, even if those facilities were located out-of-state.⁹⁹ As the volume of interstate MSW transfers increased, tensions between garbage-

^{86.} See Philip Weinberg, Congress, the Courts, and Solid Waste Transport: Good Fences Don't Always Make Good Neighbors, 25 Envtl. L. 57, 58 (1995).

^{87.} See Alexander, supra note 1, at 9-11; see also U.S. EPA, MSW 2000, supra note 33, at 124.

^{88.} See Alexander, supra note 1, at 156.

^{89.} Id.

^{90.} Id. at 21.

^{91.} See Gerrard, Fear and Loathing, supra note 47, at 1054.

^{92.} See Alexander, supra note 1, at 21.

^{93.} See Murray & Spence, supra note 77, at 74-75. Waste tends to move from densely populated, richer states to more rural, poorer states. See Engel, supra note 43, at 1494-95. The largest MSW exporters are New York, New Jersey, Illinois, and Maryland. See James E. McCarthy & Anne L. Hardenbergh, Cong. Research Serv., Rep. RL31651, Interstate Shipment of Municipal Solid Waste: 2002 Update CRS-9 (2002). The largest MSW importers are Pennsylvania, Virginia, and Michigan. Id. at CRS-7. Together they receive 52% of the total amount of waste imported. Id.

^{94.} McCarthy & Hardenbergh, supra note 93, at CRS-7.

^{95.} Engel, supra note 43, at 1492.

^{96.} Id. at 1491-92.

^{97.} Id. at 1492-93.

^{98.} See McCarthy & Hardenbergh, supra note 93, at CRS-10 to -11.

^{99.} Id. at CRS-11.

importing and garbage-exporting states escalated, often culminating in court battles.¹⁰⁰

B. The Commerce Clause Crisis

Concerned that their local landfill capacity would be hijacked by out-of-state waste, many importing states enacted statutes to control waste imports, 101 at times accompanied by heated and hostile exchanges with their fellow states. 102 These statutes have included measures such as import bans, limitations on transportation that affect garbage hauling, higher fees for out-of-state waste, flow control laws, and requirements for local approval. 103 Courts have struck down most of these statutes on dormant Commerce Clause grounds, following the analysis in *City of Philadelphia v. New Jersey*. 104 The following summary of the Supreme Court's dormant Commerce Clause jurisprudence 105 highlights the arguments for and against state control of MSW imports.

1. City of Philadelphia v. New Jersey: The Supreme Court's Test for Restrictions on Interstate Movement of Waste

Faced with shortages of landfill space in the 1970s,¹⁰⁶ New Jersey enacted laws¹⁰⁷ that banned the importation of nearly all types of out-of-state waste.¹⁰⁸ Private landfill operators that processed out-of-state

^{100.} See supra note 94 and accompanying text (describing the increase in interstate MSW transfers); infra Part I.B. (detailing court battles over interstate MSW laws).

^{101.} See Howard G. Hopkirk, The Future of Solid Waste Import Bans Under the Dormant Commerce Clause: Fort Gratiot Sanitary Landfill, Inc. v. Michigan Department of Natural Resources, 4 Vill. Envtl. L.J. 395, 396 (1993).

^{102.} Id. For other accounts of state hostilities, see Waste Management Holdings, Inc. v. Gilmore, 252 F.3d 316, 336-40 (4th Cir. 2001), Government Suppliers Consolidating Services, Inc. v. Bayh, 753 F. Supp. 739, 745 (S.D. Ind. 1990), and infra note 230

^{103.} See infra Part I.B.2.-6.

^{104.} See infra Part I.B.2.-6.

^{105.} See supra note 25 for a discussion of the dormant Commerce Clause.

^{106.} See supra text accompanying notes 2-30.

^{107.} The New Jersey statute provided:

No person shall bring into this State any solid or liquid waste which originated or was collected outside the territorial limits of the State, except garbage to be fed to swine in the State of New Jersey, until the commissioner [of the State Department of Environmental Protection] shall determine that such action can be permitted without endangering the public health, safety and welfare and has promulgated regulations permitting and regulating the treatment and disposal of such waste in this State.

City of Philadelphia v. New Jersey, 437 U.S. 617, 618-19 (1978) (citing N.J. Stat. Ann. § 13:11-10 (West Supp. 1978)).

^{108.} The regulations promulgated under the statute included three other exceptions: materials for a recycling facility, materials for waste-to-energy facilities, and hazardous wastes headed towards a treatment facility. See id. at 619-20 n.2. Waste-to-energy facilities are typically incinerators. See U.S. EPA, 2 Decision

garbage and the cities with whom they contracted sued to invalidate the laws. ¹⁰⁹ In *Philadelphia*, the Supreme Court adopted a two-step analysis ¹¹⁰ to determine whether the laws were permissible in light of the Commerce Clause. ¹¹¹ First, it applied a "virtually *per se* rule of invalidity" ¹¹² for laws that promoted the "evils of 'economic isolation' and protectionism" ¹¹³ by "overtly block[ing] the flow of interstate commerce at a State's borders." ¹¹⁴ Second, if a law did not patently discriminate against interstate commerce under the first step, the Court would use the balancing test set out in *Pike v. Bruce Church, Inc.* ¹¹⁵ A law passes the *Pike* test if it "evenhandedly" regulates for a "legitimate local public interest"; if it has only "incidental" effects on interstate commerce; and if those effects are not excessively burdensome to commerce when compared to local benefits. ¹¹⁶

The Philadelphia Court examined whether the New Jersey law was a protectionist law or one that was enacted for a legitimate purpose. The law stated that its purpose was to protect the environment and public health, rather than to protect its economic interests. The Court, however, found both the environmental and economic rationales acceptable as long as the law did not achieve its purpose through the "evils of 'economic isolation' and protectionism." New Jersey could not "discriminat[e] against articles of commerce coming from outside the State unless there [was] some reason, apart from their origin, to treat them differently" from articles coming from within the state. Because the law discriminated on the basis of origin and prohibited only waste from outside of New Jersey, it was per se invalid. 122

Joined by Chief Justice Burger in his dissent, 123 Justice Rehnquist

Maker's Guide, *supra* note 85, at A-7 to A-8 (describing waste-to-energy systems as involving combustion).

109. *Philadelphia*, 437 U.S. at 619.

- 111. Philadelphia, 437 U.S. at 621-23.
- 112. Id. at 624.
- 113. Id. at 623.
- 114. Id. at 624.
- 115. Id. (quoting Pike v. Bruce Church, Inc., 397 U.S. 137, 142 (1970)).
- 116 Id
- 117. *Id.*; see also supra text accompanying notes 112-14 (describing the character of protectionist laws).
 - 118. Id. at 625.
 - 119. See id. at 626-27.
 - 120. Id. at 623.
 - 121. Id. at 626-27.
- 122. Id. (noting that New Jersey could accomplish its goals in a nondiscriminatory manner by "slowing the flow of all waste" into its landfills).
 - 123. Id. at 629 (Rehnquist, J., dissenting).

^{110.} Id. at 624. This analysis became the heart of the negative (or dormant) Commerce Clause doctrine. See Verchick, supra note 24, at 1248-49 (describing the "irregular[]" development of the negative Commerce Clause in the nineteenth and twentieth centuries).

noted the many health risks associated with landfills, such as air, water, and noise pollution, explosions, and disease spreading.¹²⁴ He argued that these health risks made solid waste comparable to the highly infectious materials that could be banned under quarantine laws.¹²⁵ Because the Court had previously upheld quarantine laws under the dormant Commerce Clause, Rehnquist concluded that the New Jersey law should also be upheld.¹²⁶

The majority addressed Rehnquist's argument, pointing out that if the out-of-state waste was "inherently harmful," so was New Jersey waste. Because New Jersey still dumped its own waste into its landfills, the landfills negatively affected the health of its citizens despite the absence of out-of-state waste. In contrast, the highly infectious materials of the quarantine scenario, if allowed to freely cross state borders, would bring with them new and unique health risks. 129

The majority observed that its ruling would also protect New Jersey if other states closed their borders to prevent New Jersey from exporting MSW.¹³⁰ The problem of waste disposal, the majority concluded, was a "problem shared by all."¹³¹ States, however, were not magnanimous enough to see MSW disposal as a "problem shared by all" and continued to pass laws that would allow them to keep out-

^{124.} Id. at 630 (Rehnquist, J., dissenting).

^{125.} Id. at 631-32 (Refinquist, J., dissenting). Quarantine laws prohibit[ed] the importation of items "which, on account of their existing

condition, would bring in and spread disease, pestilence, and death, such as rags or other substances infected with the germs of yellow fever or the virus of small-pox, or cattle or meat or other provisions that are diseased or decayed, or otherwise, from their condition and quality, unfit for human use or consumption."

Id. at 631 (Rehnquist, J., dissenting) (quoting Bowman v. Chicago & Northwestern R. Co., 125 U.S. 465, 489 (1888)).

^{126.} Id. at 633 (Rehnquist, J., dissenting).

^{127.} *Id.* at 629. New Jersey conceded that once the out-of-state wast deposited in the landfills, it could not be differentiated from in-state waste. *Id.* 128. *See id.*

^{129.} See id. at 628-29 ("But those quarantine laws banned the importation of articles such as diseased livestock that required destruction as soon as possible because their very movement risked contagion and other evils."); cf. Maine v. Taylor, 477 U.S. 131 (1986) (allowing the ban of baitfish to prevent introduction of a disease that was not present in the state).

^{130.} Philadelphia, 437 U.S. at 629. The majority noted:

Today, cities in Pennsylvania and New York find it expedient or necessary to send their waste into New Jersey for disposal, and New Jersey claims the right to close its borders to such traffic. Tomorrow, cities in New Jersey may find it expedient or necessary to send their waste into Pennsylvania or New York for disposal, and those States might then claim the right to close their borders. The Commerce Clause will protect New Jersey in the future, just as it protects her neighbors now, from efforts by one State to isolate itself in the stream of interstate commerce from a problem shared by all.

of-state MSW outside of their borders.¹³² After *Philadelphia*, however, such laws were drafted more carefully to avoid being stricken as per se invalid under the first step of the dormant Commerce Clause analysis.¹³³

2. Fort Gratiot Sanitary Landfill, Inc. v. Michigan Department of Natural Resources: Using County Solid Waste Management Plans to Allow Import Bans

In 1978, Michigan adopted a law requiring every county to develop a twenty-year waste disposal plan.¹³⁴ In 1988, Michigan added amendments that banned the acceptance of out-of-county waste unless the county expressly allowed for such waste in its waste management plan.¹³⁵ Fort Gratiot Sanitary Landfill, Inc. ("Fort Gratiot") owned and operated a landfill in St. Clair County, Michigan.¹³⁶ After sale of its stock to out-of-state owners, ¹³⁷ Fort Gratiot applied to the county for permission to accept out-of-state waste, promising to reserve capacity for county waste for the next twenty years.¹³⁸ When its application was denied, Fort Gratiot filed suit, claiming that the 1988 amendments were unconstitutional.¹³⁹

The Supreme Court agreed.¹⁴⁰ It found that the amendments directly discriminated against interstate commerce and allowed each of Michigan's "83 counties to isolate itself from the national

^{132.} *Id.*; see also infra Part I.B.2.-8. (detailing other cases invalidating laws that gave states the power to limit or ban imported waste).

^{133.} See infra Part I.B.2.-8.

^{134.} Fort Gratiot Sanitary Landfill, Inc. v. Michigan Dep't of Natural Res., 504 U.S. 353, 355 (1992) (citing 1978 Mich. Pub. Acts 641 (codified as amended at Mich. Comp. Laws §§ 299.401-299.437 (1984 & Supp. 1991)). The law required "every Michigan county to estimate the amount of solid waste that would be generated in the county in the next 20 years and to adopt a plan providing for its disposal at facilities that comply with state health standards." *Id.* (citing Mich. Comp. Laws § 299.425 (Supp. 1991)).

^{135.} Id. at 356-57. The first amendment provided: "A person shall not accept for disposal solid waste... that is not generated in the county in which the disposal area is located unless the acceptance of solid waste... that is not generated in the county is explicitly authorized in the approved county solid waste management plan." Id. (citing 1988 Mich. Pub. Acts 475 § 1 (codified as amended at Mich. Comp. Laws §§ 299.413a, 299.430(2) (Supp. 1991))). The second amendment provided: "In order for a disposal area to serve the disposal needs of another county, state, or country, the service... must be explicitly authorized in the approved solid waste management plan of the receiving county." Id.

^{136.} Bill Kettlewell Excavating, Inc. v. Michigan Dep't of Natural Res., 931 F.2d 413, 414 (6th Cir. 1991). Bill Kettlewell was the Sixth Circuit case that was on appeal in Fort Gratiot and contains a more complete statement of the facts. Fort Gratiot, 504 U.S. at 357

^{137.} Bill Kettlewell, 931 F.2d at 414.

^{138.} Fort Gratiot, 504 U.S. at 357.

^{130 14}

^{140.} See id. at 367-68 (finding that the waste import restriction failed under the Commerce Clause).

economy."¹⁴¹ It noted that a state could not circumvent the Commerce Clause "by curtailing the movement of articles of commerce through subdivisions of the State," rather than the entire state's borders.¹⁴²

The 1988 amendments differed from New Jersey's ban on out-of-state waste because they applied to both out-of-state MSW and instate MSW from other Michigan counties. In addition, the amendments allowed individual counties to choose to accept out-of-county and out-of-state waste. Rather, it dismissed these differences, finding that the extent of the discrimination did not matter as long as there was discrimination based on the origin of MSW. Because Michigan had no reason to treat out-of-state waste differently from incounty waste, the Court struck down the amendments as "protectionist measures that [could not] withstand scrutiny under the Commerce Clause." Following Fort Gratiot, importing states attempted to justify their interstate waste control legislation by discriminating on factors other than origin.

3. Oregon Waste Systems, Inc. v. Department of Environmental Quality: Discriminatory Fees for Out-of-State Waste

Oregon Waste Systems, Inc. v. Department of Environmental Quality¹⁵⁰ came off the heels of the Supreme Court's decision in Chemical Waste Management, Inc. v. Hunt¹⁵¹ to strike down Alabama's system of charging higher tipping fees¹⁵² for out-of-state hazardous waste.¹⁵³ In Chemical Waste, Alabama charged a base fee

^{141.} Id. at 361.

^{142.} *Id*.

^{143.} Id.

^{144.} Id. at 363. The Court found it significant that the amendment required that a county act "affirmatively to permit other waste to enter its jurisdiction." Id. at 361.

^{145.} *Id*.

^{146.} Id. at 363 n.4 (quoting Wyoming v. Oklahoma, 502 U.S. 437, 455 (1992)).

^{147.} See id. at 361.

^{148.} Id. at 367-68. The Michigan laws were protectionist because they effectively blocked the flow of MSW into the state by using county borders. See id. at 361. The Court expanded its analysis of the per se rule of invalidity by noting that the measures would be permitted if Michigan could prove that there were no nondiscriminatory alternatives. See id. at 365-66 (citation omitted) (giving the example of a state's efforts to "conserve and preserve ground water for its own citizens in times of severe shortage").

^{149.} See infra notes 150-254 and accompanying text (recounting the cases following Fort Gratiot where states avoided outright bans and instead used fees and other measures to achieve the same result).

^{150. 511} U.S. 93 (1994).

^{151. 504} U.S. 334 (1992) (holding that discriminatory fees on out-of-state hazardous waste were impermissible).

^{152.} See *supra* note 85 for a definition of tipping fees.

^{153.} Chemical Waste, 504 U.S. at 338-39.

of \$25.60 per ton for both in-state and out-of-state waste, plus an additional fee of \$72.00 per ton for out-of-state waste.¹⁵⁴ The Court invalidated the additional fee because it was based only on the "origin of the waste" and Alabama did not meet its burden to show that there was another justification for the law besides "economic protectionism." In a footnote, the Court passed on the question of whether the higher fees could be justified as a "compensatory tax," or as the out-of-state generators' "fair share" of the costs of Alabama's waste disposal facilities. 156

In 1989, Oregon approved a surcharge on out-of-state waste.¹⁵⁷ The amount of the surcharge was to be calculated by the Oregon Environmental Quality Commission based on the "costs to the State of Oregon and its political subdivisions of disposing of solid waste generated out-of-state" which were not paid for under other statutes.¹⁵⁸ The Commission eventually set the surcharge at \$2.25 per ton.¹⁵⁹ In contrast, the in-state fee was capped at \$0.85 per ton.¹⁶⁰ Anticipating a court challenge, Oregon applied both fees to out-of-state waste haulers, with the in-state fee of \$0.85 to be refunded if the \$2.25 surcharge was upheld.¹⁶¹

Although the surcharge was meant to help Oregon defray its disposal costs, ¹⁶² the Court found it discriminatory on its face. ¹⁶³ The

^{154.} Id. Such a fee proved extremely effective—a year after it was enacted, the total amount of waste (from both in- and out-of-state sources) disposed of at the facility had fallen by more than 50%. See id. at 342 n.4.

^{155.} Id. at 344 (quotation marks omitted).

^{156.} Id. at 346 n.9 (quotation marks omitted). A compensatory tax ensures that those engaged in interstate commerce pay their fair share of state tax burdens. See Or. Waste Sys., Inc. v. Dep't of Envtl. Quality, 511 U.S. 93, 102-03 (1994). To impose such a tax on interstate commerce, a state must first identify and calculate the burden on intrastate commerce. Id. at 103. The compensatory tax on interstate commerce must be shown to "roughly... approximate" the burden experienced by intrastate commerce. Id. In the case of Alabama, for example, any costs associated with waste disposal that were borne by in-state dumpers but not out-of-state dumpers could be captured by the compensatory tax. See id. (quoting Justice Cardozo's depiction of a compensatory tax scheme). Such costs might include a surcharge imposed on intrastate dumping, but not on interstate dumping. See id. at 104 (finding that Oregon did not charge a fee to shippers of in-state waste that would justify a compensatory tax on out-of-state waste).

^{157.} Or. Waste Sys., 511 U.S. at 96. The surcharge was assessed on "every person who disposes of solid waste generated out-of-state in a disposal site or regional disposal site." *Id.* (citing Or. Rev. Stat § 459.297(1) (1993) (repealed 1995) (quotation marks omitted)).

^{158.} Id. (quotation marks omitted).

^{159.} Id. (citing Or. Admin. R. 340-97-120(7) (1993)).

^{160.} Id. (citing Or. Rev. Stat. §§ 459A.110(5), 115 (1991) (amended 1993)).

^{161.} Id. at 96 & n.2 (citing Or. Rev. Stat. § 459A.110(6) and 1991 Or. Laws 385, §§ 91-92).

^{162.} Id. at 109 n.1 (Rehnquist, C.J., dissenting) (detailing the identified costs that the surcharge was based on, including state activities to improve waste management, increased environmental liability, lost disposal capacity, and nuisance impacts from transportation).

Court emphasized that the state needed a valid reason to differentiate out-of-state waste from in-state waste.¹⁶⁴ The Court further found that the \$2.25 per ton surcharge did not calculate costs that were specific to out-of-state waste because the disposal cost of such waste was the same as for in-state waste.¹⁶⁵ The \$2.25 per ton surcharge also applied to in-state haulers who shipped in out-of-state waste, refuting Oregon's argument that in-state haulers already paid a surcharge through general state taxes.¹⁶⁶ Because Oregon could offer "no legitimate reason" for the higher fee charged on out-of-state waste, the Court invalidated the surcharge.¹⁶⁷

In *Philadelphia*, Fort Gratiot, and Oregon Waste Systems, importing states failed in their attempts to control interstate waste flow through prohibitions on MSW imports¹⁶⁸ and discriminatory fees.¹⁶⁹ In C & A Carbone, Inc. v. Clarkstown, ¹⁷⁰ however, the town of Clarkstown, New York approached the waste flow problem using the opposite tactic.¹⁷¹ Clarkstown passed a flow control law¹⁷² requiring that all MSW within its borders be processed at its waste transfer station,¹⁷³ allowing the town to effectively keep all of its MSW to itself.¹⁷⁴

^{163.} Id. at 99.

^{164.} *Id.* at 101 (noting that higher costs associated with out-of-state waste or unique health risks stemming from out-of-state waste could be possible justifications for the surcharge).

^{165.} *Id.* at 101 n.5.

^{166.} Id. at 105.

^{167.} Id. at 108.

^{168.} See supra notes 106-49 and accompanying text (summarizing the holdings of *Philadelphia* and *Fort Gratiot*).

^{169.} See supra notes 150-67 and accompanying text (discussing the holding in Oregon Waste Systems).

^{170. 511} U.S. 383 (1994).

^{171.} Id. at 387 (describing how Clarkstown enacted a flow control ordinance). Flow control laws are a type of waste import restriction that work like an import ban in reverse. See Lincoln L. Davies, Note, If You Give the Court a Commerce Clause: An Environmental Justice Critique of Supreme Court Interstate Waste Jurisprudence, 11 Fordham Envtl. L.J. 207, 240-41 (1999). Rather than keeping waste out, flow control laws require that all waste within a certain area be processed at a designated facility. Id. This allows towns to raise money by charging fees on the waste processed at their facility. See id. at 241. In Carbone, Clarkstown charged an above-market price for waste processing and used the money to finance its new waste transfer station. 511 U.S. at 387.

^{172.} See supra note 171 (explaining how flow control laws operate).

^{173.} The trend towards regional waste disposal spawned the development of waste transfer stations. U.S. Environmental Protection Agency, Waste Transfer Stations: A Guide for Decision-Making 2 (2002) [hereinafter U.S. EPA, Waste Transfer Stations]. These stations take solid waste from garbage collection trucks and consolidate it for shipment to an appropriate end facility, such as a landfill or waste-to-energy plant. *Id.* Waste transfer stations help communities save on costs when waste is to be transported long distances. *Id.* at 3 (describing the reduction in hauling costs when smaller loads of MSW from collection trucks are consolidated for transport by a larger transfer vehicle). They also allow for screening of waste and can serve as a drop-off center for other types of waste, such as recyclables, electronics, and household hazardous wastes. *Id.* at 3-4. The cost-effectiveness of such stations

4. C & A Carbone, Inc. v. Clarkstown: Flow Control Laws to Keep Trash In-State

Clarkstown contracted with a private company to construct and operate a waste transfer station¹⁷⁵ for five years, after which the town would buy the facility for one dollar.¹⁷⁶ To finance the station, Clarkstown planned to use income from the tipping fee charged to haulers who brought their waste to the station for processing.¹⁷⁷ Clarkstown promised to provide a minimum waste flow of 120,000 tons per year, or it would pay the tipping fee to make up the difference.¹⁷⁸ At \$81 per ton, the tipping fee was above the market price for waste disposal.¹⁷⁹ To ensure that it met its minimum waste flow needs despite the high tipping fee, Clarkstown passed an ordinance that required all nonhazardous solid waste in the town to be processed at the transfer station.¹⁸⁰

C & A Carbone, Inc. ("Carbone") owned a recycling facility in Clarkstown where it processed bulk solid waste in a similar fashion to the waste transfer station. Under the ordinance, Carbone had to bring any nonrecyclable waste to the waste transfer station and pay the \$81 per ton tipping fee even though it had already sorted the waste. Carbone ignored the ordinance and was caught shipping waste from its facility to out-of-state landfills following a traffic accident involving one of its trash haulers. When Clarkstown

depends in part on the amount of waste processed. *Id.* at 4. To ensure that stations received enough waste for cost-efficient disposal, many communities enacted flow control laws. Murray & Spence, *supra* note 77, at 84; see also *supra* note 171 for a discussion of flow control laws.

175. For more information on waste transfer stations, see *supra* note 173.

176. Carbone, 511 U.S. at 387.

177. Id.

178. Id. To reach this minimum, Clarkstown passed a flow control law that applied to waste generated in the town and waste generated outside the town and brought in. See id. (citing Town of Clarkstown, N.Y., Local Laws 1990, No. 9, §§ 3.C, 5.A, applying to in-town waste and out-of-town waste brought into town, respectively).

179. *Id*.

180. Id. (citing Local Laws 1990, No. 9 of the Town of Clarkstown). For the full version of the ordinance, see id. at 395-400.

181. Id. at 387-88.

182. Id. at 388.

183. Id. The Court described the accident as follows:

In March 1991, a tractor-trailer containing 23 bales of solid waste struck an overpass on the Palisades Interstate Parkway. When the police investigated the accident, they discovered the truck was carrying household waste from Carbone's Clarkstown plant to an Indiana landfill. The Clarkstown police put Carbone's plant under surveillance and in the next few days seized six

^{174.} See Davies, supra note 171, at 240-41 (discussing flow control laws). By exerting control over waste in this way, Clarkstown effectively kept other waste management companies based there from exporting waste. See Carbone, 511 U.S. at 388. In addition, haulers from outside of town were given an incentive to stay away from Clarkstown to avoid being made to pay its above-market tipping fee. See id. at 387 (noting that Clarkstown's tipping fee was higher than market).

sought to enforce the ordinance,¹⁸⁴ Carbone challenged the law's constitutionality under the Commerce Clause.¹⁸⁵

The Supreme Court invalidated the law in *Carbone*. The Court pointed out two ways that the law affected interstate commerce. First, the waste that Carbone processed came from both local and out-of-state sources. Second, the designated waste transfer station was given a monopoly on processing waste and deprived outside businesses from accessing the "local market." The Court found that the ordinance discriminated against interstate commerce by "allow[ing] only the favored operator to process waste... within the limits of the town." The Court cited previous cases where it had struck down local processing requirements that "bar[red] the import of the processing service." 191

Although a discriminatory law was per se invalid under the first step of the Court's dormant Commerce Clause analysis, 192 such a law could still stand if there were no other alternatives to advance legitimate local interests. 193 The Court dismissed Clarkstown's argument that the flow control law remained valid under this exception, finding that the town could have used nondiscriminatory methods to fulfill the purposes of the ordinance. 194 In addition, Clarkstown did not need to use the tipping fees to finance the waste transfer plant as it could use the mechanisms of municipal bonds and taxes. 195 Thus, the Court concluded that the flow control ordinance violated the Commerce Clause. 196

In her concurrence, Justice O'Connor advocated using the Pike

more tractor-trailers leaving the facility. The trucks also contained nonrecyclable waste, originating both within and without the town, and destined for disposal sites in Illinois, Indiana, West Virginia, and Florida.

Id.

^{184.} Id. The penalty for violating the ordinance was a fine up to \$1000 and up to fifteen days in jail. Id. at 387 (citing Town of Clarkston, N.Y., Local Law No. 9, § 7). In its suit, Carbone sought to enjoin Clarkstown from continuing its activities. Id. at 388.

^{185.} Id.

^{186.} Id. at 385-86.

^{187.} Id. at 389.

^{188.} Id.

^{189.} Id.

^{190.} Id. at 391.

^{191.} Id. at 392.

^{192.} For a summary of the Supreme Court's two-step analysis under the dormant Commerce Clause, see *supra* notes 110-16 and accompanying text.

^{193.} Carbone, 511 U.S. at 392; see also supra note 148 (noting the Court's discussion of the no nondiscriminatory alternatives test in Fort Gratiot).

^{194.} Carbone, 511 U.S. at 393 (suggesting that Clarkstown use an alternative such as enacting a uniform safety regulation that would ensure that waste disposal companies like Carbone did not "underprice the market by cutting corners on environmental safety").

^{195.} Id. at 393-94.

^{196.} Id. at 385-86.

balancing test from the second step of the *Philadelphia* dormant Commerce Clause analysis.¹⁹⁷ In her view, the flow control law did not discriminate because it treated in-town and out-of-town processors equally.¹⁹⁸ Thus, the Court should have examined the law to find out whether its incidental effects on commerce were "an excessive burden" compared to the local benefits.¹⁹⁹ The benefits of the flow control law included economic efficiency and proper disposal.²⁰⁰ Applying the *Pike* test, Justice O'Connor found that Clarkstown could achieve both benefits using less burdensome means, such as market tools, municipal financing strategies, and higher processing standards.²⁰¹ She additionally noted that flow control laws could create conflicting policies between states that would make it impossible for haulers to comply fully with both states' laws.²⁰² After balancing the burdens and benefits of the ordinance, Justice O'Connor concluded that it was invalid.²⁰³

By striking the flow control law in *Carbone*, the Supreme Court demonstrated its commitment to ensure an "unobstructed flow" of MSW across state borders in both directions—keeping garbage out or keeping it in.²⁰⁴ Lower courts have adhered to the Supreme Court's dormant Commerce Clause jurisprudence for interstate MSW disposal as laid out in the *Philadelphia*, *Fort Gratiot*, *Oregon Waste Systems*, and *Carbone* cases.²⁰⁵ Their holdings, however, have not deterred importing states from trying more creative methods of control such as facially nondiscriminatory laws.²⁰⁶

^{197.} Id. at 401-02 (O'Connor, J., concurring); see supra notes 115-16 (explaining the Pike test).

^{198.} Carbone, 511 U.S. at 404 (O'Connor, J., concurring).

^{199.} Id. at 405 (O'Connor, J., concurring).

^{200.} *Id.* at 405-06 (O'Connor, J., concurring).

^{201.} Id. (O'Connor, J., concurring).

^{202.} Id. at 407 (O'Connor, J., concurring).

^{203.} Id. (O'Connor, J., concurring).

^{204.} Id. at 393. The Supreme Court's invalidation of the flow control law in Carbone had repercussions for states such as New Jersey, which had invested in expensive waste-to-energy plants and enacted flow control laws to obtain the large volumes of waste needed to remain in operation. See McCarthy & Hardenbergh, supra note 93, at CRS-8; Jennifer Preston, New Jersey's Landfills Want the Right Stuff, N.Y. Times, Dec. 6, 1998, § 1, at 58 (describing the large debts and under-utilization of New Jersey's trash centers and incinerators due to the invalidation of laws requiring localities to dispose of their own waste in their borders). Since local communities have chosen to dispose of their waste outside of the state, New Jersey has become one of the largest importers of MSW in its efforts to meet the capacity requirements of its waste facilities. McCarthy & Hardenbergh, supra note 93, at CRS-8. New Jersey currently imports large amounts of MSW from New York to fill these demands. Id.

^{205.} Verchick, *supra* note 24, at 1266; *cf.* Murray & Spence, *supra* note 77, at 89 (noting that federal courts preempt local laws regulating waste disposal 62% of the time while state courts preempt them 34% of the time).

^{206.} Murray & Spence, *supra* note 77, at 86-89; *see also infra* notes 207-54 and accompanying text (describing interstate waste control laws in Indiana and Virginia).

5. Government Suppliers Consolidating Services, Inc. v. Bayh: Regulating Transportation Methods

Indiana passed a "backhaul ban" that allowed waste-carrying trucks to transport only a few other types of materials.²⁰⁷ In conjunction with this ban, Indiana required that such trucks register with the Indiana Department of Environmental Management and be marked with an identification sticker.²⁰⁸ Backhauling meant that trucks carrying goods from the Midwest to the Northeast would carry back waste on the return trip from the Northeast to the Midwest.²⁰⁹ Backhauling was a reviled practice, and companies did not willingly allow their goods to be shipped in trucks that had carried waste.²¹⁰ Accordingly, truckers would not voluntarily tell shippers if their vehicles were used for backhauling.²¹¹ Despite pressure from their customers to stop backhauling, many trucking companies still continued the practice.²¹² Indiana's backhauling ban effectively forced trucking companies to use a "semi-dedicated fleet[]" of waste hauling trucks.²¹³

In Government Suppliers Consolidating Services, Inc. v. Bayh, companies that brokered the transportation of out-of-state MSW to Indiana landfills challenged the backhaul ban and its related provisions.²¹⁴ In deciding whether to invalidate the ban under the virtually per se rule of invalidity under the first step of the dormant Commerce Clause analysis,²¹⁵ the Seventh Circuit extended its review of the backhaul ban beyond facial discrimination.²¹⁶ It examined the "practical effect of the statutes... on interstate commerce."²¹⁷

^{207.} Gov't Suppliers Consolidating Servs., Inc. v. Bayh, 975 F.2d 1267, 1270 (7th Cir. 1992). Besides waste, trucks could transport "[w]ood, concrete, brick, and other construction and demolition materials"; "[d]irt, sand, gravel, asphalt, salt, and other highway maintenance material"; and "[c]oal, gypsum, slag, scrap metal, and other bulk industrial commodities." *Id*.

^{208.} Id. at 1270-71.

^{209.} Id. at 1272.

^{210.} Id. at 1272-73. Companies feared adverse impacts on their products' reputations. Id.

^{211.} Id. (citing testimony from a trucker).

^{212.} *Id.* (noting that small trucking companies were especially willing to backhaul because they needed to use their trucks efficiently).

^{213.} Id. at 1270.

^{214.} *Id.* at 1269-70. The companies brokered the transport of waste from New York, New Jersey, and Pennsylvania to Indiana. *Id.*

^{215.} See supra notes 110-16 (discussing the Supreme Court's dormant Commerce Clause analysis).

^{216.} Bayh, 975 F.2d at 1278. The court explained its test as follows:

However, a determination that a statute does not discriminate on its face and "purports to regulate evenhandedly" does not end the question of which scrutiny should apply. When a statute discriminates "in practical effect" against interstate commerce, the fact that it purports to apply equally to citizens of all states does not save it.

Id. (citations omitted).

^{217.} Id.

Backhauling allowed the plaintiff companies to cut their trucking costs in half.²¹⁸ If the ban was allowed to stand, the court estimated that the resulting cost of disposing New York waste would be \$85 per ton compared to \$50 per ton under backhauling.²¹⁹ Although \$85 was still lower than the \$125 per ton tipping fee charged by landfills in the New York region,²²⁰ the increase meant that Indiana would no longer be a cost-effective place for waste disposal.²²¹ Indiana itself would not be affected by the backhaul ban since it already shipped its waste using dedicated garbage trucks.²²²

Considering all of these factors, the Seventh Circuit found that the "practical impact of the backhaul ban would be to reduce very significantly the inflow of out-of-state waste by raising the cost of disposing of such waste in Indiana." Thus, the backhaul ban was per se invalid under the first step of the dormant Commerce Clause analysis because it discriminated against out-of-state waste in practical effect. Unless Indiana could show that the ban "further[ed] health and safety concerns that [could not] be adequately served by nondiscriminatory alternatives," the law would be invalidated. 225

Indiana argued that the backhaul ban benefited public health by ensuring that goods would not be contaminated by waste and protected the reputation of goods manufactured in-state.²²⁶ The Seventh Circuit found these reasons insufficient because Indiana did not prove the lack of other alternatives and did not offer any evidence of illnesses resulting from backhauling.²²⁷ Thus, because the backhaul ban was "an obvious effort to saddle those outside the State with the entire burden of slowing the flow of refuse in to [its] remaining landfill sites," the court invalidated the law.²²⁸

6. Waste Management Holdings, Inc. v. Gilmore: Capping the Amount of Waste a Landfill Can Accept

In another example of states' creative attempts to control the flow of interstate waste, Virginia enacted a barrage of statutes²²⁹ in 1999 to

^{218.} Id. at 1273.

^{219.} Id

^{220.} Id. at 1273 & n.6 (noting that tipping fees in eastern landfills were \$125 a ton and were more expensive than tipping fees in Indiana).

^{221.} Id. (reasoning that trash haulers would no longer choose Indiana for disposal services and that the ban would eliminate interstate transport of waste to Indiana).

^{222.} *Id.* at 1279.

^{223.} Id.

^{224.} Id. (citing Fort Gratiot Sanitary Landfill, Inc. v. Michigan Dep't of Natural Res., 504 U.S. 353, 366 (1992)).

^{225.} Id. (quotation marks omitted) (quoting Fort Gratiot, 504 U.S. at 366).

^{226.} Id. at 1280.

^{227.} Id. at 1280 & n.9.

^{228.} Id. at 1281 (quotation marks omitted) (quoting City of Philadelphia v. New Jersey, 437 U.S. 617, 629 (1978)).

^{229.} The statutes included five provisions: 1) a cap on the amount of waste that

fight a flood of imported garbage from New York City²³⁰ resulting from the closure of New York's Fresh Kills landfill.²³¹ One of these statutes capped the amount of garbage that any landfill in Virginia could accept to the greater of 2000 tons per day or the average amount accepted in 1998.²³² In response, landfill operators, MSW transporters, and one Virginia county sued to enjoin the application of the laws in *Waste Management Holdings, Inc. v. Gilmore*.²³³

At the time, Virginia was home to seven regional landfills and sixty-

Virginia landfills could receive; 2) a provision to develop regulations on water transport of MSW; 3) a ban against the transport of waste on the Rappahannock, James, and York Rivers; 4) a prohibition on transportation of waste on trucks with four or more axles without special certification; and 5) a provision to develop regulations on the transport of MSW by tractor truck semitrailer combinations with four or more axles. Waste Mgmt. Holdings, Inc. v. Gilmore, 252 F.3d 316, 323-24 (4th Cir. 2001).

230. With a deadline to close Fresh Kills landfill by the end of 2001, New York City formulated a plan to ship its MSW out-of-state. See Bruce Lambert, Mayor Tells Non-New Yorkers That City's Trash Is Price for What They Reap, N.Y. Times, Jan. 14, 1999, at B3. In response to opposition to this plan from states such as Virginia, Mayor

Rudolph Giuliani commented:

New York City has a specialized problem It comes from the fact that we're so crowded and our land mass is very small, and that brings great benefits to the rest of the country, like Virginia. People in Virginia like to utilize New York because we're a cultural center, because we're a business center We don't have the room here to handle the garbage that's produced not just by New Yorkers ... but by the three million more people that come here that utilize the place every day. So this is a reciprocal

relationship.

Id. Mayor Giuliani's comments and New York City's MSW exporting plan drew angry reactions from other states. New Jersey's Governor Christine Todd Whitman issued a statement entitled "Whitman to New York's Garbage Plan: Drop Dead." Id. Virginia's Governor James S. Gilmore wrote Mayor Giuliani a letter stating that he was "offended by [Mayor Giuliani's] suggestion that New York's substantial cultural achievements... obligate[d] Virginia and other states to accept [New York City's] garbage." Gilmore, 252 F.3d at 337. New Jersey, Virginia, Pennsylvania, Maryland, and West Virginia later signed a letter of protest against the New York City waste plan. Andy Newman, 5 States Team Up to Fight Giuliani's Trash Proposal, N.Y. Times, Feb. 8, 1999, at B3.

231. Gilmore, 252 F.3d at 325-26. Fresh Kills covers 2200 acres and held the title of the world's largest dump before its closure in March 2001. See Denny Lee, At Fresh Kills Landfill, Garbage Out, Grand Plans In, N.Y. Times, Dec. 9, 2001, § 14, at 6. With its closure, New York City lost its last operating landfill and had to come up with a new way to dispose of the nearly 11,000 tons of garbage produced daily by city residents. See Michael Cooper, A Plan to Ship Garbage, but No Destination, N.Y. Times, Aug. 1, 2002, at A1. Today, Fresh Kills is on its way to becoming a park and recreation area. See Barbara Stewart, Landfill to Park? Give It Time; The Transformation of Fresh Kills Will Take Decades, N.Y. Times, Nov. 28, 2002, at B1.

232. Gilmore, 252 F.3d at 323 n.1, 325-26. The provision allowed Virginia's Waste Management Board to approve individual exceptions after weighing considerations of "human health, environmental, transportation infrastructure, and transportation safety impacts and needs." *Id.* at 323 n.1 (quoting Va. Code Ann. § 10.1-1408.3

(Michie Supp. 2000)).

233. *Id.* at 324. In a published opinion on February 2, 2000, the district court granted the plaintiffs' motion for summary judgment and invalidated the five Virginia provisions because they violated the dormant Commerce Clause. *Id.* at 324, 328.

three small local landfills.²³⁴ The seven regional landfills received 97% of the out-of-state waste that entered Virginia.²³⁵ The other 3% of out-of-state MSW went to two of the local landfills.²³⁶ The remainder of the local landfills accepted only MSW generated in Virginia.²³⁷ The regional landfills were sited under "host agreements" between private waste management companies and local communities.²³⁸ In exchange for services such as tipping fees²³⁹ and free waste disposal, the communities agreed to host landfills, which were constructed and operated by the private waste management companies.²⁴⁰ Because regional landfills were expensive to construct and operate,²⁴¹ companies needed to take in large volumes of waste to earn the income needed to remain in business.²⁴²

To examine the challenged Virginia law, the Fourth Circuit further delineated the Supreme Court's dormant Commerce Clause test.²⁴³ After finding that the landfill cap was not "facially discriminatory" against out-of-state MSW, the court then outlined two inquiries to determine whether the law was still invalid under the first step of the dormant Commerce Clause analysis.²⁴⁴ The first inquiry asked whether the law discriminated against interstate commerce in practical effect.²⁴⁵ The second inquiry asked whether the state could prove that the law was "demonstrably justified by a valid factor unrelated to economic protectionism, and that no nondiscriminatory alternatives exist[ed] that [were] adequate to preserve the local interests at stake."²⁴⁶ If the law survived these inquiries and "regulate[d] evenhandedly and only indirectly affect[ed] interstate commerce," then the second step of the dormant Commerce Clause

^{234.} Id. at 334. The regional landfills had "substantially greater disposal capacity" than the local landfills and were privately owned. Id. at 325. In addition, the regional landfills were built during the 1990s and complied with state and federal regulations. Id.

^{235.} Id. at 334.

^{236.} Id.

^{237.} Id. at 325.

²³⁸ Id

^{239.} For a description of tipping fees, see *supra* note 85.

^{240.} Gilmore, 252 F.3d at 325.

^{241.} Id. (noting that they "required tens of millions of dollars in private investment" and "face[d] high operation and maintenance costs in addition to ... sizeable host fees").

^{242.} Id.

^{243.} See id. at 333-34. This analysis is similar to the inquiry made by the Seventh Circuit in Bayh. See supra notes 216-17 and accompanying text.

^{244.} Gilmore, 252 F.3d at 334, 341. The first step of the Supreme Court's dormant Commerce Clause analysis applied a virtually per se rule of invalidity to laws that discriminated against articles of commerce based on their origin. See supra text accompanying notes 112-14.

^{245.} Gilmore, 252 F.3d at 334.

^{246.} Id. at 341.

analysis, the *Pike* balancing test, applied.²⁴⁷ Under this test, "unless the burdens on commerce [were] clearly excessive in relation to the putative local benefits," the law would be valid.²⁴⁸

The Fourth Circuit first turned its attention to whether the cap discriminated against interstate waste in practical effect.²⁴⁹ Six of the seven regional landfills disposed of more than the capped amount of 2000 tons of MSW per day, while all of the sixty-three local landfills received below the capped amount.²⁵⁰ The Fourth Circuit did not resolve the question of whether the landfill cap discriminated in its practical effect against out-of-state MSW, finding that the evidence presented an issue of material fact.²⁵¹

The Fourth Circuit then moved on to the second inquiry—whether the cap provision was the "least discriminatory means" to address Virginia's concerns about the health and safety risks particular to out-of-state MSW.²⁵² Here, the court found that Virginia did not use the least discriminatory means available because the state could have targeted only those states that had weaker health and safety standards for MSW.²⁵³ Thus, the court granted the plaintiffs summary judgment on this issue under this inquiry and affirmed the district court's holding that the landfill cap violated the dormant Commerce Clause.²⁵⁴

As *Philadelphia*, Fort Gratiot, Oregon Waste Systems, Carbone, Bayh, and Gilmore demonstrate, states have not given up on the issue of controlling interstate waste flow.²⁵⁵ In fact, despite their many defeats, states have been able to obtain control over interstate waste imports under the market participant exception.²⁵⁶

^{247.} *Id.* at 333 (citing Envtl. Tech. Council v. Sierra Club, 98 F.3d 774, 785 (4th Cir. 1996)).

^{248.} Id.

^{249.} Id. at 334.

^{250.} Id. One of the local landfills received 1540 tons of MSW per day and applied for an increase in tonnage allotment for the rare times when it would be in danger of exceeding 2000 tons of MSW per day due to its waste-to-energy plant being off-line for repairs. Id.

^{251.} Id. at 335. The Fourth Circuit found that the "practical effect" and "no nondiscriminatory alternatives" inquiries were questions of fact. Id. at 334. The Fourth Circuit found that it could not grant summary judgment to the plaintiffs because of the issue of material fact. Id. at 335.

^{252.} Id. at 342.

^{253.} Id. at 343 ("[R]ather than discriminating against MSW from every state other than Virginia, Virginia's cap should only target the MSW from states that have lesser health and safety standards regarding MSW than Virginia.").

^{254.} Id. at 324, 349.

^{255.} See supra text accompanying notes 106-254 (discussing the holdings of interstate waste flow cases).

^{256.} See infra Part I.B.7.

7. The Market Participant Exception

All four of the Supreme Court's interstate MSW disposal cases²⁵⁷ involved the regulation of private players. In *Philadelphia*, New Jersey landfill owners and the cities that were their customers brought suit because of New Jersey's import ban.²⁵⁸ Similarly, in *Fort Gratiot*, a landfill owner in St. Clair County filed suit in protest over Michigan's county-by-county import ban.²⁵⁹ In *Oregon Waste Systems*, a landfill owner and a MSW hauler challenged the surcharge on out-of-state MSW.²⁶⁰ The suit in *Carbone* was brought by a private waste management company in Clarkstown.²⁶¹ If the parties in these cases had been public players, the outcomes might have been drastically different due to the market participant exception.²⁶²

Under the market participant exception, "a state or local government... may pursue its own economic interests free from the constraints imposed by the Commerce Clause within the market in which it is a participant." The Supreme Court has not yet addressed the market participant exception in the context of interstate MSW and specifically left the issue undecided in *Philadelphia*²⁶⁴ and *Fort Gratiot*. In his dissent in *Oregon Waste Systems*, Chief Justice

^{257.} See supra Part I.B.1.-4.

^{258.} City of Philadelphia v. New Jersey, 437 U.S. 617, 619 (1978); see also supra Part I.B.1. The cities sued as parties in *Philadelphia* as customers of private waste development companies, not as public entities that owned their own waste facilities. Thus, they did not fall under the market participant exception.

^{259.} Fort Gratiot Sanitary Landfill, Înc. v. Michigan Dep't of Natural Res., 504 U.S. 353, 357 (1992); see also supra Part I.B.2.

^{260.} Or. Waste Sys., Inc. v. Dep't of Envtl. Quality, 511 U.S. 93, 97 (1994). Oregon imposed a surcharge on out-of-state MSW that was higher than the surcharge on instate MSW. *Id.* at 96. Its attempt to justify the difference in the surcharge as a compensatory tax failed. *Id.* at 104; see also supra Part I.B.3.

^{261.} C & A Carbone, Inc. v. Clarkstown, 511 U.S. 383, 387-88 (1994). The town of Clarkstown had passed a flow control ordinance that required that all nonhazardous waste be brought to a designated waste transfer station. *Id.* at 387. Under this ordinance, Carbone would have had to pay Clarkstown's above-market tipping fee even though it had already sorted its own waste. *Id.* at 388. See *supra* Part I.B.4. for a discussion of *Carbone*.

^{262.} See Verchick, supra note 24, at 1280.

^{263.} Red River Serv. Corp. v. Minot, 146 F.3d 583, 586 (8th Cir. 1998). The market participant doctrine was first established in Hughes v. Alexandria Scrap Corp., 426 U.S. 794 (1976). See Donna Vetrano, Note, Red River Service Corporation v. City of Minot, North Dakota: Local Government Controls the Importation of Waste Without Violation of the Commerce Clause, 12 Tul. Envtl. L.J. 265, 266 (1998). The Hughes case involved Maryland's policy of buying scrapped cars from in-state processors at a higher price than from out-of-state processors. Id. The out-of-state processors sued and lost. Id. The Supreme Court held that Maryland did not violate the Commerce Clause because it acted as a member of the market and could favor its own citizen over others when it took this role. Id.

^{264.} City of Philadelphia v. New Jersey, 437 U.S. 617, 627 n.6 (1978) (leaving open the issue of whether states could restrict access of state owned resources to state residents).

^{265.} Fort Gratiot Sanitary Landfill, Inc. v. Michigan Dep't of Natural Res., 504

Rehnquist made use of the market participant exception to argue that if Oregon owned its own landfills, it could charge the surcharge as a permissible user fee, contrary to the suggestions of the majority opinion.²⁶⁶ In his dissent in Carbone, Justice Souter concluded that the Clarkstown waste transfer station was "essentially an agent of the municipal government."267 In his view, the Clarkstown ordinance should have been evaluated under the Pike balancing test because the ordinance was less likely to be protectionist where it favored an agent of the government.268

Although the Supreme Court has not legitimized the market participant doctrine for interstate MSW, lower courts have applied the doctrine.²⁶⁹ The Eighth Circuit, for example, used the doctrine to uphold a city's decision to restrict use of its landfill to waste generated by its own citizens in Red River Service Corp. v. Minot.²⁷⁰ The Second Circuit applied the doctrine to approve of exclusive waste collection and disposal contracts in SSC Corp. v. Smithtown.²⁷¹ The First Circuit,

266. Or. Waste Sys., Inc. v. Dep't of Envtl. Quality, 511 U.S. 93, 114-15 (1994) (Rehnquist, C.J., dissenting).

267. C & A Carbone, Inc. v. Clarkstown, 511 U.S. 383, 416 (1994) (Souter, J., dissenting).

268. Id. at 422-23 (Souter, J., dissenting). For a court to apply the Pike test, the law must govern evenhandedly for a legitimate public purpose, and must have only incidental effects on interstate commerce that are not excessively burdensome on commerce when compared to local benefits. See supra notes 115-16.

269. See Red River Serv. Corp. v. Minot, 146 F.3d 583, 586-87 (8th Cir. 1998); SSC Corp. v. Smithtown, 66 F.3d 502, 514-17 (2d Cir. 1995); Lefrancois v. Rhode Island, 669 F. Supp. 1204 (D.R.I. 1987). But see Houlton Citizens' Coalition v. Houlton, 175 F.3d 178, 181, 187-88 (1st Cir. 1999) (expressing reluctance to apply the market participant doctrine for an exclusive waste management contract).

270. Red River, 146 F.3d at 590. The city of Minot, North Dakota, owned and operated its own landfill. Id. at 585. Worried about shrinking landfill space, Minot decided that it would only accept MSW generated by its own citizens and some grandfathered-in non-citizen haulers. See id. at 585-86. Red River was an Oklahoma hauler that dumped MSW from the Minot Air Force base in the landfill. Id. at 584. As it had a five year contract to haul the Air Force base's MSW, Red River protested against Minot's policy. Id. at 586.

271. 66 F.3d at 514-17. Smithtown and Huntington, both towns in New York, agreed to share the use of Smithtown's landfill and Huntington's incinerator. Id. at 506-07. At the time of the agreement, the incinerator was under construction. Id. at Although the incinerator was built and owned by Ogden Martin Systems ("Ogden"), Smithtown and Huntington helped finance its construction with proceeds from tax-free bonds issued by a public authority and secured by their promise to pay Ogden for the construction and operation costs even if no waste was processed by the incinerator. Id. at 507. To ensure that waste was processed, Smithtown enacted a flow control ordinance and entered into a contract with garbage haulers to haul waste exclusively to the incinerator. Id. at 505. The Second Circuit affirmed the district court's invalidation of the flow control ordinance under Carbone, but upheld the exclusive garbage hauling contract as "municipal participation in both the waste collection and disposal markets." Id. at 506.

U.S. 353, 358-59 (1992) ("Nor does the case raise any question concerning policies that municipalities or other governmental agencies may pursue in the management of publicly owned facilities.").

on the other hand, declined to apply the market participant doctrine to laws that required residents either to use the city's exclusive private hauler, or self-haul to a specified facility.²⁷² Instead, the First Circuit used the traditional dormant Commerce Clause analysis to find that the laws were not protectionist because they allowed "all comers" to bid on an equal basis for the exclusive contract. The court also found that the laws passed the *Pike* balancing test.²⁷³ Thus, the market participant exception potentially allows states to escape the bounds of the dormant Commerce Clause.²⁷⁴ It still, however, awaits a formal stamp of approval by the Supreme Court for use in the context of interstate MSW disposal.²⁷⁵

8. Other Permissible Methods of Controlling Interstate Waste Flow

In addition to the market participant exception, a few other alternatives may withstand the dormant Commerce Clause analysis. In *Chemical Waste*, the Supreme Court made three suggestions: first, a per ton surcharge on all waste disposed of within a state; second, an evenhanded cap on the amount a landfill could accept; and third, a per mile tax on all vehicles that hauled waste in the state.²⁷⁶ The first method, however, may be politically undesirable because it will raise disposal fees for residents.²⁷⁷ States that seek to use the second and third methods must be careful to avoid making them discriminatory in practical effect so that they will not be invalidated in the same way as the potentially evenhanded laws in *Bayh* and *Gilmore*.²⁷⁸

C. The LLRW Crisis

The LLRW crisis parallels the MSW crisis in some ways,²⁷⁹ but diverges in others.²⁸⁰ Radioactive waste did not accumulate

^{272.} Houlton Citizens' Coalition, 175 F.3d at 181, 188.

^{273.} Id. at 188-89. The laws were not discriminatory because they gave "all comers... equal access to the local market." Id. at 188. Thus, the Pike balancing test is applied to determine if the local benefits outweigh the costs on interstate commerce. Id. at 189. Because of the "strong local interest in efficient and effective waste management and the virtually invisible burden... on interstate commerce," the law passed the balancing test. Id.

^{274.} This is a realistic solution for states because many landfills are state-owned. See Or. Waste Sys., Inc. v. Dep't of Envtl. Quality, 511 U.S. 93, 114 (1994) (Rehnquist, C.J., dissenting) (noting that nearly 80% of landfills are state or locally owned).

^{275.} Verchick, supra note 24, at 1281.

^{276.} Chem. Waste Mgmt., Inc. v. Hunt, 504 U.S. 334, 344-45 (1992).

^{277.} See infra note 353 and accompanying text.

^{278.} See supra notes 207-54 and accompanying text (discussing Bayh and Gilmore). For example, if the backhauling ban affected the transport of waste in Indiana, it would not have had as clear a discriminatory effect on only out-of-state MSW. See Gov't Suppliers Consolidating Servs., Inc. v. Bayh, 975 F.2d 1267, 1279 (7th Cir. 1992).

^{279.} See infra notes 281-313 and accompanying text (describing the growth of

substantially until after World War II, when scientists turned from the use of nuclear technology for the atomic bomb and other military applications²⁸¹ to new peacetime, civilian uses such as nuclear power, industrial research, and medical applications.²⁸² These new usages resulted in the production of radioactive waste in amounts that required safe disposal methods.²⁸³ To address the growth of commercial nuclear technology and waste, Congress passed the Atomic Energy Act of 1954.²⁸⁴ This Act was later subsumed by the Energy Reorganization Act of 1974,²⁸⁵ which created the Nuclear Regulatory Commission ("NRC"), an independent watchdog organization whose authority includes the regulation of commercial radioactive waste.²⁸⁶

The NRC regulates three basic types of commercial radioactive waste, including high-level radioactive waste ("HLRW"), LLRW, and mill tailings.²⁸⁷ HLRW consists of spent nuclear fuel.²⁸⁸ Under the Nuclear Waste Policy Act of 1982,²⁸⁹ the Department of Energy ("DOE") was directed to study Yucca Mountain, Nevada as a possible site for national HLRW disposal.²⁹⁰ Concerns over safety continue to delay the Yucca Mountain project, which is currently slated to be open for business in 2010.²⁹¹ Mill tailings, on the other hand, are a by-

282. U.S. Nuclear Regulatory Commission, Radioactive Waste: Production, Storage, Disposal 20-24 (May 2002) [hereinafter U.S. NRC, Radioactive Waste].

283. Chapman, supra note 57, at 202-03; U.S. Nuclear Regulatory Commission, A Short History of Nuclear Regulation, 1946-1999 (June 23, 2003), at http://www.nrc.gov/who-we-are/short-history.html. Safe disposal methods were needed because of the potential negative health effects from exposure to radioactivity. See infra notes 298-300 and accompanying text (describing the health risks from LLRW exposure and disposal methods).

284. Atomic Energy Act of 1954, ch. 1073, 68 Stat. 919 (codified as amended in scattered sections of 42 U.S.C.); Chapman, *supra* note 57, at 201-02. The Atomic Energy Act of 1954 announced the policy of the U.S. to develop civilian uses of nuclear energy "subject to *absolute* defense and security considerations." *Id.* at 202. In addition, it delegated the responsibility for the disposal of low-level radioactive waste to the states, suggesting regional solutions, and created the Atomic Energy Commission. *Id.*

LLRW, the problems of closing disposal sites and the desire of states to have control over interstate flow of LLRW).

^{280.} See infra notes 302-28 and accompanying text (detailing the severity of the LLRW disposal site crisis and Congress's passage of the LLRWPA and LLRWPAA). 281. Chapman, supra note 57, at 201.

^{285.} Pub. L. No. 93-438, 88 Stat. 1233 (codified as amended in scattered sections of 42 U.S.C.).

^{286.} Chapman, supra note 57, at 202.

^{287.} U.S. NRC, Radioactive Waste, supra note 282, at 2-3.

^{288.} *Id*. at 7.

^{289.} Pub. L. No. 97-425, 96 Stat. 2201 (codified as amended in scattered sections of 42 U.S.C.).

^{290.} U.S. NRC, Radioactive Waste, supra note 282, at 15.

^{291.} Keay Davidson, Last-Minute Glitches in Yucca Nuclear-Waste Burial Plan; New Findings Could Scuttle Idea for Underground Site, S.F. Chron., Nov. 17, 2003, at A4 (describing recent chemists' findings that buried fuel rods could experience chemical changes underground).

product of processing uranium and thorium ores.²⁹² They are usually disposed of in piles next to the milling site,²⁹³ where NRC regulations require that they be covered to prevent the release of radon after the milling operations have finished.²⁹⁴ LLRW encompasses all other radioactive wastes besides HLRW and mill tailings.²⁹⁵

LLRW by far dominates the radioactive waste scene, making up 85% of the volume of radioactive waste generated in the United States. LLRW includes such diverse items as smoke alarms, exit signs, medical test tubes, laboratory animal carcasses, contaminated protective gear, and nuclear reactor parts. LLRW varies in its level of radioactivity. While reactor by-products are very hazardous, wastes from sources such as medical research are minimally hazardous and do not require the use of protective shielding for handling. Proper disposal of LLRW requires shielding and isolation from people for hundreds of years while the radioactive material decays to safe levels. Existing disposal sites employ the shallow land burial technique to dispose of LLRW.

The LLRW crisis emerged in the late 1970s.³⁰² Although six commercial LLRW disposal sites opened in the United States between 1962 and 1971,³⁰³ three of them closed by 1978 due to ground water pooling and radioactive leachate contamination.³⁰⁴ Faced with a

^{292.} U.S. NRC, Radioactive Waste, supra note 282, at 31.

^{293.} Milling sites are the locations of mining operations where ore is milled. See id. at 31-32.

^{294.} Id. at 32-33.

^{295.} Id. at 3.

^{296.} Branson, *supra* note 38, at 518. By volume, 14.8% of LLRW comes from nuclear reactors, 6.7% from industrial users, 2% from government uses (excluding nuclear weapons), 0.3% from academic users, 0.1% from medical facilities, and 76.1% from undefined sources. U.S. NRC, Radioactive Waste, *supra* note 282, at 20-21.

^{297.} U.S. NRC, Radioactive Waste, supra note 282, at 19, 23.

^{298.} Id. at 20.

^{299.} Id. at 24. Health risks from LLRW include an increased risk of cancer and possible death. Id. The exact connection between exposure to LLRW and such health effects, however, is unclear as the health impact could take many years to be seen. Branson, supra note 38, at 520.

^{300.} See New York v. United States, 505 U.S. 144, 149-50 (1992); see also Branson, supra note 38, at 518 (noting that LLRW requires only "marginal" shielding for disposal and decays more quickly than HLRW).

^{301.} Branson, supra note 38, at 522. Shallow land burial involves "excavating a trench or vault, emplacing the waste, minimizing void space within the disposal unit, and covering the waste with earth to control access to waste." Id. at 522 n.37 (quoting D.G. Jacobs & R.R. Rose, Shallow Land Burial of Radioactive Wastes, in Management of Radioactive Materials and Wastes: Issues and Progress 54, 54 (Shyamal K. Majumdar & E. Willard Miller eds., 1985)).

^{302.} See id. at 524-25.

^{303.} Id. at 524. LLRW disposal sites were located in Beatty, Nevada; Maxey Flats, Kentucky; West Valley, New York; Richland, Washington (sometimes called the Hanford site); Sheffield, Illinois; and Barnwell, South Carolina. Gerrard, Fear and Loathing, supra note 47, at 1081.

^{304.} Branson, supra note 38, at 524. Ground water pooling in the shallow burial

rising tide of LLRW,305 the host states of the three remaining disposal sites were reluctant to become the "nuclear dumping grounds" of the nation.³⁰⁶ Two of the remaining three sites, located in Richland, Washington³⁰⁷ and Beatty, Nevada, shut down temporarily in 1979 in response to incidents of improper handling and packaging of LLRW. 308 This prompted scares that valuable medical research would be stopped in its tracks due to lack of disposal capacity.³⁰⁹ During the Richland and Beatty sites' temporary shut-downs in 1979, Barnwell, South Carolina, became the only open LLRW disposal site and it had put limits on the types of LLRW that it would accept.³¹⁰ In fact, fearing that his state would have to take on the entire nation's LLRW, 311 South Carolina's governor announced in 1979 that the Barnwell site would cut in half the amount of waste it received over the next two years.³¹² This prompted the governors of Nevada and Washington to threaten to close their LLRW dumps permanently. 313 This drastic situation caught the attention of Congress and spurred the passage of the Low-Level Radioactive Waste Policy Act of 1980.³¹⁴

1. The Low-Level Radioactive Waste Policy Act of 1980 ("LLRWPA")

The LLRWPA had three basic provisions. First, under federal policy, states were responsible for the disposal of LLRW generated within their borders and were to strive for a regional disposal system.³¹⁵ Second, states could form regional compacts to establish and operate LLRW disposal facilities.³¹⁶ Third, states that had formed

trenches caused erosion and movement of radioactive material, leading to contamination of groundwater with radioactive leachate. *Id.* The LLRW disposal sites that closed were located in West Valley, New York; Maxey Flats, Kentucky; and Sheffield, Illinois. *Id.*

305. Id. at 524-25.

306. Thomas O'Toole, A-Dump Closing Threatens to Halt Cancer Research, Wash. Post, Oct. 24, 1979, at A1.

307. The Richland site is located on the Hanford reservation, and is referred to as the Hanford site by the NRC. See infra note 517.

308. Branson, supra note 38, at 526.

309. O'Toole, supra note 306. The Richland and Beatty sites were only temporarily shut down. Branson, supra note 38, at 526 & n.75 (noting that the Beatty site closed several times in 1979 in response to LLRW mishandling).

310. O'Toole, supra note 306 (noting that South Carolina's governor banned liquid

LLRW and LLRW that would have otherwise gone to Richland or Beatty).

311. South Carolina had also become the butt of jokes on television shows and in newspaper columns as a dumping ground for LLRW. See Newberry, supra note 37, at 46 n.14.

312. See Mostaghel, supra note 36, at 385; see also Gerrard, Fear and Loathing, supra note 47, at 1081.

313. Gerrard, Fear and Loathing, supra note 47, at 1081.

314. Pub. L. No. 96-573, 94 Stat. 3347 (codified as amended at 42 U.S.C. §§ 2021b-2021d (2000)); see also Mostaghel, supra note 36, at 386.

315. *Id.* § 4(a)(1)(A)-(B), 94 Stat. at 3348.

316. Id. § 4(a)(2)(A), 94 Stat. at 3348 ("States may enter to such compacts as may

congressionally approved compacts³¹⁷ could restrict the use of their LLRW disposal facilities to waste generated in the compact region after January 1, 1986.³¹⁸ Congress constructed the LLRWPA to cater to states' desires for control over disposal, and followed the recommendations of the National Governors' Association ("NGA") by creating the interstate compact system for LLRW disposal.³¹⁹

Although thirty-seven states entered into compacts by 1985, none of the compacts had been approved by Congress.³²⁰ Furthermore, none of the compacts had constructed or sited any new disposal sites.³²¹ When the three states with disposal sites again threatened either to shut down or to exclude waste, the NGA stepped in to negotiate a "transition package" that would keep the disposal sites open to the nation.³²²

2. The Low-Level Radioactive Waste Policy Amendments Act of 1985 ("LLRWPAA" or "Amendments")

This "transition package" became the LLRWPAA.³²³ The LLRWPAA expanded on the LLRWPA in three important ways.³²⁴ First, it extended the time during which other states could dispose of their waste at the Barnwell, Richland, and Beatty sites from January 1, 1986 until December 31, 1992.³²⁵ During that time, the sites could

be necessary to provide for the establishment and operation of regional disposal facilities for low-level radioactive waste.").

317. For a compact to take effect, Congress had to consent by law. Id. § 4(a)(2)(B), 94 Stat. at 3348 ("A compact entered under subparagraph (A) shall not take effect until the Congress has by law consented to the compact."). Congress could withdraw consent by law every five years after the compact took effect. Id. ("Each such compact shall provide that every 5 years after the compact has taken effect the Congress may by law withdraw its consent.")

318. Id. ("After January 1, 1986, any such compact may restrict the use of the regional disposal facilities under the compact to the disposal of low-level radioactive waste generated within the region."). The power to exclude extended only to compact states and not to stand-alone states that had not joined a compact. Wash. State Bldg. & Constr. Trades Council v. Spellman, 684 F.2d 627, 630 (9th Cir. 1982). In Spellman, the Ninth Circuit applied the Supreme Court's dormant Commerce Clause jurisprudence to Washington's attempt to exclude all other states from accessing its Richland facility. See id. at 631.

319. Mostaghel, *supra* note 36, at 385-86.

320. Branson, *supra* note 38, at 533 (noting that members of Congress were reluctant to ratify compacts when their states had not yet gained access to disposal sites).

321. *Id*.

322. Mostaghel, supra note 36, at 386.

323. *Id*.

324. The LLRWPAA also included other provisions, such as those to place a percentage of LLRW disposal fees in an escrow account that would be paid back to states that met the LLRWPAA's milestones, 42 U.S.C. § 2021e(d)(2) (2000); to delegate responsibility to the NRC to oversee a system of licensing LLRW disposal sites, 42 U.S.C. § 2021i; and to identify other methods of disposing of LLRW besides shallow land burial, 42 U.S.C. § 2021h.

325. Low-Level Radioactive Waste Policy Amendments Act of 1985, Pub. L. No.

cap the amount of waste they accepted and charge a graduated fee that increased every two years until 1992.³²⁶ Second, it created milestones that required compacts and stand-alone states without disposal sites to develop their own sites or otherwise ensure that they could take care of their own LLRW by certain deadlines.³²⁷ Lastly, the Amendments set out penalties that would apply if states did not meet the milestones.³²⁸

The LLRWPA was supposed to give states an incentive to solve their LLRW disposal problems by granting them the authority to control interstate LLRW flow through the regional compact system.³²⁹ Even with the carrot of this coveted power, states were unable to mobilize fast enough to site new LLRW disposal facilities.³³⁰ The LLRWPAA added penalties to the incentive structure of the LLRWPA to put pressure on states to address the LLRW crisis.³³¹ These measures did not work either, as states have still not been able to develop any new disposal sites.³³² Both the LLRWPA and its Amendments have failed in their goal to encourage the development of more LLRW disposal capacity.³³³

3. An Analogue for the MSW Crisis and the Garbage Wars

Like the MSW crisis, the LLRW crisis is fueled by concerns over a lack of disposal capacity.³³⁴ The similarity between the two crises has not gone unnoticed. In a 1995 study of the national MSW market, Kirsten Engel suggested that Congress adopt an interstate compact system like that established by the LLRWPA and its Amendments to

^{99-240, § 5(}a)-(b), 99 Stat. 1842, 1846-47 (1986) (codified as amended at 42 U.S.C. § 2021e).

^{326.} *Id.* § 5(b), 5(d)(1), 99 Stat. at 1847. The fee was \$10 per cubic foot in 1986 and 1987, \$20 per cubic foot in 1988 and 1989, and \$40 per cubic foot in 1990, 1991, and 1992.

^{327. 42} U.S.C. § 2021e(e); Branson, *supra* note 38, at 536; Mostaghel, *supra* note 36, at 389-94.

^{328. 42} U.S.C. § 2021e(d); Branson, *supra* note 38, at 536-37. Such penalties included a surcharge paid by states that would only be returned if milestones were met; increasing fees that could be charged for dumping at the LLRW disposal sites, or even denial of access; and the "take-title" provisions that made states own the LLRW generated within their borders and assume the associated liabilities. *Id.* at 543. The "take-title" provision was invalidated and severed from the rest of the LLRWPAA by the Supreme Court in *New York v. United States*, 505 U.S. 144, 186-87 (1992).

^{329.} See Newberry, supra note 37, at 66.

^{330.} See infra Part II.B.1.

^{331.} See supra note 328 and accompanying text.

^{332.} See infra Part II.B.1.

^{333.} Gerrard, Fear and Loathing, supra note 47, at 1050, 1093 ("Few laws have failed so completely as the federal and state statutes designed to create new facilities for the disposal of . . . radioactive waste."); see also infra Part II.B.1.

^{334.} See Murray & Spence, supra note 77, at 73-76; Weinberg, supra note 86, at 57 (noting the concerns of states and localities over landfill shortages).

deal with the MSW crisis.³³⁵ Professor Engel hypothesized that such a system would solve the problems of equity, lack of capacity, and inefficiency that stem from the national MSW market.³³⁶

Congress designed the LLRWPA and the LLRWPAA to stave off the LLRW equivalent of the MSW Garbage Wars. The brewing LLRW Wars were set off by threats from the three sited states to exclude other states from access to disposal, or more drastically, to eliminate disposal capacity by shutting down their facilities.³³⁷ Like MSW importing states, LLRW importing states attempted to use state laws to exclude out-of-state waste.³³⁸ In 1980, the State of Washington, which hosted the Richland site, passed a voter initiative to prohibit the transportation and storage of radioactive waste produced outside the state.³³⁹

The Ninth Circuit quickly squelched this law under the dormant Commerce Clause analysis.³⁴⁰ The Ninth Circuit noted, however, that under the compact system of the LLRWPA, Washington could legitimately pass a measure to exclude the waste of states outside its compact.³⁴¹ Thus, in contrast to the deadlocked result of the MSW Garbage Wars, where states continue to enact discriminatory garbage laws and courts continue to strike such laws down,³⁴² the war to control interstate LLRW flow through state law has ended.³⁴³ The resolution to the LLRW Wars, however, has not brought peace. Rather, states have clashed over the difficulties of siting new LLRW disposal facilities under the compact system.³⁴⁴

D. The Siting Crisis

Underlying the MSW and LLRW crises and the Garbage Wars is the problem of siting.³⁴⁵ Siting is the process of choosing a location for

^{335.} See Engel, supra note 43, at 1551-60. Even before Professor Engel's study, Michael Harpring suggested in a 1991 student comment that an interstate compact system for MSW would help states solve the garbage crisis by fostering uniformity, diffusing emotional tensions, and encouraging regional problem solving. See Harpring, supra note 43, at 888-91 & n.266.

^{336.} See Engel, supra note 43, at 1552-53. But see Murray & Spence, supra note 77, at 94-97 (rejecting a system of multi-state compacts to address waste management problems because of the failure of the LLRWPA and its Amendments).

^{337.} See supra notes 302-14 and accompanying text (describing the LLRW crisis and the passage of the LLRWPA).

^{338.} See, e.g., Wash. State Bldg. & Constr. Trades Council v. Spellman, 684 F.2d 627 (9th Cir. 1982).

^{339.} Id. at 629.

^{340.} Id. at 630-31.

^{341.} Id. at 630.

^{342.} See supra Part I.B. (describing the interstate MSW cases).

^{343.} See Spellman, 684 F.2d at 630 (noting that Congress had enacted the Atomic Energy Act and the LLRWPA to regulate nuclear activities).

^{344.} See supra Part II.B. (describing the results of the LLRWPA and LLRWPAA).

^{345.} See U.S. EPA, 2 Decision Maker's Guide, supra note 85, at 2-1 ("Facility siting... [has] become the most contentious and difficult aspect[] of the solid waste

new disposal facilities and includes planning, site selection and design, and implementation.³⁴⁶ Difficulties with the siting process and landfill closures³⁴⁷ have led states to perceive a landfill shortage.³⁴⁸ These perceptions have prompted states to enact laws that would limit the use of their landfills to local residents.³⁴⁹ Many of these laws, in turn, have been struck down under the dormant Commerce Clause.³⁵⁰ Thus, difficulties in siting³⁵¹ have fueled importing states' pursuit of legislative solutions that permit them to preserve landfill space for their own disposal needs,³⁵² without requiring them to take measures that would increase in-state disposal costs, such as raising tipping fees across the board.³⁵³

1. The Knockdown Drag-Out Fight of the Siting Process

Traditionally, landfills were sited under a top-down model, where government officials used technical criteria to select a suitable site

management process."); see infra notes 495-500 and accompanying text (describing the siting crisis for LLRW disposal sites).

346. See U.S. EPA, Decision Maker's Guide, supra note 85, at 2-4. In the planning stage, the facility developer must gather information to help decide what kind of facility to build. Id. at 2-5, fig. 2-1. Then, the developer must find a location that fulfills the criteria for obtaining a permit, as well as deciding on a design for the facility. Id. Lastly, in the implementation stage, the developer must monitor the landfill and ensure that it is properly closed when it is full. Id.

347. See Murray & Spence, supra note 77, at 74-75.

348. See U.S. EPA, MSW 2000, supra note 33, at 14 (noting that "[a]t the national level, capacity does not appear to be a problem, although regional dislocations sometimes occur"); Weinberg, supra note 86, at 58. The siting problem is political, rather than physical. Alexander, supra note 1, at 9-10. Compared to other industrialized countries, the United States has by far the largest amount of available land to create new disposal capacity relative to population size and discards per person. Id. In the LLRW context, this shortage was extremely clear. See supra notes 307-13 and accompanying text (describing how all three of the existing LLRW dumps threatened to close).

349. See Weinberg, supra note 86, at 58-59.

350. See supra Part I.B. (summarizing the interstate waste cases).

351. Engel, supra note 43, at 1514-15 (finding that interstate waste disposal allowed

states to avoid the siting problem).

352. See Murray & Spence, supra note 77, at 73-76; Rebekah Hall, Industry Sues State over Canada Cargo, Waste Age, Oct. 2003, at 4 (noting that the rationale for a Michigan county's 2003 law restricting trash imports was to preserve landfill space for residents).

353. Lana Pollack, Editorial, Cheap Prices Make State a Dumping Ground; Restrict Homegrown and Imported Waste, Detroit News, Sept. 28, 2003, at A19; cf. Kevin Penton, Neighboring States Are Dumping on the Valley; Northhampton Landfills Taking in More Imported Garbage, and That May Rise, Morning Call (Allentown, Pa.), Sept. 28, 2003, at A1 (noting that Pennsylvania's state fee rose \$4 per ton in 2002). Indeed, when Alabama raised its tipping fees for out-of-state hazardous waste, the amount of waste received fell from 791,000 tons to 290,000 tons within two years. Chemical Waste Mgmt, Inc. v. Hunt, 504 U.S. 334, 342 n.4 (1992). Also, LLRW facilities have dramatically raised their prices, from \$40 per cubic foot in the 1980s and 1990s to hundreds of dollars per cubic foot today, causing the amount of disposed LLRW to plummet. See supra note 326.

before announcing their decision to the public.³⁵⁴ This model resulted in strong public opposition, which led to the shelving of many siting proposals.³⁵⁵ The use of the top-down model, also called the "decide-announce-defend" model, has since become discouraged.³⁵⁶ In its place, the EPA has encouraged officials to embrace the public participation model.³⁵⁷

The process of siting can take many years.³⁵⁸ It begins with estimations of how much new disposal capacity is needed.³⁵⁹ The next step is to choose potential sites based on land use plans and geological conditions.³⁶⁰ The sites must conform to federal, state, and local regulations and must obtain the necessary permits.³⁶¹ Then, the facility must be designed and constructed.³⁶² Once in place, the facility must have a management plan to regulate its operation and closure.³⁶³ Site developers are encouraged to include the public in all stages of this process.³⁶⁴

The siting process does not always go smoothly.³⁶⁵ The recent siting of a 1030 acre landfill by a private developer in Taliaferro Country, Georgia incited community revolt.³⁶⁶ Three county commissioners were thrown in jail for failing to obey a judicial order to write a letter of assurance to the Georgia Environmental Protection Division stating that the landfill complied with zoning regulations.³⁶⁷ In other instances, however, siting can end happily. Tullytown, Pennsylvania, for example, welcomed the siting of a new landfill, as it infused the old

^{354.} Barry G. Rabe et al., NIMBY and Maybe: Conflict and Cooperation in the Siting of Low-Level Radioactive Waste Disposal Facilities in the United States and Canada, 24 Envtl. L. 67, 70 (1994).

^{355.} Id. at 81.

^{356.} U.S. EPA, 2 Decision Maker's Guide, supra note 85, at 2-4.

^{357.} *Id.* Such a model includes public discussion and involvement, as well as disclosure of issues that arise in the siting process. *Id.* at 2-7, tbl. 2-1.

^{358.} The EPA estimates that it takes three to ten years to site, design and construct an MSW landfill. *Id.* at 9-11.

^{359.} Id. at 9-12.

^{360.} Id. at 9-14 to 9-18. The Resource Conservation and Recovery Act ("RCRA") prohibits siting near airports, flood plains, wetlands, faults, seismic zones, and unstable areas. 42 U.S.C. §§ 6901-6992k (2000); U.S. EPA, 2 Decision Maker's Guide, supra note 85, at 9-16.

^{361.} *Id.* at 9-18 to 9-19. States and localities may require developers to submit a waste management plan and obtain additional permits. *Id.* at 9-19.

^{362.} Id. at 9-26.

^{363.} Id. at 9-30.

^{364.} Id. at 2-5, 9-26, 9-28.

^{365.} For strategies that communities can use to stop facilities, see Michael B. Gerrard, Stopping and Building New Facilities, in The Law of Environmental Justice: Theories and Procedures to Address Disproportionate Risks 465 (Michael B. Gerrard ed. 1999)

^{366.} Robert Pavey, Landfill Lands Leaders in Jail, Augusta Chron., Oct. 15, 2003, at A1.

^{367.} Id.

mining town's budget with \$48 million dollars over fifteen years, while providing a multitude of free municipal services.³⁶⁸

2. Economics and Equity

Siting is inherently inequitable.³⁶⁹ No matter where a landfill is sited, it greatly burdens one part of a population over another.³⁷⁰ It would be impractical, however, to distribute landfills equally because larger regional facilities are safer, more efficient, and, on the whole, burdensome to fewer people.³⁷¹

Certain types of inequities in siting, such as environmental racism, have emerged as unacceptable and are carefully scrutinized.³⁷² In the late 1980s, a series of studies revealed that minorities and poor communities were disproportionately burdened by environmental risks.³⁷³ This data prompted the rise of the environmental justice movement.³⁷⁴ In 1994, President William J. Clinton issued Executive Order 12,898, requiring federal agencies to consider the environmental impact of their actions on minority and poor populations and create policies to achieve environmental justice goals.³⁷⁵ Many states have also adopted programs to address environmental justice issues.³⁷⁶

^{368.} Rick Hampson, Trash Provides 'Horn O' Plenty' for Towns, USA Today, Sept. 29, 2003, at A15.

^{369.} See Gerrard, Fear and Loathing, supra note 47, at 1122-25 (finding an "irreconcilable" conflict in the principles that should be followed for equitable siting). 370. Colglazier & English, supra note 47, at 645-47.

^{371.} Vicki Been, Compensated Siting Proposals: Is It Time to Pay Attention?, 21 Fordham Urb. L.J. 787, 791 (1994).

^{372.} Gerrard, Fear and Loathing, supra note 47, at 1125-31.

^{373.} Id. at 1125 (describing the environmental justice movement). In the case of interstate waste flow, however, there is no evidence to suggest that minorities bear a greater burden. In fact, the statistics seem to suggest the opposite. Engel, supra note 43, at 1494-95 ("[I]n contrast to what might be expected from the conventional wisdom on environmental inequities, this analysis does not provide any evidence that racial minorities endure a greater solid waste burden, at least when statistics are aggregated at the state level."). But see Davies, supra note 171, at 266-67 (noting that in Virginia and Ohio, imported waste goes to counties with higher numbers of minorities than the rest of the state).

^{374.} Verchick, *supra* note 24, at 1289-94.

Environmental justice . . . describes an area of activism and study that is concerned with the distribution of environmental benefits and harms on the basis of people's race, sex, age, income, or other characteristics. Spawned by grassroots activists across the country, the environmental justice movement originally began as a protest against the siting of polluting industries and waste facilities in poor communities or communities of color.

Id. at 1289.

^{375.} Bradford C. Mank, *Executive Order 12,898*, in The Law of Environmental Justice: Theories and Procedures to Address Disproportionate Risks 103 (Michael B. Gerrard ed., 1999). The order can be found at Exec. Order No. 12,898, 59 Fed. Reg. 7629 (Feb. 11, 1994).

^{376.} See Chuck D. Barlow, State Environmental Justice Programs and Related Authorities, in The Law of Environmental Justice: Theories and Procedures to

Ideally, the siting process allows both facility developers and communities to maximize net benefits.³⁷⁷ The facility developer wants to find an area with low land costs near the source of generated waste, and with geological features that minimize future environmental liability.³⁷⁸ The community, in turn, wants assurances as to safety and health, and also wants compensation for taking on the associated risks of hosting a landfill.³⁷⁹ These incentives have led to the practice of compensated siting.³⁸⁰

A compensated siting scheme allows developers to compensate communities for bearing the cost of hosting a waste disposal facility.³⁸¹ Compensated siting has been lauded as a way to make developers internalize the costs of a project, giving them the incentive to build efficient facilities.³⁸² In addition, communities are given the opportunity to voluntarily participate in the siting process, making it more likely that a project will be approved.³⁸³

Critics have disapproved of this practice, however, viewing the compensation as a bribe rather than as a fully informed, voluntary decision, and further, finding it immoral to commodify health.³⁸⁴ Moreover, compensated siting may not always be completely equitable—for example, a disposal site may affect people outside the host community who will not be compensated.³⁸⁵ Compensated siting can also fail if volunteer communities cannot be found.³⁸⁶ Despite the negative aspects of compensated siting, it is still one of the most promising ways to develop new disposal capacity.³⁸⁷

Address Disproportionate Risks 140 (Michael B. Gerrard ed., 1999) (summarizing state environmental justice programs); Sheila Foster, *Impact Assessment, in* The Law of Environmental Justice: Theories and Procedures to Address Disproportionate Risks 256, 285 nn.148-78 (Michael B. Gerrard ed., 1999) (detailing state environmental justice laws).

377. Tom Tietenberg, Énvironmental and Natural Resource Economics 499-500 (5th ed. 2000). The facility owner seeks net benefits that would allow him to process wastes cheaply. *Id.* The community wants benefits from compensation or promises of safety to outweigh its costs. *Id.*

378. Id. Such liabilities might include the cost of cleanup if the site becomes contaminated. See supra note 74 and accompanying text (mentioning RCRA's corrective action measure).

379. Tietenberg, *supra* note 377, at 500.

380. Been, *supra* note 371, at 788-91.

381. Id. (describing compensated siting proposals and justifications for using them).

382. Id. at 791.

383. Id.

384. Engel, supra note 43, at 1545.

385. See Been, supra note 371, at 826 (pondering the question of whether a ski resort twenty miles away from the site should be able to have a voice in the process).

386. Id. at 800-08 (describing how state compact commissions were ultimately unsuccessful with compensated siting in the context of LLRW).

387. Id. at 823-24.

3. Psychology and NIMBY

The human psyche is an important part of the siting process, as emotions run high and logic does not always prevail.³⁸⁸ An example of the importance of human psychology in siting is the NIMBY³⁸⁹ syndrome, where public opposition has consistently blocked the siting of undesirable, but necessary, facilities such as landfills.³⁹⁰ According to Michael B. Gerrard, the NIMBY phenomenon comes from a community's feelings of "dread and intrusion"—the vague and undefined health threats from waste disposal sites (dread), combined with the feelings of mistrust and invasion from the outside (intrusion).³⁹¹

The NIMBY syndrome, however, can be addressed through a more human approach to the siting process.³⁹² According to Gerrard, the siting process would be more productive if it incorporated measures to account for the human instinct of territoriality.³⁹³ Territoriality is the primal instinct to defend one's turf from outside invasion.³⁹⁴ It explains the fury of importing states towards exporting states and the powerful opposition of communities against unwelcome landfill developers.³⁹⁵ It also explains the failure of the top-down, "decide-announce-defend," model of siting.³⁹⁶

To account for territoriality, developers can adopt three different approaches. First, a developer can seek volunteers to host disposal facilities, as in compensated siting.³⁹⁷ Second, developers can emphasize societal responsibility³⁹⁸ for waste production by committing to source reduction and other alternative methods of dealing with the waste disposal crisis. Third, developers can depict waste disposal in holistic terms to deflect the perception of inequity.³⁹⁹ For example, although a community may be burdened by hosting a

^{388.} Michael B. Gerrard, Territoriality, Risk Perception, and Counterproductive Legal Structures: The Case of Waste Facility Siting, 27 Envtl. L. 1017 (1997) (emphasis omitted) [hereinafter Gerrard, Territoriality].

^{389.} See supra text accompanying note 91 (describing NIMBY and other acronyms referring to community protest against siting projects like waste disposal facilities).

^{390.} Rabe et al., supra note 354, at 69.

^{391.} Gerrard, Fear and Loathing, supra note 47, at 1138-46.

^{392.} Gerrard, Territoriality, supra note 388.

^{393.} Id. at 1018.

^{394.} Id. at 1018-20.

^{395.} See id.

^{396.} See id. at 1020-21; supra note 356 and accompanying text.

^{397.} See Gerrard, Territoriality, supra note 388, at 1023 ("[T]his would mean seeking disposal sites in communities that have volunteered for them...").

^{398.} See id. at 1022 (explaining how fairness and equitable distribution can counteract territoriality).

^{399.} See id. at 1026 (describing how the separate treatment of different types of waste leads to the perception of inequity); id. at 1030 (proposing a comprehensive approach that addresses the waste streams together as a way to counteract perceptions of inequity).

MSW facility, it may be exporting its hazardous waste or LLRW to another community.⁴⁰⁰ Thus, when the waste streams are considered together, the burdens on the communities are more equitable.⁴⁰¹ Additionally, gaining a community's trust through education about the risks and benefits can help overcome NIMBY and territoriality.⁴⁰²

The Garbage Wars are yet another example of NIMBY, but on a state scale. 403 Outraged at being dumping grounds for the nation, states continually attempt to blockade their borders from outside garbage. 404 This self-same reaction was present in the LLRW crisis. 405 The LLRWPA and LLRWPAA were meant to address the primal instinct that made Washington, Nevada, and South Carolina refuse to be the LLRW dumping grounds for the nation. 406 To gauge the success of the LLRW legislation and its helpfulness for the MSW context, Part II first examines the state psyche concerning MSW imports, and then moves on to scrutinize the results of the LLRW compact system.

II. DISMANTLING THE EMOTION, POLITICS, AND RHETORIC OF THE GARBAGE WARS

After the Supreme Court's decision in City of Philadelphia v. New Jersey, 407 states have tried to attain the ability to ban or limit MSW imports. 408 Although states gained this power over interstate LLRW, they still failed to address the LLRW disposal crisis. 409 Undaunted, states have continued to pursue their goal of controlling interstate MSW flow through both state law 410 and congressional solutions. In fact, bills granting states the power over interstate waste flow have been introduced in every session of Congress since the late 1980s, but none have become law. 411 Part II.A. outlines states' concerns and

^{400.} See id.

^{401.} Id.

^{402.} See Gerrard, Fear and Loathing, supra note 47, at 1149-51 (describing how communities that are familiar with waste disposal facilities are more willing to be hosts for such facilities).

^{403.} See supra Part I.B. (detailing states' attempts to ban or limit out-of-state garbage in their landfills).

^{404.} See supra Part I.B.

^{405.} See supra notes 302-14 and accompanying text (describing the LLRW crisis).

^{406.} See supra notes 302-14 and accompanying text.

^{407. 437} U.S. 617 (1978).

^{408.} See Weinberg, supra note 86, at 60.

^{409.} See infra text accompanying notes 495-500.

^{410.} See supra note 30 (describing Michigan's 2003 law placing limitations on interstate waste flow).

^{411.} McCarthy & Hardenbergh, supra note 93, at CRS-1. In 1994, the 103rd Congress passed interstate waste bills in both the House and Senate, but failed to enact them into law because of disagreements over language. See S. 2345, 103d Cong. (1994); H.R. 4779, 103d Cong. (1994); McCarthy & Hardenbergh, supra note 93, at CRS-1 n.1. In 1995, the Senate passed the Interstate Transportation of Municipal Solid Waste Act, but this bill was not enacted into law either. S. 534, 104th Cong.

their expected benefits from gaining this control, as well as some proposed solutions from Congress. Part II.B. contrasts these concerns and expectations with the failures of the LLRWPA and the LLRWPAA, which granted states the ability to control the flow of interstate LLRW.

A. The Rose-Colored Glasses of the Garbage Soldiers: State Rationales for Controlling Waste Flow and Congressional Solutions

By gaining control over interstate waste flow, states hope to address concerns such as health, environmental protection, and fairness. Part II.A. catalogues the state concerns expressed in the interstate waste cases. Then, it describes the provisions of two recent bills before Congress, which were drafted to address states' concerns about interstate MSW.

1. State Concerns

The four main Supreme Court MSW dormant Commerce Clause decisions demonstrate the gamut of concerns that states have about out-of-state garbage. 412 In Philadelphia, New Jersey's legislature passed an import ban because waste disposal was a threat to environmental quality; the state's landfills were nearly full; and banning out-of-state waste would protect public health, safety, and welfare. 413 The New Jersey Supreme Court found that New Jersey would run out of landfill space within a few years, and that the state would have to develop new landfill capacity, most likely from "virgin wetlands or other undeveloped lands."414 In Fort Gratiot, Michigan was concerned about long-term planning to protect health and safety. 415 Because Michigan had developed a state waste management plan, and had taken measures to conserve landfill capacity, the state felt it was reasonable to enact the county approval system because counties could then plan for future waste flows. 416 Oregon, in contrast, was concerned about fairness in Oregon Waste Systems. 417 Oregon wanted other states to "pay their 'fair share' of the costs" of disposal within its borders. 418 Clarkstown, New York, had a purely

^{(1995);} McCarthy & Hardenbergh, supra note 93, at CRS-1 n.1.

^{412.} C & A Carbone, Inc. v. Clarkstown, 511 U.S. 383 (1994); Or. Waste Sys., Inc. v. Dep't of Envtl. Quality, 511 U.S. 93 (1994); Fort Gratiot Sanitary Landfill, Inc. v. Michigan Dep't of Natural Res., 504 U.S. 353 (1992); City of Philadelphia v. New Jersey, 437 U.S. 617 (1978). For a discussion of these cases, see *supra* Part I.B.1.-4.

^{413.} Philadelphia, 437 U.S. at 625.

^{414.} Id. (citation omitted).

^{415.} See Fort Gratiot, 504 U.S. at 363-64 (describing Michigan's argument that the statute was necessary to protect citizens' health).

^{416.} *Id.* at 364, 366.

^{417.} Or. Waste Sys., 511 U.S. at 102.

^{418.} Id.

economic objective in Carbone -- to finance its waste transfer station. 419

The Fourth Circuit's opinion in *Gilmore* sheds more light than the Supreme Court decisions on the emotional milieu behind the retinue of laws directed at out-of-state garbage. As the second-largest importer of MSW, Virginia wished to protect its state reputation. As a Virginia General Assembly delegate phrased the issue: "Do we want to be known as the capital of garbage? . . . Maybe we need a new bumper sticker—instead of Virginia is for lovers, what about Virginia is for garbage?" Virginia also cited several secondary concerns such as worry over its ability to dispose of its own waste in the future, distrust of out-of-state waste, and potential environmental impacts from hosting landfills.

The Bayh case also documents the divisive sentiment behind the Garbage Wars. ⁴²⁴ In 1990, the District Court for the Southern District of Indiana addressed an earlier version of the laws later considered by the Seventh Circuit. ⁴²⁵ The court found that Indiana was concerned about the amount and composition of out-of-state waste disposed of in Indiana landfills. ⁴²⁶ In fact, three different inspections of out-of-state trash turned up potentially infectious medical waste such as hypodermic needles and gloves contaminated with human blood. ⁴²⁷ A further justification of Indiana's worries was that two of its former sanitary landfills were designated as Superfund sites ⁴²⁸ and others

Senator Bolling... list[ed] the following four reasons: (1) continuing to allow Virginia's limited landfill space to be consumed by MSW generated outside Virginia may harm the ability of Virginia to properly dispose of its own waste in years to come; (2) because MSW generated outside Virginia is handled by a number of vendors before being transported to Virginia, Virginia's ability to have a satisfactory level of confidence about the nature of the waste it receives is limited; (3) the large amount of MSW generated outside Virginia that Virginia is currently receiving 'has the potential of harming Virginia's legacy and image'; and (4) the potential for negative environmental impact on Virginia's land by the 'massive landfill operations.'

^{419.} C & A Carbone, Inc. v. Clarkstown, 511 U.S. 383, 393 (1994).

^{420.} Waste Mgmt. Holdings, Inc. v. Gilmore, 252 F.3d 316, 336-40 (4th Cir. 2001). See *supra* Part I.B.6. for further discussion of *Gilmore*.

^{421.} Gilmore, 252 F.3d at 337.

^{422.} Id. at 339 (quotation marks omitted).

^{423.} *Id.* at 337.

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^{424.} Gov't Suppliers Consolidating Servs., Inc. v. Bayh, 975 F.2d 1267 (7th Cir. 1992). See *supra* Part I.B.5. for further discussion of the *Bayh* case.

^{425.} Gov't Suppliers Consolidating Servs., Inc. v. Bayh, 753 F. Supp. 739 (S.D. Ind.

^{426.} Id. at 745.

^{427.} *Id.* at 754-55. A routine inspection of in-state trash, however, also turned up potentially infectious waste, suggesting that Indiana's distrust of out-of-state waste was misplaced. *See id.* at 756.

^{428.} Superfund sites are sites placed on the EPA's National Priority List for hazardous waste cleanup by state and federal authorities under the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), Pub. L.

were designated as sites that required remedial cleaning under state law. 429 Governor Bayh's State of the State address revealed two other concerns—the fear of being a "dumping ground for the nation" and losing "scarce disposal capacity." 430

The concerns expressed in Philadelphia, Fort Gratiot, Oregon Waste Systems, Carbone, Gilmore, and Bayh were not unique to each state. 431 All of the states passed their interstate waste laws because of common fears about shortages (or excesses, as in Carbone) of waste disposal capacity, health effects from receiving out-of-state waste, and state pride. 432 Although these laws assuaged these fears at the state level, they accentuated the disposal capacity fears of exporting states on a national level.433

2. Congressional Solutions

Judging by the virtual deadlock between the states and the courts over state-crafted solutions that would allow states to address their concerns by controlling MSW flow, congressional solutions appear to be the key to ending the Garbage Wars. 434 So far, however, this route has also proved discouraging. 435 Bills giving states the ability to ban or otherwise limit waste imports have been presented to Congress since the late 1980s, but none of them have been successful. 436 This has led some scholars to suggest that states turn to laws that have already been enacted, such as using the EPA's authority under RCRA to only approve state waste management plans that prohibit MSW exportation.437 On the other hand, one commentator questions Congress's ability to even enact a statute that would allow states to put up barriers to interstate MSW without violating the Equal Protection Clause. 438

Despite Congress's disappointing reception of interstate MSW laws, representatives from several states have continued to propose such

No. 96-510, 94 Stat. 2767 (1980) (codified as amended in scattered sections of 42

U.S.C.). See Percival et al., supra note 61, at 224-26.
429. Gov't Suppliers, 753 F. Supp. at 748. MSW sanitary landfills can contain hazardous waste as they accept this type of waste from "small quantity generator[s]." Id. at 749 (citation omitted).

^{430.} Id. at 746.

^{431.} See supra text accompanying notes 412-30.

^{432.} See supra text accompanying notes 412-30.

^{433.} See supra Part I.B. (describing how exporting states or their contracted haulers brought suit to invalidate interstate waste control laws so that they could meet their own waste disposal needs).

^{434.} Murray & Spence, *supra* note 77, at 91-92; Weinberg, *supra* note 86, at 64-67.

^{435.} See Murray & Spence, supra note 77, at 92; see also supra note 411 (describing how some interstate waste control bills were passed by the House and/or Senate, but were ultimately not enacted into law).

^{436.} See Murray & Spence, supra note 77, at 92.

^{437.} *Id.* at 97-100.

^{438.} Weinberg, *supra* note 86, at 68-72.

bills.⁴³⁹ This section examines two of the bills that are currently under consideration, H.R. 418 and H.R. 1730.

a. Proposed Laws Before the 108th Congress

H.R. 418 and H.R. 1730 were presented to Congress on January 28, 2003 and April 10, 2003, respectively. Both bills give states control over interstate waste, but through contrasting approaches.

b. H.R. 418: Solid Waste Compact Act

Representative Paul Kanjorski, a Democrat from Pennsylvania, introduced H.R. 418 to the House on January 28, 2003.⁴⁴¹ The bill would amend Subtitle D of the Solid Waste Disposal Act ("SWDA")⁴⁴² by adding two new provisions.⁴⁴³ Under the first provision, a "State whose State [waste management] plan has been approved... may prohibit the importation into that State of solid waste from outside that State."⁴⁴⁴ The second provision requires the EPA to "identify innovative alternative solid waste disposal methods" and to "establish and publish technical guidance" to implement those methods.⁴⁴⁵

Although the short title implies that the bill creates a compact system such as the one for LLRW, 446 the provisions instead resemble the comprehensive county waste management system of *Fort Gratiot*. 447 The laws, however, differ in at least one important way: the state needs to act affirmatively to exclude waste under H.R. 418. 448 In the county waste management system, the counties needed to act affirmatively to allow in waste imports. 449 The Supreme Court found this need for action significant when it concluded that the law in *Fort*

^{439.} See Murray & Spence, supra note 77, at 92.

^{440.} H.R. 418, 108th Cong. (2003); H.R. 1730, 108th Cong. (2003).

^{441.} H.R. 418, 108th Cong.

^{442. 42} U.S.C. §§ 6941-6949 (2003). The SWDA was amended by RCRA in 1976. Subtitle D refers to Subtitle D of RCRA. See *supra* note 70 for more information about the SWDA and RCRA.

^{443.} H.R. 418, 108th Cong.

^{444.} Id. § 2.

^{445.} Id. § 3.

^{446.} Previously, Representative Kanjorski proposed the Solid Waste Compact Act of 1993, which contained provisions that allowed states to form compacts to deal with solid waste on a regional basis and more closely adhered to the model of the LLRWPA. H.R. 599, 103d Cong. (1993); Weinberg, *supra* note 86, at 66.

^{447.} Fort Gratiot Sanitary Landfill, Inc. v. Michigan Dep't of Natural Res., 504 U.S. 353, 361 (1992).

^{448.} H.R. 418 § 3. Compare Fort Gratiot, 504 U.S. at 361 (describing how counties under the Michigan law had to act affirmatively to allow out-of-state and out-of-country waste).

^{449.} Fort Gratiot, 504 U.S. at 361.

Gratiot was invalid. 450 The bill, H.R. 418, was referred to the House Subcommittee on Environmental and Hazardous Materials on February 14, 2003, but no further action has been taken. 451

c. H.R. 1730: Solid Waste Interstate Transportation Act of 2003

James Greenwood, a Republican Representative Pennsylvania, introduced H.R. 1730 to the House on April 10, 2003. 452 This bill is co-sponsored by twenty other representatives from Nebraska, Michigan, Indiana, Ohio, California, Oregon, and Mississippi. 453 It has three main provisions. First, it places a presumptive ban on out-of-state waste unless the waste is received under a host community agreement, allowed by state permit, or accepted under an existing contract. 454 States could deny permits based on the lack of local or regional need for more disposal capacity.455

Second, the bill allows states to cap the amount of out-of-state waste that each landfill or incinerator in the state can receive. 456 If states enact comprehensive recycling programs, they can cap out-ofstate MSW to the amount received at each facility in 1995. 457 States could also limit landfills or incinerators that had been receiving outof-state MSW to the amount of out-of-state MSW received in 1993. 458 States could further add provisions in the permit limiting the amount of out-of-state MSW to 20% of the total amount of MSW received at the disposal facility.⁴⁵⁹ None of the caps could conflict with the limits set out under permits and host community agreements, 460 or discriminate against MSW because of state origin. 461

Third, the bill allows states to impose a "cost recovery surcharge" much like the one in Oregon Waste Systems. 462 The surcharge is limited to the amount necessary to recover the cost of processing. combustion, or disposal in the state arising from an out-of-state source

^{450.} Id. at 363, 367-68.

^{451.} H.R. 418, 108th Cong. (2003) (indicating no further actions), available at http://thomas.loc.gov/bss/d108query.html.

^{(2003),} 1730, 108th Cong. available http://thomas.loc.gov/bss/d108query.html.

^{453.} Id. Except for California, all of the other states whose representatives sponsor the bill receive net imports of MSW. McCarthy & Hardenbergh, supra note 93, at

^{454.} H.R. 1730 § 2 (amending 42 U.S.C. § 4011(a)).

^{455.} *Id.* (amending 42 U.S.C. § 4011(g)(1)). 456. *Id.* (amending 42 U.S.C. § 4011(h)).

^{457.} Id. (amending 42 U.S.C. § 4011(h)).

^{458.} *Id.* (amending 42 U.S.C. § 4011(f)(2)).

^{459.} *Id.* (amending 42 U.S.C. § 4011(g)(2)). 459. *Id.* (amending 42 U.S.C. § 4011(g)(2)). 460. *Id.* (amending 42 U.S.C. § 4011(f)(1)(A), (g)(2)(B), (h)(1)(A)). 461. *Id.* (amending 42 U.S.C. § 4011(f)(3), (g)(2)(C)(ii), (h)(2)).

^{462.} *Id.* (amending 42 U.S.C. § 4011(i)).

and is capped at \$2 per ton. 463 The fee collected would help fund solid waste programs administered by the state. 464

H.R. 1730 was discussed in a hearing before the House Subcommittee on Environmental and Hazardous Materials on July 23, 2003, along with two other interstate and international MSW bills. 465 The impetus behind the hearing was a looming waste crisis in Michigan. In 2001, Michigan imported 3,597,729 tons of MSW and exported 146,358 tons, for a net of 3,451,371 imported tons, making it the third largest net importer of MSW in the United States. 466 About half of the imported MSW came from the province of Ontario, Canada, rather than other states in the United States. 467 When the city of Toronto closed its last two landfills in at the end of 2002, it began to ship all of its MSW to Michigan landfills.

Furious at its status as the dumping grounds for Ontario, Michigan fought to keep out Canadian garbage. Several events fueled Michigan's anger. In October 2002, U.S. customs inspectors at the border stopped a garbage truck coming into Michigan from Canada because it was dripping blood. On several occasions, most recently

^{463.} Id. (amending 42 U.S.C. § 4011(i)).

^{464.} Id. (amending 42 U.S.C. § 4011(i)(3)).

^{465.} Hearing on H.R. 382, H.R. 411, and H.R. 1730 Before the Subcomm. on Env't and Hazardous Materials of the House Comm. on Energy and Commerce, 108th Cong. 6-7 (2003) (statement of Robert A. Ficano, Wayne County Executive, Wayne County, Michigan) [hereinafter Hearing]. H.R. 382 and H.R. 411 addressed waste flow across the U.S.-Canadian border. Id. at 7. H.R. 382 allowed states to regulate MSW from outside the United States. Id. H.R. 411 required the EPA to enforce the requirement that Canada and the United States notify each other about imported waste, and to consider the impact on states before consenting to the imports. Id.

^{466.} McCarthy & Hardenbergh, supra note 93, at CRS-6, tbl. 3.

^{467.} Id. at CRS-8. Canada imposed a 7% Goods and Services Tax on MSW disposed of in Canada, further giving Ontario an incentive to dump MSW in Michigan. Hearing, supra note 465, at 130 (statement of Michael Garfield, Director, Ecology Center).

^{468.} See Hearing, supra note 465, at 14-15 (statement of Sen. Debbie Stabenow, Michigan); McCarthy & Hardenbergh, supra note 93, at CRS-8.

^{469.} Heinlein, *supra* note 30 (describing Michigan's effort to pass interstate waste flow legislation).

^{470.} Hearing, supra note 465, at 104 (statement of Linda Jordan, Michigan State Trooper). Ms. Jordan, the state trooper who stopped the truck, testified as follows:

Customs Agent Young advised while he was checking vehicles for illegal cargo he noticed blood dripping from the trailer of one of the vehicles. He stated it had created a pool in its previous location and since the vehicle had been sequestered there was another pool of blood in its new location and blood continued to drip. The driver of the vehicle stated he was hauling garbage.

The vehicle trailer had two grates in the back door, one of which was leaking blood. It was also dripping through the seam between the door and the bed of the trailer. Agent Young and I climbed to the top of the trailer to check the contents but the trash was compacted so tightly we were not able to see the source of the blood. The x-ray performed by Customs agents onsite revealed a location of density, but was inconclusive.

in September 2003, radioactive waste was detected in shipments of Canadian MSW.⁴⁷¹ In April 2003, inspectors found fifty pounds of marijuana in a Canadian garbage truck heading to a Michigan landfill.⁴⁷² This discovery was compounded by another drug bust in September 2003, uncovering 1900 pounds of marijuana in a garbage truck coming into Michigan from Canada.⁴⁷³

To combat the inflow of out-of-state waste, especially that coming from Canada, Michigan supported H.R. 1730 as a measure to help the state manage its waste crisis.⁴⁷⁴ The House Subcommittee has not taken any further action on this bill since the hearing in July 2003.⁴⁷⁵

B. The Waste Crisis Reality: The Results of the LLRWPA and Its Amendments

The three states with LLRW disposal sites echoed one of the same concerns as importing MSW states—they did not want to be the dumping grounds of the nation. After a near nuclear meltdown at Pennsylvania's Three Mile Island in 1979, fear and hatred of radioactive waste skyrocketed. Due to negative public and political perceptions of radioactive waste, siting new disposal facilities became more difficult. After the closing of the Maxey Flats, Kentucky; West Valley, New York; and Sheffield, Illinois sites, the Barnwell site in South Carolina became the only LLRW site available to the eastern part of the United States and soon began receiving nearly 80% of the

Agent Young and I escorted the vehicle to a waste management recovery station in Detroit in order to off-load the garbage and find the source of the blood. The driver of the vehicle pushed approximately a quarter of the garbage out of the trailer. In this small amount of garbage we found two garbage bags full of used blood products, partially empty blood transfusion bags, and intravenous tubing. In addition there was still a large amount of blood in the bags. The medical waste filled two large clear garbage bags and then were placed in another yellow garbage bag. The two clear bags were tied, but the yellow bag was not. None of the waste was in the required red biohazard bags nor was the vehicle properly marked with biohazard placards.

Id.

472. Hearing, supra note 465, at 6 (statement of Sen. Carl Levin, Michigan).

475. H.R. 1730, 108th Cong. (2003), available at http://thomas.loc.gov/bss/d108query.html.

476. See supra note 306 and accompanying text.

^{471.} Hearing, supra note 465, at 15 (statement of Sen. Debbie Stabenow, Michigan); Radioactive Toronto Trash Irks Michigan, The Record (Kitchener-Waterloo, Ont.), Sept. 9, 2003, at A2.

^{473.} Jeremy W. Steele, Pot Discovery Fuels Imported Trash Battle; Ton of Marijuana Found in Truck; Today Stabenow Will Present Anti-Import Petitions to EPA Chief, Detroit News, Oct. 1, 2003, at B6.

^{474.} Hearing, supra note 465, at 43-44 (statement of Stephen E. Chester, Director, Michigan Department of Environmental Quality).

^{477.} See Newberry, supra note 37, at 46.

^{478.} Id.

nation's commercial LLRW.⁴⁷⁹ On the campaign trail, Governor Richard Riley promised to restore South Carolina's reputation by ensuring that Barnwell would not become the nation's only dumping ground for LLRW.⁴⁸⁰

Along with the governors of the other two sited states, Nevada and Washington, Governor Riley pushed Congress to enact the LLRWPA.⁴⁸¹ In the first hopeful years following the passage of the LLRWPA, most states set about finding compact partners. 482 Their progress, however, was deterred by several factors. negotiation process was much lengthier than anticipated as the LLRWPA did not prescribe any format for compact agreements. 483 States were still negotiating in 1985, perilously close to the January 1. 1986 deadline after which the sited compacts could exclude others from their facilities. 484 Second, the LLRWPA required all states to take the same steps to assume responsibility for the LLRW generated in their borders, but not all states generated enough LLRW to justify devoting their resources to comply with the law. 485 Third, LLRW production began to fall, dimming the need for new disposal sites. 486 Department of Energy ("DOE") published a report recommending six regional disposal sites for maximum efficiency. Seven compacts had already formed, however, prompting worries about overcapacity and site proliferation.⁴⁸⁷

By 1985, thirty-seven states had joined compacts. When Congress enacted the LLRWPAA, it also approved the first seven compact regions en masse: Central, Central Midwest, Midwest, Northeast (now called Atlantic), Northwest, Rocky Mountain, and Southeast. As LLRW management plans unfolded under the new law's requirements, some states left their original compacts to join other ones, or to become stand-alone states. Some of the states, in fact, were signatories to more than one compact when Congress approved the first seven compacts en masse.

^{479.} Id.

^{480.} See id. at 46-47.

^{481.} Id. at 47.

^{482.} See id. at 48.

^{483.} Id.

^{484.} See Mostaghel, supra note 36, at 396-97.

^{485.} Newberry, supra note 37, at 48.

^{486.} Id. at 49; see also U.S. NRC, Radioactive Waste, supra note 282, at 19.

^{487.} Newberry, *supra* note 37, at 49 (citing U.S. Dep't of Energy, Low-Level Radioactive Waste Policy Act Report: Response to Public Law 96-573 at 7 (1981)).

^{488.} See supra note 320 and accompanying text.

^{489.} See Omnibus Low-Level Radioactive Waste Interstate Compact Consent Act, Pub. L. No. 99-240, 99 Stat. 1859 (1986) (codified as amended at 42 U.S.C. 2021d note (2000); see also infra Table 1: Compacts Approved by Congress in 1986.

^{490.} See Newberry, supra note 37, at 50.

^{491.} *Id.* at 50-51, 55-56; *see also infra* Table 1: Compacts Approved By Congress in 1986, Table 2: Current Compacts and Member States.

^{492.} See Mostaghel, supra note 36, at 396-97; see also infra Table 1: Compacts

compacts at all.⁴⁹³ Congress later approved the Southwestern, Appalachian, and Texas Compacts, bringing the total number of compacts to ten.⁴⁹⁴

1. Siting Under the LLRWPA and the LLRWPAA

As the compacts formalized, each compact commission turned its attention to developing new LLRW disposal sites by 1993, the year when Barnwell, Beatty, and Richland could close their doors to outside LLRW. 495 None would succeed. Michigan, originally the host state for the Midwest Compact, tried to dodge its responsibilities by finding no need for disposal capacity since the other compacts were siting facilities. 496 California, the host state of the Southwest Compact, had almost succeeded in finding a site in Ward Valley, but was thwarted in the end by protests from environmental groups and an endangered species of desert tortoise.497 Nebraska, the host state for the Central Compact, had come close to siting a facility in Boyd County, but denied the site a permit because of political opposition.⁴⁹⁸ Its official reason was the facility's proximity to wetlands. 499 Texas also was very close to siting a LLRW disposal site in the Hudspeth County town of Sierra Blanca, but the permit was denied because of earthquake risks and environmental justice considerations. 500

Most of the compacts used a top-down approach to siting.⁵⁰¹

Approved By Congress in 1986 (listing the compacts approved in the Omnibus Low-Level Radioactive Waste Interstate Compact Consent Act).

493. See U.S. Nuclear Regulatory Commission, Low-Level Waste Compacts, at http://www.nrc.gov/waste/llw-disposal/compacts.html (last visited Apr. 5, 2004); see also infra Table 2: Current Compacts and Member States.

494. Low-Level Radioactive Waste Policy Amendments Act of 1985, Pub. L. No. 99-240, § 5(a)-(b), 99 Stat. 1842, 1846-47 (1986) (codified as amended at 42 U.S.C. § 2021e (2000)) (establishing the availability of LLRW disposal capacity at Barnwell, Richland and Beatty).

495. See Newberry, supra note 37, at 55 (describing attempts to find new sites); supra note 325 and accompanying text.

496. See Newberry, supra note 37, at 55-56.

497. US Ecology, Inc. v. United States Dep't of Interior, 231 F.3d 20, 23 (D.C. Cir. 2000) (referring to *Desert Tortoise v. Lujan*, a 1993 decision by the Northern District of California); see also Rabe et al., supra note 354, at 87.

498. Entergy, Ark., Inc. v. Nebraska, 241 F.3d 979, 983 (8th Cir. 2001). Nebraska was unhappy that it was chosen to host the LLRW disposal facility. *Id.* When U.S. Ecology, the private company chosen to find a disposal site, applied for a license, Nebraska required it to answer 700 questions before reviewing the application. *Id.* Ultimately, Nebraska denied the license after eight years and millions of dollars. *Id.* at 984.

499. Id. at 983.

500. Randy Lee Loftis, Panel Rejects Nuclear Dump in W. Texas; Earthquake Risk, Possible Harm to Residents Cited, Dallas Morning News, Oct. 23, 1998, at A1.

501. See Newberry, supra note 37, at 61; see also supra note 356 and accompanying text. Four of the ten compacts initially used a compensated siting process, but turned to the top-down approach when no states or communities volunteered. See Been, supra note 371, at 800-08.

Although such an approach was technically fair and used scientific and technological criteria to choose sites, the communities selected to host LLRW facilities were not pleased. The original six LLRW sites were chosen successfully using the top-down approach, but this preceded the anti-nuclear sentiment following the events at Three Mile Island and Chernobyl. Three of these sites were chosen personally by an entrepreneur, Frederick Beierle, using no technical criteria at all. Although siting had been more easily accomplished in the past, it usually resulted in damage to the environment because the site selectors gave little thought to the possibility of contamination or pollution of nearby natural resources. For example, the Richland site is located near the Columbia River and the Barnwell site is near the Savannah River, raising the risk of water contamination. Siting decisions were based on business considerations, expediency, so or even arbitrary personal preferences for certain locations.

Perhaps another factor that contributed to the failure of siting LLRW disposal facilities⁵¹⁰ was that the shallow land burial technique employed by disposal sites has not always been effective.⁵¹¹ The West Valley, Maxey Flats and Sheffield sites have all resulted in contamination.⁵¹² The environmental reputation of the original LLRW disposal sites negatively impacts the siting process by raising the perception of risk associated with such sites.⁵¹³ The lack of

^{502.} Newberry, supra note 37, at 63.

^{503.} Gerrard, Fear and Loathing, supra note 47, at 1138. Operating errors caused both the 1979 accident at the Three Mile Island nuclear plant in Pennsylvania and the 1986 explosion at the Chernobyl nuclear plant in the former Soviet Union. Malcolm W. Browne, In West, After Anxiety, No Major Technical Changes in Industry, N.Y. Times, Apr. 26, 1987, at 1. The Three Mile Island accident did not claim any lives, but many people were exposed to radiation, raising fears of cancer risks. Id. Thirty-one people died in the Chernobyl accident and many more were exposed to radiation. Id. Both of these accidents contributed to public fears of nuclear power. Id.

^{504.} Gerrard, Fear and Loathing, supra note 47, at 1092; Newberry, supra note 37, at 46

^{505.} Gerrard, Fear and Loathing, supra note 47, at 1093.

^{506.} See id. at 1091-93.

^{507.} *Id.* at 1090-91 (noting that developers considered "proximity to markets and materials, availability of labor, transportation, utilities and infrastructure, and low land and development costs" when making siting decisions).

^{508.} *Id.* at 1091-92 (describing how war time pressures allowed the development of a plutonium production facility on the banks of the Columbia River in Washington).

^{509.} *Id.* (pointing out that the Los Alamos National Laboratory was picked as a nuclear laboratory site because of its scenic view).

^{510.} See id. at 1137-46 (describing how nuclear disasters caused public opposition to siting radioactive waste facilities because of fear and mistrust).

^{511.} Branson, *supra* note 38, at 523-24.

^{512.} Id. The Richland and Beatty sites have experienced fewer problems because of their location in "arid regions." The Barnwell site has avoided problems by having "porous soil underlying the burial trenches" to allow water to drain out. Id. at 526 n.73.

^{513.} See Gerrard, Fear and Loathing, supra note 47, at 1137-46 (describing reasons for public opposition to siting radioactive waste facilities).

advances in technology may also hurt the siting process.⁵¹⁴ Although the LLRWPAA required the NRC to develop alternate disposal methods for LLRW,⁵¹⁵ disposal sites continue to use the same shallow land burial technique, which has not protected against contamination in the past.⁵¹⁶

2. Current Status of the LLRW Compact System

In the end, the Barnwell and Richland sites remained open.⁵¹⁷ In 1991, they were joined by the Envirocare of Utah, Inc. site, which received a license to accept the least hazardous type of LLRW at its hazardous waste facility.⁵¹⁸ Richland currently only accepts LLRW from the Northwest and Rocky Mountain Compacts.⁵¹⁹ Barnwell will accept LLRW from the rest of the nation until 2008 when it will only take waste from the Atlantic Compact.⁵²⁰

South Carolina joined the Atlantic Compact in 2000⁵²¹ after first being part of the Southeast Compact. In the Southeast Compact, North Carolina was to replace South Carolina as host of the region's LLRW disposal facility.⁵²² North Carolina, however, was never able to site a new facility and eventually withdrew from the Southeast Compact, fueling South Carolina's own withdrawal to become a stand-alone state.⁵²³ Surcharges at South Carolina's Barnwell site

516. U.S. NRC, Radioactive Waste, *supra* note 282, at 27 (noting that Barnwell and

Richland use shallow land burial technology).

518. Jo Mannies & Robert L. Koenig, New Utah Facility Offers Option for Waste at Lambert, St. Louis Post-Dispatch, May 17, 1991, at A3; see Charles Seabrook, Science Watch: The Leftovers Nobody Wants; Georgia Now Sends Its Low-Level Nuclear Wastes to South Carolina for Disposal, Atlanta J.-Const., Dec. 19, 1999, at C4 (noting that the Utah dump accepts only the least radioactive type of LLRW-Type A).

519. U.S. Nuclear Regulatory Commission, Locations of Low-Level Radioactive Waste Disposal Facilities, at http://www.nrc.gov/waste/llw-disposal/locations.html (last visited Apr. 5, 2004).

520. *Id*.

^{514.} See Branson, supra note 38, at 522, 524.

^{515. 42} U.S.C. § 2021h (2000).

^{517.} Id. at 26. Both are run by private operators: Chem-Nuclear runs the Barnwell site and U.S. Ecology runs the Richland site. Melita Marie Garza, ComEd May Be Left Holding Its Low-Level Nuclear Waste; Only Available Dump Expected to Reject It, Chi. Trib., May 24, 2000, at 1. The Richland site is located on a portion of the U.S. Department of Energy's Hanford site in Washington State. See Robert Reinhold, A Test Case for Nuclear Disposal, N.Y. Times, Jan. 24, 1994, at A8; Hanford Site Tours Website, at http://www.hanford.gov/tours/ecology.html (last visited Apr. 5, 2004). The NRC refers to the Washington site as Hanford. See U.S. Nuclear Regulatory Commission, Locations of Low-Level Radioactive Waste Disposal Facilities, at http://www.nrc.gov/waste/llw-disposal/locations.html (last visited Apr. 5, 2004).

^{521.} See Atlantic Interstate Low-Level Radioactive Waste Compact Implementation Act, S.C. Code Ann. §§ 48-46-10 to 48-46-90 (Law Co-op. Supp. 2003).

^{522.} Seabrook, supra note 518.

^{523.} Id.

have increased dramatically, from the cap of \$40 per cubic foot in 1992 under the LLWRPAA⁵²⁴ to over \$300 per cubic foot.⁵²⁵

The LLRWPA and its Amendments handed over the reins of the Garbage Wars to South Carolina, Nevada and Washington by giving them the ability to exclude LLRW from outside their regional compacts.⁵²⁶ It also, however, made the sited states wait to use this power until their fellow states had a chance to create new regional disposal sites through the interstate compact system. 527 LLRWPAA kept the facilities open to the nation until December 31. 1992, but allowed these states to add surcharges to their tipping fees starting in 1986.⁵²⁸ Although none of the compacts were able to site new facilities by the December 31, 1992 deadline, the sited states acted. The Beatty site closed its doors on December 31, 1992.⁵²⁹ The Richland site remained open only to compact states as of 1993.⁵³⁰ The Barnwell site was closed except to the Southeast Compact states in 1994.⁵³¹ By 1995, Barnwell was again open to the nation and withdrew from the Compact following North Carolina's reluctance to be the new host for a LLRW facility.532 The Barnwell site will again close its doors in 2008 to states outside the Atlantic Compact.⁵³³

Most of the compacts have halted their search for new disposal sites and continue to rely on the remaining open facilities.⁵³⁴ With the closing of Barnwell, states will need to find a new place to dispose of their LLRW since the Envirocare site in Utah only takes the least hazardous types of LLRW.⁵³⁵ States face inordinate pressure to find alternative solutions as half of the nation's nuclear power plants will be shut down in the next thirty years and their waste will have nowhere to go.⁵³⁶ States faced this dilemma before, when Barnwell

^{524.} Branson, supra note 38, at 535 (detailing the rates set out in the LLRWPAA).

^{525.} The Atlantic Interstate Low-Level Radioactive Waste Management Compact, SC Budget and Control Board Approves New Disposal Rates Effective June 1, 2003 (stating that rates range from \$250 to \$375 per cubic foot), available at http://www.atlanticcompact.org/rates.htm.

^{526.} See supra notes 317-18 and accompanying text.

^{527.} See supra note 325 and accompanying text.

^{528.} See supra note 326 and accompanying text.

^{529.} Julie Anderson, U.S. Ecology's Parent Calls Nevada Waste Site's Transfer a Success, Omaha World-Herald, Jan. 7, 1998, at 11.

^{530.} Tom Meersman, Waste Woes; NSP, Others Face Stockpiling of Material as Dumps Shut Down, Star Trib. (Minneapolis-St.Paul), July 4, 1994, at B1.

^{531.} Id.

^{532.} See Seabrook, supra note 518.

^{533.} See supra notes 520-21 and accompanying text.

^{534.} See Murray & Spence, supra note 77, at 95; Rabe et al., supra note 354, at 80.

^{535.} See supra note 518 and accompanying text. Envirocare is currently trying to get a license to accept all types of LLRW. See Seabrook, supra note 518.

^{536.} Janet Wilson & Seema Mehta, Nucleus of a Dilemma: Reactors Closing as Disposal Sites Wane, L.A. Times, Mar. 2, 2003, at B6.

shut down in 1994.⁵³⁷ They reacted by reducing the number of items that were exposed to radioactivity and by compacting debris.⁵³⁸

Now, generators of LLRW are preparing for on-site storage as a temporary stop-gap solution.⁵³⁹ States are also turning to private waste management businesses in the hopes that they will be able to successfully site new facilities where interstate compact commissions have failed.⁵⁴⁰ For example, Envirocare, a private waste management company, was able to become the newest LLRW facility in 1991 while the compacts were all unsuccessful in developing new facilities.⁵⁴¹ Texas is now pursuing the private development approach. After failing to site a LLRW facility in Sierra Blanca, Texas passed a bill in 2003 that authorized the creation of a privately-run LLRW dump under state license.⁵⁴²

The results of the LLRWPA and its Amendments have been rife with failure. In the twenty or so years since the laws were enacted, no new LLRW facilities have been developed through the oncepromising interstate compact system. The laws, however, did prevent the drastic scenario of having no LLRW disposal facilities. The Richland site still remains open and provides disposal capacity to two interstate compacts. The Barnwell site also remains open and provides disposal capacity to the rest of the nation until 2008. Thus, the laws merely postponed the LLRW disposal crisis by keeping facilities open rather than addressing the underlying problem of siting new facilities.

III. PREDICTING THE FUTURE OF INTERSTATE WASTE LAWS

Although the sited states were able to win the LLRW Garbage Wars by excluding other states from their disposal facilities, the victory was bittersweet. They still remained the dumping grounds of

^{537.} Garza, supra note 517.

^{538.} See Meersman, supra note 530.

^{539.} See id.

^{540.} See Newberry, supra note 37, at 58 (recommending private waste disposal site developers as being more effective than public developers). Private developers, such as the one in California, have generally been more successful at siting than states, but can still be thwarted by NIMBY activism. See id. at 58-59.

^{541.} Joby Warrick, A Dump's Murky Deals; Nuclear Waste Facility Paid Regulator, Wash. Post, Apr. 6, 1998, at A1. Envirocare, however, has been rocked by scandals such as fraud and employing an unlicensed engineer. See id.

^{542.} Matt Stiles, West Texas Sees a Waste Opportunity; Desperate for Jobs, Town Looks Past Hazards in Nuclear Dump Plan, Dallas Morning News, July 12, 2003, at A1 (describing Waste Control Specialists' efforts to court residents for its planned LLRW dump); Terrence Stutz, Senate Approves Dump, Sets Limit for Low-Level Radioactive Waste, Dallas Morning News, May 8, 2003, at A5 (describing passage of Texas bill allowing the creation of a privately-run LLRW dump). Compare Been, supra note 371, at 800-08 (describing how interstate compact commissions failed to site LLRW disposal sites even when using compensation plans).

the nation.⁵⁴³ Millions of dollars were spent and years were wasted in the search for new disposal sites, with no results.⁵⁴⁴ There was a small silver lining—states were forced to find alternatives for their LLRW, such as source reduction and compacting methods;⁵⁴⁵ in addition, the sited states could charge hefty surcharges for their troubles.⁵⁴⁶

The LLRW crisis sheds light on possible ways to approach states' concerns in the MSW crisis. It is a starker and more powerful crisis than MSW. LLRW, depending on its level of radioactivity, is extremely dangerous;⁵⁴⁷ the disposal sites are less technologically developed than MSW sites and must be monitored for hundreds of years. 548 What is more, there are only three disposal sites available. 549 MSW, in contrast, is not as feared.⁵⁵⁰ MSW disposal sites are numerous⁵⁵¹ and are constructed under strict standards promulgated by the EPA.552 Part III extracts lessons from the results of the LLRWPA and the LLRWPAA that can be used by states as they continue to wage the Garbage Wars in the search for legislation that will allow state control of interstate MSW flow. Part III then evaluates H.R. 418 and H.R. 1730, two interstate waste flow bills currently before the 108th Congress, using the lessons from the LLRW context.553 Lastly, Part III proposes interstate waste flow legislation that incorporates the lessons from the LLRWPA and LLRWPAA, and applies such legislation to the modern American waste disposal crisis.

A. Lessons from the LLRWPA and LLRWPAA

The LLRWPA and its Amendments provide valuable insight for future congressional solutions to the Garbage Wars. Specifically, the aftermath of these laws highlight the need to address siting problems, the role of state pride and equity in waste disposal wars, and the desirability of alternative disposal methods.

^{543.} See supra notes 517-20 and accompanying text.

^{544.} See supra notes 495-500 and accompanying text.

^{545.} See supra note 538 and accompanying text. This may, however, have been at the expense of medical research. See O'Toole, supra note 306.

^{546.} See supra notes 524-25 and accompanying text.

^{547.} See supra notes 298-99 and accompanying text.

^{548.} See supra notes 300-01 and accompanying text.

^{549.} See supra notes 517-20 and accompanying text.

^{550.} See Ain, supra note 63 (describing a town's willingness to open up an old MSW landfill for reclamation).

^{551.} See Weinberg, supra note 86, at 58 (noting that despite landfill closures, 364 new landfills opened between 1986 and 1991).

^{552.} See supra notes 74, 78 and accompanying text.

^{553.} See *supra* Part II.A.2. for a summary of the provisions of H.R. 418 and H.R. 1730.

1. The Problem of Siting

The most striking dilemma that followed the enactment of the LLRWPA and its Amendments was the problem of siting.⁵⁵⁴ Although each regional compact and some of the unaffiliated states took steps to follow the directive of the LLRWPAA to site new facilities, none of them were ultimately successful because of powerful opposition from communities, state governments, and environmental groups.⁵⁵⁵ Despite the law's attempt to get around NIMBY by requiring states to take responsibility for their LLRW, NIMBY popped up in a different context. Rather than a national NIMBY, the phenomenon occurred on a smaller scale, such as within a regional compact (e.g., the Central and Southeast Compacts), or within a state (e.g., California and Texas).⁵⁵⁶

The top-down approach⁵⁵⁷ that states used for siting LLRW facilities also contributed to the failure of the LLRWPAA to develop new disposal capacity. Such an approach triggers territoriality instincts,⁵⁵⁸ and raises barriers between developers and communities that prevent the creation of workable solutions for needed facilities. The current move to private solutions is a step in the right direction, as a private developer can more successfully work with communities through the compensated siting mechanism.⁵⁵⁹

The modern siting process (using the public participation model and compensation schemes), although often unsuccessful, 560 is still better than the method used to site the original six LLRW facilities.⁵⁶¹ Those without considering facilities were sited environmental impacts, and led to disastrous leaking contamination.⁵⁶² The long period of time needed to site facilities, however, increases the negative environmental impacts from older and less safely constructed waste disposal sites while the nation waits for newer, safer disposal options.⁵⁶³

559. See supra notes 540-42 and accompanying text.

^{554.} See supra note 333 and accompanying text (describing how the LLRWPA and its Amendments failed to create more disposal capacity).

^{555.} See supra notes 496-500 and accompanying text. 556. See supra notes 496-500 and accompanying text.

^{557.} See supra note 501 and accompanying text.

^{558.} See supra Part I.D.3.

^{560.} See Been, supra note 371, at 824 (noting that while "[n]o compensated siting program has been a 'success' in getting LULUs sited... neither has any other siting program").

^{561.} See *supra* notes 503-09 and accompanying text for a discussion of the top-down method as used for nuclear facilities.

^{562.} See supra notes 503-12 and accompanying text.

^{563.} Gerrard, Fear and Loathing, supra note 47, at 1052.

2. State Pride and National Equity

State pride and equity issues were the impetus for the LLRPWA and its Amendments.⁵⁶⁴ South Carolina, Nevada and Washington, the three states with LLRW disposal sites, did not want to be the nuclear dumping grounds for the nation.⁵⁶⁵ By threatening to shut down their disposal facilities, they were granted the power to control LLRW imports through an interstate compact system.⁵⁶⁶ Congress addressed the state pride issue by leaving the structure of the compact system entirely up to the states, allowing them to make individual choices about siting new facilities.⁵⁶⁷ Congress addressed the equity issue by delegating responsibility to each state for its own waste.⁵⁶⁸

Paradoxically, both state pride and equity contributed to the downfall of the compact system. None of the other states wanted to be dumping grounds either, and the chosen host states, such as Michigan, North Carolina, and Nebraska, proved reluctant to fulfill their duties under the compact agreements.⁵⁶⁹ This was not only a phenomenon at the national and regional levels, but also at the state level. California and Texas made good faith efforts to find new LLRW disposal sites, but were thwarted in the final stages of the siting process because of opposition from environmental groups and communities.⁵⁷⁰

Congress, however, may not have succeeded if it had taken the opposite approach and dictated the placement of new regional facilities, as it did for HLRW.⁵⁷¹ Congress selected the Yucca Mountain site as the nation's sole repository for HLRW in the 1980s, but the site has not yet opened due to public outcry over safety and environmental impacts.⁵⁷² Despite the Yucca Mountain project's current difficulties resulting from Congress's high-handed approach to siting for HLRW, Congress could still have adopted measures to ease the path for states to work together cooperatively to develop disposal capacity for LLRW.⁵⁷³

The compact system took some time to get off the ground because of lengthy negotiations.⁵⁷⁴ Congress could have provided some guidance to states by creating uniform standards for compact

^{564.} See supra notes 302-14 and accompanying text.

^{565.} See supra note 306 and accompanying text.

^{566.} See supra notes 312-14 and accompanying text.

^{567.} See supra note 319 and accompanying text.

^{568.} See supra note 315 and accompanying text.

^{569.} See supra notes 496, 498, 522-23 and accompanying text.

^{570.} See supra notes 497, 500 and accompanying text.

^{571.} See supra notes 289-90 and accompanying text.

^{572.} See supra notes 289-91 and accompanying text.

^{573.} See Newberry, supra note 37, at 48.

^{574.} See supra notes 483-84 and accompanying text.

agreements.⁵⁷⁵ In addition, Congress could have preemptively anticipated NIMBY problems by encouraging states to be more open about the site selection process and educating the public about LLRW.⁵⁷⁶ After all, anti-nuclear sentiment and the perceived risks from LLRW blocked the development of new sites under the top-down selection model.⁵⁷⁷

3. Alternative Solutions

The lack of new disposal capacity, combined with the ability of states to exclude outside LLRW under the LLRWPA and its Amendments, encouraged states to embrace alternative disposal methods. LLRW generators scrambled to find creative ways to deal with their waste when the sited states were finally able to exclude out-of-state LLRW.⁵⁷⁸ They cut down on the amount of material that was exposed to radioactivity and compacted waste to reduce volume.⁵⁷⁹ In contrast, the LLRWPAA provisions for the NRC to develop alternative disposal methods failed.⁵⁸⁰

Because the Barnwell site will soon be closed to states outside the Northeast Compact,⁵⁸¹ states are finding new ways to approach the siting process. States such as Texas are now seeking private solutions.⁵⁸² By hiring a private business to find new disposal sites rather than giving the responsibility to an unwilling host state, compacts can avoid some of the state pride and equity issues that blocked previous siting efforts.⁵⁸³

These three lessons shed some light on what legislators should consider in proposing new laws that would allow states to control interstate MSW. As the LLRWPA and its Amendments show, gaining the power to exclude waste imports by itself will not be a satisfactory way for importing states to win the Garbage Wars. Underlying issues such as siting, equity, and disposal alternatives must also be addressed. In Parts III.B. and III.C., this Note analyzes H.R. 418 and H.R. 1730, recent interstate waste bills in front of the 108th Congress, for their utilization of these principles.

^{575.} See Newberry, supra note 37, at 48 (noting that the LLRWPA "did not require any particular configuration" for compacts).

^{576.} See Gerrard, Fear and Loathing, supra note 47, at 1146-51.

^{577.} See supra notes 501-16 and accompanying text.

^{578.} See supra notes 536-40 and accompanying text.

^{579.} See Gerrard, Fear and Loathing, supra note 47, at 1189 (finding that the increased price of LLRW disposal has cut LLRW generation by more than half).

^{580. 42} U.S.C. § 2021h (2000); see also supra text accompanying notes 515-16.

^{581.} See supra note 520 and accompanying text.

^{582.} See supra note 542 and accompanying text.

^{583.} See Newberry, supra note 37, at 58 (noting that private companies were in a better position to work with the public to site facilities).

B. Assessing H.R. 418

H.R. 418 would give states with approved waste management plans the ability to exclude MSW imports.⁵⁸⁴ This provision is similar to the measure in the LLRWPA that gives states the freedom to create their own arrangements under an interstate compact system.⁵⁸⁵ Under H.R. 418, however, each state would represent one compact region.⁵⁸⁶ As with the LLRW compact system, importing states may be afraid that if their waste management plan is not approved, they could become the next dumping ground for the nation. Thus, importing states will likely try to get approval for their plans as soon as possible, in a race to exclude their fellow states. The prohibition on MSW imports is likely to be reciprocated, making states responsible for their own waste since they will only be able to dispose of it in-state. The onus will be on states to site new landfills when their current disposal space becomes full.

Banning or severely limiting MSW imports may have an unwanted side effect. Many of the larger, newer regional landfills are developed by private businesses, and depend on large volumes of waste from other states to remain operational. These companies will no longer want to find sites in states that place stringent controls on interstate waste flow. States will thus have to develop their own landfills and face the NIMBY issue on a smaller, more local scale. This provision of H.R. 418 could pit sited communities against the rest of their state, raising issues of territoriality and equity. This will be especially problematic for exporting states, which are usually more densely populated than importing states and have less space available for landfills.

H.R. 418's second provision promotes alternative disposal methods for MSW.⁵⁸⁹ The LLRWPAA contained a similar provision to promote alternatives to shallow land burial for LLRW.⁵⁹⁰ This provision, however, had little effect and disposal sites continue to use

^{584.} See supra note 444 and accompanying text.

^{585.} See *supra* notes 315-18 and accompanying text for a summary of the interstate compact system.

^{586.} See supra note 316 and accompanying text (allowing compacts to form between several states).

^{587.} See supra notes 241-42 and accompanying text.

^{588.} See supra Part I.B. (detailing several cases where waste management companies brought suit to invalidate state laws controlling interstate waste flow because such laws hurt their businesses).

^{589.} In the MSW context, several alternative disposal methods have already been developed, including source reduction, recycling, and composting. See U.S. EPA, MSW 2000, supra note 33, at 105 (listing source reduction, recycling, and composting as alternatives to incineration and landfilling).

^{590. 42} U.S.C. § 2021h (2000).

the shallow land burial technique.⁵⁹¹ Rather, states turned to alternative disposal methods for LLRW only out of necessity. 592

Alternative disposal methods cannot handle an entire state's waste stream alone. For example, only 26.7% of MSW was recycled in For LLRW, alternative disposal methods also did not eliminate the need for disposal capacity. LLRW generators were able to reduce the amount of material that needed disposal, but also had to use on-site storage as a temporary measure while waiting for new LLRW disposal sites to open. 594

H.R. 418, thus, would fall into the same pitfalls as the LLRWPA. By allowing states to ban MSW imports, the bill creates national equity. At the same time, however, H.R. 418 exacerbates the MSW crisis by requiring states to site their own landfills at a substantial cost. and in the face of more local NIMBYs. The alternative disposal method provision of H.R. 418 is laudable for its forward-thinking qualities, but it cannot be a complete solution on its own. Alternatives to land disposal do not erase the need for new landfill space, and states will not adopt new disposal methods until absolutely necessary. Ultimately, H.R. 418 fails because it does not adequately address the siting problem.

C. Assessing H.R. 1730

H.R. 1730 gives states the ability to ban out-of-state waste, but avoids the problems arising in H.R. 418 by providing two exceptions. First, the bill would allow landfills sited under host agreements to accept out-of-state MSW. Under this exception, private waste management companies would be encouraged to develop large regional facilities because they would be able to receive enough waste to function.⁵⁹⁵ This approach promotes the use of compensated siting, one of the more successful techniques in siting.⁵⁹⁶ Because the communities volunteer to host the landfill, there is no issue of community pride. The community's willingness to participate indicates that there is no perception of an unfair burden.

Another provision of H.R. 1730 would give states the ability to cap the amount of out-of-state waste accepted by each landfill in three different ways.⁵⁹⁷ If a state has a comprehensive recycling program, it

^{591.} See supra text accompanying notes 515-16.

^{592.} See supra notes 536-38 and accompanying text. 593. Scott M. Kaufman et al., The State of Garbage in America, BioCycle, Jan. 2004, at 31, 36.

^{594.} See supra note 539 and accompanying text.

^{595.} See supra notes 587-88 and accompanying text (analyzing the impact on private landfill developers under H.R. 418).

^{596.} See Been, supra note 371, at 791.

^{597.} See supra notes 456-61 and accompanying text.

can cap the amount of out-of-state MSW to 1995 levels.⁵⁹⁸ This provides an incentive for states to recycle. The incentive, however, may be minimal, as states can add a percentage cap as a provision in its permit or can cap at 1993 levels for facilities that had been receiving out-of-state waste before the enactment of the bill.⁵⁹⁹ Under the percentage cap provision, the cap ensures that facilities cannot primarily accept out-of-state waste. The cap may even cause waste management companies to spread out-of-state waste between several of their landfills for a more equitable distribution. The caps, however, may unintentionally prohibit regional landfills, similar to the scenario in *Gilmore*.⁶⁰⁰ If the effect is too draconian, landfill developers may choose not to site regional landfills in that state. Thus, the problem of siting may still exist at the state level.

Lastly, H.R. 1730 allows states to add a cost recovery surcharge to their tipping fees. The surcharge is capped at \$2 per ton. As Chief Justice Rehnquist noted in *Oregon Waste Systems*, which had a similarly low surcharge of \$2.25 per ton, the surcharge is a small price to pay for garbage disposal. This surcharge allows states to make MSW importers pay their fair share and addresses equity concerns.

H.R. 1730 thus addresses all three of the issues that arose under LLRWPA and its Amendments. The bill anticipates the siting dilemma by encouraging voluntary, compensated siting arrangements by private waste management companies. The bill addresses the pride issue by giving communities the choice of whether they would like to host a landfill and thus voluntarily accept the attendant risks and reputation. The bill also considers equity issues by providing for caps on out-of-state waste and allowing cost recovery surcharges. It also encourages the development of recycling programs, although the incentive behind this provision is weak because states can use other methods to cap MSW imports besides establishing recycling programs.

H.R. 1730, however, has two main weaknesses. First, if there are no volunteers to host MSW facilities, the bill's provisions for compensated siting will be for naught.⁶⁰³ The bill's cap and permit provisions also undermine the bill's ability to fully address these three issues by allowing overly stringent limits on interstate waste flow⁶⁰⁴

^{598.} See supra note 457 and accompanying text (discussing the cap provision under H.R. 1730).

^{599.} See supra notes 458-59 and accompanying text.

^{600.} See supra text accompanying notes 229-54 (describing the landfill cap provision in Gilmore).

^{601.} See supra note 463 and accompanying text.

^{602.} Or. Waste Sys., Inc. v. Dep't of Envtl. Quality, 511 U.S. 93, 109 (1994) (Rehnquist, C.J., dissenting).

^{603.} See supra note 386 and accompanying text.

^{604.} Hearing, supra note 465, at 141 (statement of Robert Orlin, Deputy Commissioner, New York City Sanitation Department) (describing how H.R. 1730 places restrictions on host agreements through the cap provision and permit requirements).

despite statutory language prohibiting the cap from discriminating against MSW based on its origin⁶⁰⁵ and conflicting with host agreements.⁶⁰⁶ Thus, H.R. 1730 can still create siting problems at the local level.⁶⁰⁷

D. Proposing New Interstate Waste Flow Legislation

A workable interstate waste flow bill needs to address the siting issue, first and foremost. This reverses the approach taken by the LLRWPA and the LLRWPAA, in which Congress catered to state concerns.⁶⁰⁸ By addressing siting first, the proposed bill will also target the state pride and alternative disposal method issues.

The proposed bill should encourage private development of regional facilities and compensated siting by allowing host agreements. Although this approach failed due to lack of volunteers in the LLRW context, 609 it is more promising than the top-down approach. Unlike H.R. 1730, the proposed bill should provide that host agreements cannot be fettered by caps on the amount of waste that can be received from out-of-state. States, however, will be unhappy with this provision because they will not be able to control the waste inflow of hosted facilities. In the dormant Commerce Clause cases, states passed laws to control the behavior of the private waste management companies that developed regional facilities because such facilities received the bulk of out-of-state waste. 610

To address states' desires to control interstate waste flow, states should be allowed to ban or limit MSW from publicly owned and operated landfills, tracking the market participant exception to the dormant Commerce Clause. In addition, the private development schemes should involve states as well as local communities and environmental groups. In the LLRW context, the compensated siting approach failed because states, communities, and environmental groups successfully fought the plans of private companies seeking to develop waste facilities. Giving these parties a voice in the process may help combat the territoriality instinct by allowing discussion about the health benefits of more modern, safer landfills built to higher environmental standards, as well as the economic benefits from newly created jobs. G12

^{605.} See supra text accompanying note 461.

^{606.} See supra text accompanying note 460.

^{607.} See supra note 556 and accompanying text.

^{608.} See supra text accompanying note 319.

^{609.} See supra note 386 and accompanying text.

^{610.} See supra Part I.B.

^{611.} See supra notes 496-500 and accompanying text.

^{612.} See Gerrard, Fear and Loathing, supra note 47, at 1122, 1146-49, 1152 (describing the harm caused by "old, substandard" facilities and explaining ways to reduce public opposition to siting).

To address state territoriality, the proposed bill should include uniform national provisions to govern the host agreement process. A standardized process will allow communities and states to make sure that host agreements are fair. Standardization will deter states from abusing their regulatory powers while also allowing them to have a role in the siting process.

In addition, the proposed bill should provide information to the public about the type and amounts of waste that are being imported and exported. If states see that they are not the only dumping grounds because they export their hazardous waste to another state, but receive MSW from out-of-state, their perceptions of inequity will diminish. States may also feel mollified if they compared the amount of MSW flowing in from out-of-state to the amount of MSW generated in-state. If the waste going into landfills mainly comes from in-state, then the perception of inequity lessens.

Lastly, the proposed bill should encourage states to use alternative disposal methods. The best way to achieve this goal is to allow states to raise tipping fees. In the LLRW and hazardous waste contexts. raising tipping fees encouraged waste generators to turn to disposal alternatives. States, however, should not be allowed to raise fees with the practical effect of banning imported MSW. Allowing this effect would lead to the result of the LLRWPA and its Amendments by merely postponing the seriousness of disposal problem until the blockaded landfill becomes full. Instead, the proposed bill should allow states to uniformly raise the price of MSW land disposal, perhaps capped by increments set out in the bill. The fee⁶¹⁴ can be used to fund the development of alternative waste disposal Although this fee would make waste disposal more expensive overall, such a fee would be equitable because it would be applied uniformly to the nation. This fee, however, may not be effective if a state's existing tipping fee is already low.

The proposed bill starts by targeting siting and contains more finely tuned provisions to address state pride, equity, and disposal alternatives. By supporting compensated siting and giving states the power to administer standardized siting regulations and raise tipping fees, the bill acknowledges state pride concerns, while still placing emphasis on the primary problem of siting. Like other proposed laws, this bill still remains vulnerable to a state's instinct of territoriality. To address this issue, the proposed bill uses education to counter misperceptions of inequity.

^{613.} See supra notes 399-402 and accompanying text.

^{614.} See supra note 353 and accompanying text.

^{615.} Such a fee-based incentive can also create the impetus for states to turn to alternative disposal methods. See supra Part III.A.3. and text accompanying notes 589-94.

E. Caveat: Why the MSW Scenario May Be Different

In the end, the dire results of the LLRWPA and its Amendments do not necessitate a gloomy future for interstate MSW. There are several differences between MSW and LLRW that may make state control of interstate MSW a success. First, LLRW involved only state players until 1991 when Envirocare of Utah, Inc. came on the scene. The compacts have only recently turned to private players to help manage LLRW disposal. MSW, on the other hand, already involves private players. The dormant Commerce Clause cases indicate that a large amount of out-of-state waste is disposed of at large privately owned and operated regional facilities, and control over interstate waste imports will disproportionately affect the owners of those larger facilities.

Second, MSW is much less feared than LLRW—thus, siting an MSW landfill is easier. LLRW must be isolated for hundreds of years or more, making it a much more expensive and long-term waste. MSW landfills, on the other hand, can be reused as golf courses, parks and other kinds of attractive spaces. Furthermore, the technology for MSW landfills has improved over time. LLRW disposal, in contrast, still uses the shallow land burial technique that has historically been unsuccessful in protecting against radioactive contamination of groundwater.

Third, nearly every state has MSW landfills.⁶²² In the LLRW scenario, only three states had disposal sites, and only six facilities in total were necessary.⁶²³ Thus, it was difficult to satisfy the demands of equity because the great majority of the states would not be burdened by a nuclear waste dump.⁶²⁴ To further assuage equity concerns, many states have environmental justice statutes that may help ensure a fairer siting process within the state.⁶²⁵

^{616.} Although it would seem that state players would fall under the market participant exception, the Ninth Circuit dismissed this argument in *Spellman*. Because the prohibition in that case was designed to stop LLRW at Washington's borders, and not from the specific disposal site, it was market regulating rather than participatory. Wash. State Bldg. & Constr. Trades Council v. Spellman, 684 F.2d 627, 631 (9th Cir. 1982).

^{617.} See supra Part I.B.1.-6.

^{618.} See supra note 300 and accompanying text.

^{619.} Alexander, supra note 1, at 156.

^{620.} See supra notes 69-79 and accompanying text.

^{621.} See supra note 516 and accompanying text.

^{622.} Nora Goldstein & Celeste Madtes, *The State of Garbage in America*, BioCycle, Dec. 2001, at 42, 48. The District of Columbia lacks its own landfill and information on the number of landfills in Montana was unavailable. *Id.*

^{623.} See Newberry, supra note 37, at 49.

^{624.} See Gerrard, Fear and Loathing, supra note 47, at 1206 (describing how the free rider problem was a major reason for the failure of siting for LLRW disposal).

^{625.} See supra note 376 and accompanying text.

CONCLUSION

Throughout the ages, waste disposal crises have continually plagued civilizations. The modern American waste disposal crisis stems from worries about dwindling disposal capacity, as well as issues of state pride, health, environmental protection, and equity. Prodded by the regionalization of the waste disposal market, the current crisis gave rise to the Garbage Wars. This series of contentious brawls between garbage-importing and garbage-exporting states has to date been fought in state legislatures and the courts. Importing states have long attempted to gain control over interstate MSW flow by enacting state laws that ban or limit MSW imports. Courts, however, have consistently struck down such measures under the rubric of the dormant Commerce Clause.

In the analogous LLRW crisis, Congress granted states the authority to control interstate LLRW waste flow through a regional compact system under the LLRWPA and its Amendments. Although this move forestalled a LLRW version of the Garbage Wars, it did not remove the conflict. The battles merely shifted to more local arenas, such as states within regional compacts and communities within the states picked to host LLRW disposal sites. Although the LLRWPA and its Amendments did not abate the crisis, they did marginally benefit states by forcing them to turn to alternative disposal methods such as source reduction.

The LLRW saga suggests that importing states should not yet be granted the victor's prize. Until states can adequately address the difficulties of siting, any congressionally sanctioned scheme that gives them the ability to exclude out-of-state MSW will likely fail. A more workable solution may be to provide states with information that counters their perceptions of being a dumping ground for the rest of the nation, and to give states a limited role in the siting of regional facilities. To truly win the Garbage Wars, states must also turn to alternative disposal methods such as source reduction, recycling, and composting to address the waste disposal crisis head-on.

Table 1: Compacts Approved By Congress in 1986

(Source: Omnibus Low-Level Radioactive Waste Interstate Compact Consent Act, Pub. L. No. 99-240, 99 Stat. 1859 (1986))

COMPACT NAME	MEMBER STATES	
Central	Arkansas	Missouri (also in Midwest)
	Iowa (also in Midwest)	Nebraska
	Louisiana	North Dakota
	Minnesota (also in Midwest)	Oklahoma
Central	Illinois	Kentucky
Midwest		
Midwest	Indiana	Minnesota (also in Central)
	Michigan	Missouri (also in Central)
	Ohio	Wisconsin
	Iowa (also in Central)	
Northeast	Connecticut	Maryland
(Atlantic)	Delaware	New Jersey
	Alaska	Oregon
		Utah (also in Rocky
Northwest	Hawaii	Mountain)
Northwest	Idaho	Washington
		Wyoming (also in Rocky
	Montana	Mountain)
	Arizona	New Mexico
Rocky Mountain	Colorado	Utah (also in Northwest)
		Wyoming (also in
	Nevada	Northwest)
Southeast	Alabama	North Carolina
	Florida	South Carolina
	Georgia	Tennessee
	Mississippi	Virginia
Unaffiliated	California	Pennsylvania
	District of Columbia	Rhode Island
	Kansas	South Dakota
	Maine	Texas
	Massachusetts	Vermont
	New Hampshire	West Virginia
	New York	

Table 2: Current Compacts and Member States

(Source: NRC, Low-Level Waste Compacts (2000), available at http://www.nrc.gov/waste/llw-disposal/compacts.html)

COMPACT NAME	MEMBER STATES	
Appalachian	Delaware Maryland	Pennsylvania (host state) West Virginia
Central	Arkansas Kansas Louisiana Nebraska (membership	Oklahoma
	revoked) Illinois (host state)	<u> </u>
Midwest	Kentucky	
Midwest	Indiana Iowa Minnesota	Missouri Ohio Wisconsin
Northeast (Atlantic)	Connecticut (host state) New Jersey (host state) South Carolina	
Northwest	Alaska Hawaii Idaho Montana	Oregon Utah Washington (host state) Wyoming
Rocky Mountain	Colorado Nevada New Mexico	
Southeast	Alabama Florida Georgia	Tennessee Virginia
Southwestern	Arizona California (host state) North Dakota South Dakota	
Texas	Maine Texas Vermont	
Unaffiliated	District of Columbia Massachusetts (will host) Michigan (will host) New Hampshire	New York (will host) Puerto Rico North Carolina (will host)

Notes & Observations