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An Analysis of Competition in Collection and Disposal of Solid Waste in Maine

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MAINE ATTORNEY GENERAL

**An Analysis of Competition in Collection and Disposal of
Solid Waste in Maine**

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An Analysis of Competition in Collection and Disposal of Solid Waste in Maine

Executive Summary and Policy Recommendations

The Attorney General's Office, with assistance from the University of Maine Margaret Chase Smith Center for Public Policy, prepared this report to assess the state of competition in Maine's solid waste management industry and to examine factors that will affect competition in the future. The report identifies three policy steps to assure robust competition in the industry.

Our key findings about the state of competition in Maine's solid waste management industry are:

- There has been significant consolidation in Maine, as in the rest of the U.S. Maine's solid waste management industry has changed dramatically in the past 15 years. Environmental restrictions have closed the old municipal open dumps. To meet new environmental requirements, disposal facilities are now much larger and commercial disposal capacity has become a large part of total disposal capacity. There has been substantial consolidation in the collection and hauling of solid waste, and most of this consolidation has been by vertically integrated firms. The changes in Maine's solid waste industry mirror virtually identical national changes. This consolidation in the solid waste industry has raised concerns in Maine, in other states and at the national level that competition in various aspects of solid waste management may be diminished.
- Maine's ban on new commercial landfills reduces potential competition. In 1989, Maine enacted a ban on new commercial solid waste landfills. This ban was enacted

because Maine did not want to become a “dumping ground” for waste from New England and the northeastern U.S. While the ban may reduce out-of-state waste disposal in Maine, the two existing commercial landfills are insulated from the threat of competitive entry by the ban. With a protected position in disposal, commercial landfills may be able to raise disposal fees or, through vertical integration, to reduce competition in collection and hauling. Waste management policy in Maine has not carefully considered the potential for the ban to reduce competition in the industry.

- Disposal fees have been stabilized by adequate national disposal capacity, but Maine fees have increased in late 1990s. National waste disposal fees increased in the 1980s and early 1990s as old, inexpensive open dumps were replaced with modern, more environmentally engineered and expensive landfills. There was widespread concern that a shortage in waste disposal capacity, caused by the inability to site new landfills, would increase disposal fees dramatically. The problem was expected to be especially severe in New England and the northeast. The siting of very large landfills and the reduction in the rate of growth in the demand for waste disposal has meant that the expected crisis has not occurred. National disposal fees have stabilized in the late 1990s. New England and Maine fees remain well above national fees. Although there are a number of limitations in the available data, the evidence indicates that Maine and New Hampshire fees have increased in the late 1990s, in contrast with national fees.
- Out-of-state competition is not an adequate restraint on Maine’s disposal prices. The high cost of moving trash insulates in-state disposal sites from interstate competition to a significant degree. The cost of moving solid waste is on the order of \$.10 per ton

per mile. If the nearest competitive disposal facility is 200 to 300 miles away, the local disposal site can raise fees \$20.00 to \$30.00 per ton above the distant competitor.

There is reason to be concerned that out-of-state competition is weakening. Of the nearest five disposal sites in New Hampshire, four are operated by the same two firms that operate commercial disposal sites in Maine. Furthermore, New Hampshire has recently convinced its largest landfill (Turnkey, operated by Waste Management) to substantially reduce imports of out-of-state waste. New Hampshire disposal prices increased 15% to 36% during 1997-99.

Competition from New Brunswick disposal is limited by provincial policy that allows landfills to accept only waste from Washington County and some parts of Aroostook County.

- Entry of new state or municipal landfill capacity is a key issue for competition.
Because distance insulates disposal sites from out-of-state competition, competition within the state is very important. In-state competition for the two commercial landfills is essentially competition from municipal facilities. The alternatives to commercial landfills are: one waste-to-energy incinerator owned by one of the commercial landfill owners; one independent commercial incinerator with close ties to a municipal group; two municipal waste-to-energy plants; 7 municipal landfills for municipal solid waste (MSW); and 24 municipal landfills for construction and demolition debris (CDD). Because of the ban on new commercial facilities, new competition will be state or municipal capacity.

The capacity for MSW and incinerator ash disposal in Maine is roughly in line with current volumes generated, and this rough balance should continue for approximately ten years. The current adequacy of disposal capacity does not mean that Maine can ignore the difficult issue of siting new landfill capacity for the present. There are several reasons to be concerned now. First, the stream of construction debris and bulky goods is growing. These items cannot be incinerated, so they must go to landfills. There is evidence of upward pressure on CDD disposal fees at least in some parts of the state. Second, the options for disposal of incinerator ash and front-end process residue (FEPR) are more limited. The two commercial landfills provide a much larger share of disposal capacity for ash and FEPR than they do for MSW. Third, it takes several years to site a new landfill. Making decisions in advance of a crisis is likely to avoid costly mistakes. Fourth, the closure of even one major disposal facility in Maine could put very significant pressure on prices.

The threat of opening a state owned landfill probably does not constrain current market behavior by disposal sites. The proposed Carpenter Ridge site is remote from population centers. Under the current statute, legislative action to open that site will not be considered until only four years of capacity remain elsewhere in the state.

New capacity will almost certainly be in the form of landfills. Additional entry of waste-to-energy plants is very unlikely. Unless fees in competitive wholesale electric markets rise substantially above current levels, waste-to-energy plants will have great difficulty achieving disposal costs that are competitive with new landfill capacity.

- There is no clear economic rationale for the substantial consolidation in collection and hauling. The national waste management industry typically suggests that the consolidation in collection and hauling is driven by economies of scale in collection. There are some modest economies of scale in collection, but these modest economies do not explain the emergence of large national and multi-state firms. Critics of the industry, on the other hand, suggest that the consolidation is driven by the objective of extending the market power of scarce landfill facilities into collection and hauling.
- Evergreen contracts restrict the ease of entry into collection. Collection and hauling is a trucking business. Entry at an efficient scale might require something like seven to eight trucks and several hundred containers (also known as 'dumpsters'). This investment is not a serious barrier to entry. But the "evergreen contracts" used in the industry do make it difficult for a new entrant to attain sufficient scale and density of routes to compete efficiently. Evergreen contracts are self-renewing commercial hauling contracts with onerous notice, termination and first refusal provisions. Action to restrict evergreen contracts has been a key feature of federal and state antitrust enforcement actions.

This assessment of competition in the waste management industry leads us to make the following three policy recommendations. The first recommendation addresses competition in collection markets; the last two address pricing in disposal markets.

Recommendation 1: That legislation be enacted to restrict small container commercial contracts by:

- (i) **requiring contracts to be clearly identified as contracts and to be easily readable;**

- (ii) prohibiting so-called “first refusal” or “right-to-compete” clauses that require that the incumbent hauler be provided notice of and/or an opportunity to match a new entrant’s offer;**
- (iii) requiring that small container commercial contracts permit customers to terminate such contracts on 30 days notice by mail, fax, or e-mail;**
- (iv) requiring such contracts to limit the financial charge for early termination of the contract to the lesser of Seventy-Five Dollars (\$75) or two times the current monthly charge or two times the average monthly charge over the most recent six month period;**
- (v) allowing collection companies to submit bids that would otherwise violate requirements (iii) and (iv) where competitive bid specifications by the customer request such terms, and then to enforce the resulting contract; and**
- (vii.) declaring inconsistent provisions in existing contracts unenforceable.**

The best protection for competition in the collection sector of the waste industry is the threat of new entry. The investment required to enter the collection industry is modest, but restrictive evergreen contracts make it difficult for new entrants to achieve the route density required to attain competitive costs. By removing this barrier to entry, the state can rely on competition to protect consumers. The proposed restrictions are those to which Casella is subject in Maine’s nine northern and easternmost counties under the terms of a merger consent decree negotiated with the Maine Attorney General.

The last two recommendations are steps to incorporate pricing and competition into state disposal capacity policy.

Recommendation 2: That the State Planning Office expand its current data collection to gather more detailed disposal fee information. This recommendation would require some changes in data collection by the State Planning Office. It

would also require legislative authority to collect revenue data from landfills, which creates a requirement analogous to one now imposed on incinerators. Further, we recommend that the five-year solid waste management plans and the biennial disposal capacity reports by the State Planning Office include analyses of how capacity changes are likely to impact prices. That analysis should assess whether existing commercial disposal facilities are likely to earn windfall profits as disposal capacity declines.

The State Planning Office currently collects some information on disposal costs from municipalities and from incinerators, but the resultant information is not sufficient for policy development on disposal pricing. For the municipal survey, we recommend that specific per-ton disposal costs for MSW, CDD, bulky goods, and tires be collected. We also recommend that the statute that requires submission of disposal tonnages and revenues by incinerators be expanded to require analogous data from landfills. The legislation should enable the State Planning Office to collect tonnage and revenues for six categories of waste (MSW, CDD, bulky goods, FEPR, incinerator non-processibles, and incinerator ash) for five major customer groups (incinerators, municipalities and other government units, instate commercial accounts, spot market from instate sources, and out-of-state sources).

With this price data information, the State Planning Office can use its analytical capabilities, both in waste management and in economics, to inform the Legislature how changes in available disposal capacity are likely to impact disposal prices.

Recommendation 3: That legislation be enacted to affirm that commercial disposal sites should not receive windfall profits through higher disposal fees as disposal

capacity declines. When the State Planning Office determines that a decline in disposal capacity has the potential to increase disposal fees, it should be required to submit that finding and concurrently submit a proposal for corrective legislation to the Legislature.

The language in this third recommendation parallels the current legislation on opening Carpenter Ridge. Under the current statute, the State Planning Office must estimate when remaining state disposal capacity falls below four years' requirements and ask the Legislature for permission to open Carpenter Ridge at that point. Under this recommendation, when Maine's landfill capacity reaches levels that may increase landfill prices, the State Planning Office would be required to notify the Legislature and to recommend a policy direction to avoid that outcome. Embedded in this recommendation is the implicit assumption that the State Planning Office will need to initiate and coordinate a broad policy discussion about how to respond to higher disposal prices well before higher prices are realized. Draft Legislation incorporating these recommendations is attached hereto as Appendix D.

The range of policy choices that the State Planning Office might consider in policy development is broad. This study identifies at least four options; there are probably more. First, the state could open Carpenter Ridge and perhaps additional state-owned capacity on a schedule that maintains stable disposal prices. Second, legislation could be enacted to increase municipal interest in siting new disposal sites. For example, the state could substantially reduce the financial risk of attempting to site a new disposal facility by assuming a large share of the cost of up-front, pre-construction investments, whether or not the facility were opened. The state could also share some of the financial

risks associated with regulatory changes and with site closure. A third option would be to allow at least one of the two existing commercial landfills to expand beyond the limitations in the current legislation. If Maine is to rely heavily on a single commercial landfill, it might consider some form of public utility regulation to prevent price escalation. Fourth, Maine might consider a tax on landfill disposal to discourage landfilling of waste in preference for waste reduction strategies and incineration. Revenues from such a tax might be returned to municipalities on a per-capita basis to partially offset higher fees and to finance other waste management costs. Under this strategy, the state accepts (indeed, mandates) higher landfill costs, but diverts the revenues from commercial landfills to government.

The report does not take a position on any of these choices. Pricing is but one component of waste disposal policy, and other objectives must and will be considered. But we emphasize that current policy has great potential to result in significantly higher landfill disposal fees in the next ten to fifteen years. We doubt that the Legislature intended to generate windfall profits for the existing commercial landfills, but policy action is necessary to avoid that outcome. Because the policy choices in landfill siting are inherently difficult, it is important to place the issues before the Legislature in a coherent and timely way. The longer we delay addressing this difficult policy area, the fewer the choices the state will have to reconcile competing policy objectives.

A number of parties have submitted comments on earlier drafts of this report and may submit further comments on this final report. Copies of these comments are obtainable by contacting Kathi Peters at the Office of the Attorney General.

An Analysis of Competition in Collection and Disposal of Solid Waste in Maine

Chapter 1

Purpose and Background of Report

The Office of the Maine Attorney General prepared this report, with assistance from the University of Maine Margaret Chase Smith Center for Public Policy. The project is a direct outgrowth of a research effort started by the Maine Legislature. In 1999, the Maine Legislature authorized a task force to examine the question of competition in the solid waste industry in Maine. The task force issued an interim report (Maine Legislature, 2000), which included an outline for a full study of competition in waste management. Funding to complete the second year of the study did not become available. Because the Attorney General had been involved in questions about competition in waste management through a series of antitrust enforcement actions, this office decided to complete the study outlined by the task force report. The Attorney General contracted with the Smith Center to provide assistance with economic analysis in the report.

Work on the study began in fall 2001. A draft report was issued for comment on March 5, 2002. Comments were received from both industry and government; a list of those providing comments appears in the acknowledgements at the end of the report. A presentation of the draft report was made to the Natural Resources Committee of the Legislature on March 20, 2002. At the time of the presentation to the Natural Resources Committee, the authors submitted a preliminary revision of the recommendations, which

reflected some of the comments received by that date. The final report is being issued in December 2002.

This report is concerned with municipal solid waste (MSW) and associated waste material flows. MSW includes non-hazardous waste generated by residential and commercial sources. Closely associated with this flow are construction and demolition debris (CDD), bulky goods and furniture, yard waste and wood, and tires. This flow results in residue from incinerators, which includes ash, front end process residue (FEPR), and large bulky non-processible items. Ash from incinerators (and also from municipal burn piles) is the only type of special waste addressed by this report. This report does not address other kinds of waste, such as sludges from mills and sewer treatment plants, hazardous wastes, or medical wastes.

The report attempts to provide a broad background from which to understand competition in Maine's waste management industry. The solid waste industry has been shaped by environmental policies to ensure safe solid waste disposal. At least partially as a result of those environmental policies, the solid waste management industry has seen very rapid consolidation, both nationally and in Maine, during the 1990s. The report assembles information on Maine's solid waste management industry and uses that information to assess the state of competition in the industry. Finally, the report examines possible policy responses and makes three specific recommendations for steps to promote competition in both collection and disposal.

Chapter 2

State and Federal Environmental Policy on Solid Waste

Federal Policy

The Resource Recovery and Conservation Act of 1976 (RCRA) broadly addressed waste disposal. The act made hazardous waste management an area of primary federal responsibility, and established a policy objective of moving away from landfill disposal of hazardous waste. Non-hazardous waste (which includes MSW) would be primarily a state responsibility, and landfill disposal of non-hazardous waste would continue to be authorized.

In 1984, the federal government enacted the Hazardous and Solid Waste Amendments to RCRA. The Hazardous and Solid Waste Amendments (HSWA) substantially increased the federal role in solid waste management. States were directed to implement solid waste management strategies, and these plans are subject to EPA approval. The HSWA added Subtitle D to the RCRA, which defined federal standards for the design and operation of solid waste landfills. Modern landfills that meet these federal criteria are often called “Subtitle D Landfills”.

In 1991, the Environmental Protection Agency issued new rules for solid waste disposal facilities, to become effective in 1993. These rules tightened the standards for construction, operation, and post-closure monitoring of landfills. The rules also created mandatory combustion standards and air emissions standards for solid waste incinerators. These rules replaced what had been only guidelines for state incinerator regulation.

The shared state-federal role for solid waste management is not unusual for U.S. environmental policy. For both air and water pollution, federal legislation establishes a

shared responsibility. The general concept is that the federal government would establish broad criteria, and states would implement those criteria for their specific circumstances. In solid waste management, for example, state implementation could take into account specific soil characteristics in the specification of detailed design criteria for landfills.

This shared responsibility for solid waste disposal policy creates two tensions within federal policy. First, different states can choose to implement the policy in very different ways. Some states may choose to exceed federal minimum standards; others may barely reach those standards. These variations in regulatory approaches can imply significantly different costs of compliance for municipalities and businesses in different states. Second, the tiering of responsibilities makes states the intermediary between federal standards and municipal implementation. The federal government directly reviews only state plans. Those state plans in turn specify the standards that communities must meet if they site and operate a disposal facility.

Maine Solid Waste Policy

The overall thrust of state policy can be summarized as having seven elements:

State environmental regulation of municipal and commercial disposal sites.

The Department of Environmental Protection has the authority and responsibility to regulate all waste disposal facilities in Maine, which includes insuring compliance with federal solid waste regulations. This regulatory authority is basically reactive in nature: the DEP responds to proposals to license or re-license disposal sites and then enforces license requirements. This regulatory authority does not include the authority or responsibility for a state waste management plan. The state, through a series of bond issues, has provided subsidies to towns to assist with closures of old landfills.

State promotion of a “hierarchy of waste management”. The planning function for solid waste policy was initially vested in the Maine Waste Management Agency (MWMA) and was moved to the State Planning Office in 1995, when MWMA was closed.

Like many other states, Maine has formally adopted a policy of reducing the volume of waste that requires disposal. Maine has endorsed the hierarchy of waste options favoring first waste reduction, second reuse, third recycling, and fourth composting. Waste disposal through incineration, or lastly through landfilling, are the least favored options. Although recycling is the third option in this hierarchy, it has received the most attention from state and local governments.

State historical preference for incineration at waste-to-energy plants. Maine depends heavily upon incineration for its waste disposal, with roughly 65% of Maine’s MSW going to four waste-to-energy plants. This differs substantially from the national experience, where only 10% is incinerated, but is closer to the rate in other New England states (Goldstein and Madtes, 2001).

Maine’s preference for incineration is consistent with the goal of reducing the volume of waste. Incineration reduces both the weight and the volume of material that must be landfilled. Weight is reduced by approximately 60 -75% and volume by approximately 80-90%.

Through public utility policies that favored alternative energy sources, Maine created strong economic incentives for waste-to-energy plants. The significant electric rate impacts of Maine’s preferential treatment of alternative electric generation became clear in the 1990s. Maine has since reduced the rates paid for new alternative energy

contracts and has also tried to restructure existing contracts to lower the rate impacts. The electricity prices paid to existing waste-to-energy plants have been reduced somewhat as a result of debt restructuring, but rates are still above what new plants would receive in the current open market.

While Maine's formal policy still prefers waste-to-energy plants over landfilling, market conditions make new incinerators unlikely. Under current wholesale electric rates, large landfills are likely to have significant cost advantages over new incinerators.

Ban on new commercial disposal restricts importation of trash. Maine became very concerned that it would become the recipient of large volumes of waste from the rest of New England, which has relatively limited waste disposal capacity. Maine banned all new commercial disposal facilities in 1989 (38 M.R.S.A. § 1310-V; 38 M.R.S.A. § 1303-C [30]). The ban allowed existing disposal facilities to continue to operate. The decision to ban new commercial facilities, rather than simply banning waste imports, correctly anticipated later court limitations on how states could control waste flow under the Commerce Clause of the federal Constitution. (See the discussion of flow control in Chapter 3.)

Preference for interlocal municipal agreements over state responsibility in siting. Prior to the state and federal initiatives to regulate local landfills, operation of waste disposal sites was a local responsibility and was typically met by a small municipally operated landfill. The stricter environmental standards resulted in much larger waste disposal facilities, so solid waste from a number of municipalities usually flows to a disposal site. Where commercial sites operate, municipalities can contract individually with the operators. But Maine's ban on new commercial disposal requires

that some government entity must operate new additions to capacity, so some form of government unit larger than municipalities is usually required. The role of county government in Maine is limited (except in law enforcement) and the state was not eager to accept the responsibility to site new facilities or the financial risks associated with operations. The remaining option was to create interlocal agreements or other kinds of joint municipal actions, which occurred in Maine. The largest of these agreements is the Municipal Review Committee (MRC) in central and eastern Maine, with 140 member communities. The MRC was formed to negotiate and manage the municipal contracts with the PERC incinerator.

Ambiguous policy on siting state-owned landfills. The state has taken initial steps to site a state-owned landfill at Carpenter Ridge, near Lincoln. The site has been identified and a permit for special waste disposal issued. The site is permitted for special waste because it is envisioned primarily as a disposal site for incinerator ash, as opposed to unprocessed MSW. No further action can be taken on the site until construction is authorized by the Legislature. The State Planning Office is directed to inform the Legislature when only four years of landfill capacity remains in the state, at which time legislative consideration will begin. When two years for construction and some period for legislative action are deducted, this four-year cushion is quite short. This schedule would suggest some reluctance to open a state-owned landfill. The report of the most recent state task force on solid waste policy (Maine State Planning Office, 1999) suggests that the role of Carpenter Ridge in state disposal is subject to two different interpretations. It could be the next (or one of the next) major additions to disposal capacity. Or it could be a last resort or safety net, which the state in fact hopes never to

open. While a majority of the 1999 Task Force endorsed the first interpretation, the four-year triggering mechanism seems more consistent with the second interpretation.

Focus on quantity of landfill space, rather than cost. Maine's waste disposal policy was developed as the closure of most municipal landfills generated concern that Maine would run out of disposal capacity. Recycling and incineration were highly desirable because they reduced the volume of waste to be landfilled and therefore increased the life of remaining landfill capacity. State policy, as reflected in requirements for a biennial disposal capacity report and the capacity trigger for Carpenter Ridge, focuses narrowly on remaining disposal capacity. The connection between disposal capacity and the price of disposal is, at most, a secondary consideration. The cost of disposal to municipalities and businesses has been a minor issue for state policy. Only recently has municipal pressure over increasing local costs become a state issue.

Chapter 3

Competition in National Solid Waste Industry

National disposal trends

Table 1 presents a summary of national trends in total MSW and disposal methods for 1990-2001. Total MSW tonnage has grown at a rate of about 4% per year over this period. The growth rate slowed in the mid-1990s, but was at 7% for 2000-2001. The fraction being recycled increased steadily, from under 8% in 1990 to 30% in 1998. The recycling rate has been roughly constant since 1998. The share being landfilled fell dramatically, from 84% in 1990 to 63% in 1996. Again, landfill fees have stabilized in the late 1990s. While the share of MSW being landfilled has fallen, the total tonnage going to landfills has increased about 10% over the period, due to overall growth in MSW. Incinerator share peaked at 11.5% in 1991 and has declined slowly since. Total tonnage incinerated has declined slightly over the period.

Consolidation in the U.S. waste management industry

The U.S. waste management industry has seen great consolidation in the 1990s. The scale of disposal facilities has increased significantly. The number of landfills has fallen from about 7900 in 1989 to only 2142 in 2001 (Goldstein, 2000; Goldstein and Madtes, 2001). Despite the decline in the number of facilities, there is no imminent national crisis in landfill capacity, although there are regional issues. Capacity at large disposal facilities has substantially replaced the small municipal landfills that were closed for environmental reasons. These disposal facilities are increasingly owned by a few firms that operate nationally and even internationally. The commercial firms that own

disposal facilities are almost always vertically integrated in collection and transfer activities. These firms often supply a range of waste management services, including collection and processing of recycled materials and implementation of waste reduction programs. These firms usually handle a range of wastes, including MSW, special wastes, and hazardous wastes.

The consolidation in the disposal and collection sectors of the waste management data is clearly reflected in the national four-firm concentration data (see New Hampshire, 2001, Appendix D). For Standard Industrial Code 4953, refuse systems, which includes disposal management, the top four firms controlled only 2.9% of all revenues in 1987, but that rose to 42.6% in 1992. The North American Industrial Classification System (NAICS) replaced the SIC codes for the 1997 Census of Business. NAICS Code 5622, waste management and disposal, showed that the top four firms controlled 48% in 1997. Clearly, the large increase in concentration in disposal occurred in the late 1980s and early 1990s as environmental regulations caused older open landfills to be replaced with modern, secure landfills.

The SIC code definitions for waste collection for 1987 and 1992 are not comparable. The 1992 four-firm concentration for SIC 4212, garbage and trash collection, was 34.5%. The four-firm concentration for the comparable NAICS industry had risen to 48.4% by 1997. These data indicate that concentration in the collection sector occurred slightly after concentration in the disposal sector.

As a rough measure, a four-firm concentration ratio of 50% (that is, when the 4 largest firms control 50% of total revenues) is often considered the threshold at which concerns over competition arise. Both the disposal and collection sectors have four-firm

national concentrations ratios near 50%. But these national ratios understate the degree of concentration in any particular regional market, because not all firms operate in every market. Given the level of national concentration, the level of concentration in most regional markets is likely to be well above the 50% threshold.

Table 2 presents data on revenues and employees for the ten largest waste management firms. Three large firms, Waste Management, Inc. (WMI), Allied Waste Industries, and Republic Services, operate nationally and account for 83% of the revenues earned by the top 100 firms (Source: Waste Age 100 [2001]). Maine's two largest waste management firms, Waste Management and Casella, are first and sixth on this list. One other firm from Maine, Regional Waste Systems (a public entity) appears on the Waste Age 100 list, as number 62. Although the large national firms account for an increasing share of total revenues, there remain a large number of local and regional waste management companies.

Table 1
National MSW Disposal
1990-2001

Year	Total tonnage (million tons)	Landfill (%)	Recycled (%)	Incinerated (%)
1990	269.0	84	8	8
1991	293.6	77	11.5	11.5
1992	280.7	76	14	10
1993	291.7	72	17	11
1994	306.9	71	19	10
1995	322.9	67	23	10
1996	326.7	63	27	10
1997	327.5	62	28	10
1998	340.5	61	30	9
1999	374.6	61	31.5	7.5
2000	382.6	60	33	7
2001	409.0	61	32	7

Source: Goldstein and Madtes (2001)

Table 2
10 Largest US Waste Management Firms
2000

Company	2000 Revenues (millions)	Employees
1. Waste Management	\$11,200	57,000
2. Allied Waste Industries	\$ 5,710	28,000
3. Republic Services	\$ 2,103	12,700
4. Onyx N.A.	\$ 1,165	8,660
5. Safety-Kleen Corp.	\$ 559	n/r
6. Casella Waste Systems	\$ 480	n/r
7. Norcal Waste Systems	\$ 350	2,000
8. Stericycle, Inc.	\$ 323	2,285
9. Waste Connections, Inc.	\$ 304	n/r
10. Rumpke Consolidated Companies	\$ 278	2,500

“n/r” indicates not reported in source.

Source: Waste Age 100 (2001).

Mergers have been very significant in shaping the structure of the waste management industry. WMI, which heads the list in Table 2, was formed in 1998 when USA Waste acquired the former Waste Management. USA Waste then adopted the name of the acquired entity. Allied was formed in 1999 by the merger of BFI and Allied. The rate of mergers and acquisitions in the late 1990s was quite startling. In preparing its Waste Age 100 for 1999, Waste Age magazine contacted 200 firms it considered eligible. Of the 200 firms, 71 (35%) reported that they had been acquired that year.

Although a few national firms are very important in waste management, waste markets are in fact local or regional in scope. Transportation costs are a significant limit on the scope of the market. The increase in the cost of disposal relative to collection and hauling has probably increased the size of local markets somewhat in the past 20 years. The trend towards fewer, larger landfills has meant that waste moves greater distances

today than in the past. Goldstein and Madtes (2001), for example, find the number of transfer stations continues to increase, while the number of disposal facilities declines.

Scale economies in solid waste management

A potential explanation for the rapid consolidation in the waste management industry in the 1980s and 1990s is that economies of scale in collection and disposal require larger firms. A second argument has been that vertical integration provides economies of scope. This section assesses the evidence for economies of scale and economies of scope in the waste management industry.

There is general agreement that there are significant economies of scale in landfill construction. These economies of scale were increased by the more elaborate construction standards under RCRA Subtitle D and by the expense of siting any new landfill. A firm or municipality siting a landfill must spend several million dollars on site acquisition, engineering studies, and participation in regulatory proceedings prior to construction. These regulatory costs may increase as larger landfills are proposed, but probably do not increase in proportion to the size of the landfill.

Construction costs also exhibit economies of scale. The total acreage required for buffering the landfill from surrounding property does not increase proportionately with landfill size. The geometry of constructing stable slopes on landfills means that large landfills lose less airspace to slope angles and are able to fill more deeply than smaller landfills. A larger landfill can hold more waste per acre of footprint than a smaller landfill. The cost of access roads, monitoring systems, administrative buildings, truck scales, and related support equipment also does not increase proportionately with landfill size.

In operations, there may be modest economies of scale in labor and equipment costs for larger operations. More substantial economies of scale may be present in the operation of leachate collection systems and monitoring systems.

Table 3 presents estimates from Dooley *et al.* (1994) for the fixed and variable costs per ton for landfill construction in North Dakota. Their data is based upon landfills with a 20-year life. Their estimates indicate that economies of scale in both fixed and variable costs are significant for landfills with capacity of less than 175 tons per day.

Table 3
Estimated Fixed Costs per Ton for
North Dakota Landfill Construction
1992

<u>Landfill size (tons/day)</u>	<u>20</u>	<u>75</u>	<u>175</u>	<u>250</u>	<u>400</u>
Fixed costs/ton	22.19	12.36	8.41	7.96	7.48
Variable costs/ton	11.26	9.45	6.50	5.92	5.44
Total costs/ton	33.45	21.81	14.91	13.88	12.92

Source: Dooley, *et al.* (1994).

There is more debate over the significance of economies of scale in collection. There are two issues. First, how significant is route density in affecting costs? And second, what are the economies of operating multiple routes by the same firm?

Economies of scale that result from route density are frequently cited. The logic for these economies is simple. A truck that collects all the containers on a given street can minimize the travel time between containers. This logic applies both to curbside collection from residential containers and commercial collection with container lift service.

The argument is also made that a firm needs to operate some minimum number of vehicles to achieve minimum efficient scale in fleet operations. Maintenance is a significant factor in this type of equipment. Economies of scale in maintenance *per se* are less important, because maintenance can be contracted and because the minimum economies of maintenance can be achieved by firms with multiple trucking activities. But the firm needs spare equipment to continue to function while vehicles are being serviced. The ratio of necessary spare equipment to routes falls as firm size increases.

For residential curbside collection, Stevens (1978) found that significant economies of scale exist in communities below 20,000 population and that the economies of scale are exhausted for cities of 50,000 or more. When using trucks as the measure of scale, she found economies for up to four trucks, but that all economies were exhausted at more than five trucks. (Stevens submitted comments on our preliminary report that suggested the minimum scale might require seven to eight trucks today.) For a Canadian sample, Tickner and McDavid (1986) also found significant economies of scale in curbside collection. Because of the correlation between population density and community population (that is, the larger communities are also the most dense) neither Stevens (1978) nor Tickner and McDavid (1986) could statistically separate whether the economies are due to route density or to absolute community size. Callan and Thomas (2001) found constant returns to scale in collection of both waste and recycled materials for Massachusetts. They find economies of scope in collecting waste and collecting recycled materials together. At mean values for their sample, towns would save about 5% in joint provision of waste collection and recycled material collection relative to the cost of separate programs.

If there is a cost disadvantage for small-scale entry, the size of that cost disadvantage matters. If the cost disadvantage is relatively small, a firm that is prepared to sustain small losses while building the business to an efficient scale can successfully enter. For a small owner-operator, the investment to overcome these small cost disadvantages might be made by “sweat equity” from the owner’s time. Unfortunately, the statistical evidence on the size of the cost disadvantage associated with small-scale entry is weak. The Tickner and McDavid (1986) study suggests a 15% cost advantage when firm size doubles over all firm sizes. However, their statistical methodology did not really identify whether this cost disadvantage disappeared at some firm size.

For business services, quality of service is an important issue in retaining customers. Commercial container collection is such a business service. Missing collections, failure to maintain canister hardware, and collections at inconvenient times might all be dimensions of service. A firm does not necessarily need the lowest price to attract customers. Customers who are unhappy with some aspect of service might be willing to switch to a firm with higher costs but better service.

Finally, the economies of scale issue is more complicated than simply whether economies of collection favors monopoly local collection. We also need to examine whether the markets are “contestable” (Baumol *et al.*, 1982). In a contestable market, the threat of entry by a potential competitor constrains the behavior of current firms, perhaps even in the case of a single monopoly supplier. A market is said to be contestable if a firm could enter and exit the market quickly and at relatively low cost. If a firm in a contestable market attempts to raise price, it risks entry by new firms. This threat of entry is sufficient to restrain prices. Contestability requires low fixed costs, or capital

that can be easily moved to alternative uses. The theory of contestable markets has been applied to airlines, for instance. Low-volume routes may not be large enough to accommodate more than one or two carriers. But the major capital investment in airline service, the airplane, can be easily moved into or out of a market. Therefore, an existing airline knows that higher prices will attract entry from other firms, and its pricing is thereby constrained.

Waste collection is a contestable market. The primary assets used in commercial service, trucks and containers, are clearly mobile. There is an active market in used equipment for an entrant to acquire equipment or to dispose of excess equipment. Even if economies of density favor a single provider on any given route, the threat exists that higher prices will attract entry to take entire routes. And a firm that serves an adjoining area may be able to enter by taking parts of nearby routes.

For municipal curbside collection, use of public employees is a competitive option for the municipality. Savas (1987, pp. 124-131) summarizes the results of nine studies (five in the U.S., two in Canada, one each in Switzerland and Japan) of public versus private contract costs of curbside collection. Savas draws from these studies a 35% cost disadvantage for public collection. While these studies are somewhat dated (conducted between 1975 and 1984), there is little reason to think that the economics of public versus contract commercial collection have changed much in 15 years. If public provision is the only constraint on private pricing in the collection market, this 35% cost differential means that public provision is a weak competitive threat. Private industry frequently suggests that government enjoys several cost advantages over commercial collection firms, including lower interest financing for equipment (because of tax-free

municipal borrowing) and no property/excise or sales taxes on equipment. The productivity disadvantage of public collection would seem to more than offset these tax-driven advantages.

For hauling, there is little evidence of economies of scale. Hauling would include moving waste from transfer stations to disposal sites or hauling of roll-on, roll-off containers (for example, of construction debris). These are straightforward trucking operations. In tractor-trailer applications, the tractor is not specialized, and could even be shared with other trucking operations. A wide range of heavy trucking firms, such as construction companies and logging contractors, would find entry into hauling relatively easy.

Economies of scope are distinct from economies of scale. Economies of scope arise when there are cost advantages to be achieved by vertical integration or by operating in several distinct markets. Economies of scope may arise when combining successive stages in the production process can reduce costs. Planning may increase efficiency if successive stages in the production process can be coordinated, even if the steps are still distinct.

We could find no statistical analysis on economies of scope in collection, hauling and disposal, so the issue cannot be resolved quantitatively. There are no obvious technological reasons to expect economies from integrating collection and hauling with disposal. The physical assets used in collection and hauling are quite distinct from the physical assets used at a landfill or incinerator. It is difficult to see where physical economies would arise in joint operation of collection and disposal. One might postulate some economies in coordinating delivery times. Careful scheduling might minimize idle

time caused by trucks standing in line. While such economies are conceivable, it is difficult to see why such coordination can only be accomplished by a vertically integrated firm.

Industry commentary has suggested that bringing professional management to small collection firms was a major impetus for merger activity, which implies economies of scope in management. While professional management may be important in complicated tasks such as siting and operating waste disposal facilities, the management required to operate collection routes does not seem so specialized as to require large national firms. And several firms involved in major merger activity in the 1990s, such as WMI, Allied, and Casella, have had weak financial results in the aftermath of their acquisitions. A larger firm faces increased challenges in communication and control that may offset benefits from more specialized central management.

Economies of scope are distinct from strategic competitive reasons for owning both disposal capacity and collection services in an area. A collection firm may be reluctant to enter an area where competitors control all disposal facilities. The firm may worry that competitor control of the price of disposal, a crucial input, places it at a serious disadvantage. The firm might worry, for example, that competition in collection could be subsidized from higher prices in disposal. These strategic issues arise not from the cost advantages of vertical integration but rather from competitive advantages in market power in the disposal market.

Federal Antitrust Actions to Promote Competition

The federal antitrust statutes include the Sherman Act, the Clayton Act, and the Federal Trade Commission Act. The Sherman Act prohibits contracts, combinations, and

conspiracies in restraint of trade and monopolization. The Sherman Act sanctions violations with criminal as well as civil penalties. The Clayton Act, among other provisions, bars mergers and acquisitions “where the effect may be substantially to lessen competition or tend to create a monopoly in any line of commerce.” The Federal Trade Commission Act declares unfair methods of competition to be unlawful, a category that includes, but casts its net somewhat beyond, established antitrust offenses. The Clayton Act is enforced jointly by the Department of Justice and the Federal Trade Commission. Under the Sherman Act, Department of Justice (“Justice”) jurisdiction is supplemented by private enforcement.

There are four primary opportunities for antitrust enforcement authorities to intervene for the purpose of addressing market power. First, a proposed merger or acquisition that reduces competition is subject to challenge. Second, collusive agreements or combinations among competitors (*e.g.*, price fixing or market allocation agreements) are subject to attack. Third, exclusionary conduct by a market participant with a high market share may be addressed as a monopolization offense. Finally, each of these violations can be brought to court as an unfair method of competition.

Antitrust enforcement authorities are confined to addressing market power problems on an *ad hoc* rather than a systematic basis. Possessing market power is not illegal; only certain actions that abuse or extend that market power violate antitrust statutes. For example, pre-existing market power that is exercised unilaterally to increase price is beyond the reach of the antitrust laws. Where existing market power is at issue, it may be appropriate to consider specific legislative remedies directed at the structure or conduct of a specific industry.

The federal enforcement record in the trash industry includes more than a dozen criminal and civil antitrust cases over a fifteen-year period that charge combinations in restraint of trade, such as price fixing or customer allocation. This record attests to “an industry highly susceptible to tacit or overt collusion among competing firms.” (See *U.S. v. USA Waste Services, Inc.* [1996], Competitive Impact Statement at 14.) In some cases the problem of collusion may transcend antitrust laws. (See, for example, *U.S. v. Private Sanitation Industry Association of Nassau/ Suffolk, Inc.* [1994] involving a massive conspiracy to control the Long Island solid waste disposal industry through the threat and use of force in violation of Racketeer Influenced and Corrupt Organizations Act [RICO].)

Justice has brought at least two monopolization cases and has filed a series of complaints and consent decrees in significant merger cases. The two monopolization cases merit special attention because of their focus on so-called evergreen contracts (*U.S. v. BFI of Iowa, Inc.*, 1996; *U.S. v. Waste Management of Georgia, Inc.*, 1996). In consent decrees to settle the two monopolization cases, Justice obtained prohibitions on the inclusion of the following terms in commercial hauling contracts in affected markets:

- an initial term longer than two years;
- a renewal term longer than one year;
- any requirement that notice of termination be provided earlier than 30 days prior to the expiration of an initial or renewal term;
- any requirement that the customer pay liquidated damages (*i.e.*, a termination penalty) during the first twelve months of service that exceeds three times the greater of current charges or the six-month average monthly charge, or pay liquidated damages after the first twelve months that exceed two times the greater of its current or average monthly charge;
- any “right to compete” clause requiring notice of a competitive offer of service and an opportunity to match a competitor’s prices.

In addition, the consent decrees required that the contracts be “easily readable,” and clearly identified as contracts for solid waste services. In at least one subsequent case, Justice obtained a more restrictive standard that limited the initial contract term to one year (*U.S. v. USA Waste Services, Inc.*, 1996).

In its Competitive Impact Statements, Justice explained why evergreen contracts had been singled out for special prosecutorial attention in affected markets:

Many of these contracts contain terms that, when taken together ... make it more difficult and costly for customers to switch to a competitor...and allow Defendants to bid to retain customers approached by a competitor. The contracts enhance and maintain Defendants’ market power ... by significantly raising the cost and time required by a new entrant or small incumbent firm to build its customer base and obtain efficient scale and route density Defendants’ use of these contracts ... raise barriers to entry and expansion [in affected markets]. (*U.S. v. BFI of Iowa, Inc.*, 1996.)

Justice has obtained similar restrictions on evergreen contracts in its merger consent decrees. (See, for example, *U.S. v. Allied Waste Industries, Inc.* [May 2000] and *U.S. v. Allied Waste Industries, Inc.* [September 2000])

In most merger cases, the primary relief sought and obtained in federal consent decrees consists of targeted divestitures to protect competition in specific affected markets (*e.g.*, *U.S. v. USA Waste Services, Inc.*, 1998, divestitures in a dozen states; *U.S. v. Waste Management, Inc.*, 1999, divestitures in three states). Justice has also obtained consent decree provisions requiring defendants to provide advance notice of certain categories of future acquisitions or to provide nondiscriminatory access to a particular facility for competitors (*U.S. v. Allied Waste Industries, Inc.*, September 2000, notice provision; *U.S. v. USA Waste Services, Inc.*, 1998, notice and access provisions; *U.S. v. Reuter Recycling of Florida, Inc.*, 1996, access provision).

The Canadian agency responsible for competition in Canadian markets, the Competition Tribunal, has also undertaken enforcement actions with respect to solid waste management. Because the major U.S. firms also operate in Canada, the same firms are often subject to competition enforcement there. The Competition Tribunal has adjudicated four waste management cases in the past decade. In 1992, the Laidlaw Waste Management Systems case (CT-91/02) resulted in numerous restrictions on evergreen contracts used by Laidlaw in British Columbia. In 1997, the Canadian Waste Services case (CT-97-01) led to a consent decree to divest some assets acquired by merger in Ontario. In 1998, the Canadian Waste Services case (CT-98/01) led to a consent decree to divest some assets acquired by merger in Edmonton, Alberta. In 2001, the Tribunal ordered divestiture of a landfill acquired by Canadian Waste Services Holding (CT-2000/002) in southern Ontario. The arguments in these cases are similar to arguments made about competition in waste management in the U.S.

Other States' Responses to Competition Concerns in Waste Management.

Competition in the waste management industry has been an issue for a number of other states. The most direct evidence of that concern is antitrust enforcement activities and direct state regulation of waste management pricing.

Antitrust activities. State Attorneys General have often participated in Justice actions brought to enforce the Clayton Act. See, for example, *U.S. v. Reuter Recycling*, 1996 (Florida Attorney General was co-plaintiff); *U.S. v. USA Waste Services, Inc.*, 1996 (Texas and Pennsylvania); *U.S. v. Browning-Ferris Industries, Inc.*, 1995 (Florida and Maryland); *U.S. v. USA Waste Services, Inc.*, 1998 (Arizona, California, Colorado, Florida, Kentucky, Maryland, Michigan, Ohio, Pennsylvania, Texas, Washington and

Wisconsin); *U.S. v. Waste Management, Inc.*, 1999 (Florida, New York and Pennsylvania). A limited survey of other states by the Task Force (Maine Legislature, 2000) found additional antitrust activity or interest in Connecticut, Missouri, Pennsylvania, and Utah.

Regulatory Responses. Three states, Alaska, Washington, and West Virginia, subject parts of the waste management industry to public utility regulation. The regulation in all three states traces its roots to state regulation of trucking. Of the three states, only West Virginia has adopted a regime of comprehensive regulation of solid waste landfills. The West Virginian regime was prompted at least in part by concerns over competition and market behavior in the solid waste disposal industry.

The Regulatory Commission of Alaska sets fees for residential and commercial curbside pick-up. Firms providing commercial containerized pick-up and roll-on, roll-off service must file their fees with the Commission. There is a requirement for non-discrimination in these container and roll-on, roll-off services. The same rate must be charged to customers receiving the same service in an area covered by a filed rate. Most disposal takes place at municipally operating facilities, whose fees are not subject to Commission rate-setting. The Alaskan regulation of curbside pick-up suggests an assumption that economies of scale in local curbside pick-up yield natural monopoly characteristics. The reliance on non-discrimination requirements in larger volume commercial services suggests only modest concerns with market power in that sector.

The Utilities and Transportation Commission of the State of Washington also regulates some parts of the waste management industry. Specific state regulation of waste collection was authorized in 1951, and the current structure was established in

1961. Both curbside pick-up and commercial container service are regulated. The state Utilities and Transportation Commission shares responsibility for regulation with local municipalities. Local municipalities may choose to contract for services on behalf of their citizens or to regulate collection services. The Utilities and Transportation Commission has authority in rural, unorganized areas or in municipalities that decline to exercise their option to regulate. Most municipalities do regulate, so the commission is primarily responsible for setting fees for the unorganized areas. Neither the state nor the municipalities currently regulate landfill fees.

Regulation of the solid waste industry in West Virginia also traces its roots to state regulation of trucking. West Virginia expanded its regulation in 1989 to include landfills and commercial container service. Curbside pick-up by municipal employees is not subject to regulation. Contracts between municipalities and commercial firms for curbside pick-up must be filed for approval with the Public Service Commission. Collection companies have an obligation-to-serve in their designated territories. Most fees for collection services are determined by negotiation between the service provider and the customer. However, if a customer is dissatisfied with the offered rate, the customer may request that the Public Service Commission initiate a proceeding to set the rate. The threat of going to the Public Service Commission strengthens the bargaining position of the customer if there is disagreement over the rate.

In 1989, the West Virginia Public Service Commission was given authority to regulate landfills and transfer stations. Both commercial and municipal landfills are subject to rate regulation. In 1989, there were about 40 landfills. At present, there are approximately 20 landfills and 10 transfer stations. A traditional public utility rate base

approach is used to set fees at each landfill for MSW, CDD, bulky goods, and tires.

Some special waste fees are negotiated rather than regulated. Out-of-state waste faces the same fees as in-state waste. West Virginia imposes a tax of \$8.75 per ton on all waste to finance closures of old landfills and to cover various state program costs. Fees in West Virginia are now in the range of \$40 per ton for MSW (including the state fee) and \$20 per ton for CDD. Landfills are subject to non-discrimination provisions with respect to trucks delivering to a landfill, under a “first-come, first-served” requirement.

West Virginia’s regulation of landfill fees illuminates the types of issues and problems that would arise under state regulation of landfills. First, most of the revenues from landfill services come from a relatively small number of categories that are easily defined: MSW, CDD, bulky goods, and tires. There may be some categories of special wastes that have distinct characteristics that make uniform tariffing difficult.

Second, an obvious set of questions about the boundary of the regulated industry arises.

- Should interstate waste, as well as instate waste, be subject to rate regulation?

One could argue that interstate waste is subject to price competition in its originating jurisdiction. However, unless a landfill has an obligation-to-serve, it may refuse instate waste in favor of higher priced interstate waste. For vertically integrated firms, the pricing of interstate waste is especially problematic, because it is impossible to regulate transfer prices within a firm.

- Should transfer stations be regulated?
- Should landfills run by local governments be subject to rate regulation?

Utility commissions, including Maine’s, have generally tried to shed

responsibilities for regulating municipally-provided utility services. However, a municipal landfill may serve other communities and commercial haulers, as well its own residents.

Third, public utility regulation typically involves the grant of an exclusive franchise and the concomitant imposition of an obligation-to-serve. For that reason, West Virginia has a certificate of need process to license new landfill capacity. In West Virginia, the landfill licensing process is essentially a closely coordinated activity between the Public Service Commission and the Department of Environmental Protection. Regulation of landfills raises an interesting question about whether an obligation-to-serve should be imposed and what it might entail. Without an obligation-to-serve, a disposal site unhappy with its fees might simply refuse to accept waste, or decide to accept only certain kinds of waste. Could an obligation-to-serve extend beyond the immediate provision of services to include an expectation that the landfill will manage its available capacity to meet the needs of a state's citizens for some period into the future? But restricting capacity for future instate use might violate flow control limitations under the federal Commerce Clause.

Fourth, public utility regulation encounters difficulties when only part of a company's activities are regulated. Most commercial landfills will be run by vertically integrated, interstate firms. Both vertical integration and interstate operations complicate public utility rate setting. When a firm has both competitive and regulated activities, rate base regulation must determine which investments and expenses are attributed to the regulated entity and which to the competitive activity. Under the cost-plus incentives of rate-base regulation, the firm has strong incentives to shift costs to the regulated activity.

This raises the possibility that regulation may result in cross-subsidies from the regulated business to the unregulated business, to the detriment of competitors in the unregulated activity.

Public utility regulation of telecommunications has increasingly faced the problem of regulating only part of a company. A response has been “price cap” regulation, instead of cost-plus, rate-base regulation. Under price cap regulation, a rate is set for the current year and allowed to increase automatically in relation to an inflation index, perhaps with an offset for increased productivity. Because the rate is set by formula and does not change as the firm’s costs change, there is no incentive to cross-subsidize competitive activities from regulated activities. Price cap regulation might be preferable to rate-base regulation for any landfill price regulation.

Fifth, West Virginia’s extension of regulation to landfills in 1989 illustrates the inherently *ad hoc* process of initiating rate-base regulation. West Virginia initially froze fees in 1989. Thereafter, it brought firms under rate-base regulation by eventually completing a rate case for each firm. The process of initiating rate-base regulation must determine the rate base, which is the value of the assets used by the newly regulated firm. The issue is complicated for assets acquired prior to regulation at a price that exceeded their book value. The excess of acquisition price over book value is typically capitalized as “goodwill” by the acquiring firm. The goodwill may include a premium for the acquisition of assets that earn above-average returns because of market power. If the goodwill is not included in the rate base, the firm suffers a loss from its inability to recover the entire purchase price. But if goodwill is included, then regulation allows the firm to set a price that is based upon built-in expectation of above-normal profits.

Legal status of flow control

State and municipal regulation of the flow of waste has been an important issue in competition. Local governments, including some in Maine, have directed residential and commercial waste generated within their borders to specific disposal sites. These controls help local communities meet commitments to deliver certain minimum tonnages to disposal sites, and especially to waste-to-energy plants. These controls have also been used by municipalities to subsidize their disposal costs. Municipalities can bargain for preferential rates from disposal sites in return for a captive commercial market, which can then be charged higher fees. On the other hand, some states would like to restrict the flow of waste into their states to avoid importing environmental problems from other states. These restrictions have run into the constitutional issue of whether solid waste flow control violates the Commerce Clause of the U.S. Constitution, which reserves the regulation of interstate commerce as a federal prerogative.

The federal Commerce Clause (Article I, §8, cl. 3) provides, in pertinent part, that

Congress shall have the Power...[t]o regulate Commerce
with Foreign Nations, and among the several states....

Although this language does not explicitly prohibit state regulation in the absence of Congressional action, such prohibition has been held to exist by implication in a string of U.S. Supreme Court decisions stretching back to *Gibbons v. Ogden* (1824). That case held that power to regulate interstate commerce could not be shared by two sovereigns. The rationale for the judicial creation of this so-called “dormant Commerce Clause” prohibition was the preservation of a national marketplace unimpeded by the constraints of parochial economic protectionism. (See *H.P. Hood & Sons v. DuMond*, 1949.)

The frontier separating prohibited economic protectionism from legitimate state and local regulation to protect health and safety has proven difficult to define. Over the past decade, the courts' struggle to distinguish permissible regulation from prohibited protectionism has coincided with state and local government efforts to cope with solid waste management through flow control. As a result, the solid waste industry has found itself at the cutting edge of Commerce Clause jurisprudence (S. Cox, 1997).

Although application of the dormant Commerce Clause to state and local regulation of the solid waste industry remains complicated, the governing case law provides three basic principles. First, a state or local government does not run afoul of the Commerce Clause unless it is acting as a regulator in a governmental capacity. If the government entity is simply participating in the market as a private enterprise might, no constitutional issue arises (*Sal Tinnerello & Sons v. Town of Stonington*, 1998; *United Haulers Association, Inc. v. Oneida-Herkimer Solid Waste Management Authority*, 2002). Second, if the government action is regulatory in nature and discriminates on its face against interstate commerce, a virtual *per se* rule of invalidity applies (*City of Philadelphia v. New Jersey*, 1978). This strict scrutiny is triggered by "differential treatment of in-state and out-of-state economic interests that benefit the former and burden the latter" (*Oregon Waste Systems v. Department of Environmental Quality*, 1994). Despite the *per se* label, if the discriminatory regulation is necessary to address a public health threat for which no alternative remedies are available, the measure will be upheld (*Maine v. Taylor*, 1986). Third, if the regulation is nondiscriminatory and its impact on interstate commerce can be characterized as incidental, a more lenient balancing test applies. In such a case, the regulation is upheld unless the burden on

interstate commerce is clearly excessive in relation to putative local benefits (*Pike v. Bruce Church, Inc.*, 1970).

These principles can be readily articulated, but they have proven difficult to apply. The courts have pieced together a patchwork of decisions that is not always either clear or consistent, and which leaves important unresolved issues. Among the options available to state and local governments, it is possible to identify three categories: those that are clearly prohibited, those that currently appear permissible, and finally those which may be permissible but remain subject to controversy.

Clearly prohibited (unless they can be justified as necessary health or safety measures for which no alternative exists under the stringent *Maine v. Taylor* [1986] test) are state or local regulatory measures which:

- discriminate against out-of-state solid waste by barring its importation for disposal at private facilities (*City of Philadelphia v. New Jersey*, 1978; *Fort Gratiot Sanitary Landfill v. Michigan Department of Natural Resources*, 1992);
- levy discriminatory fees or taxes on imported out-of-state solid waste (*Chemical Waste Management, Inc. v. Hunt*, 1992; *Oregon Waste Systems v. Department of Environmental Quality*, 1994.); or
- require that locally generated solid waste be directed to a specific private facility (*C&A Carbone, Inc. v. Town of Clarkstown*, 1994; *SSC Corp. v. Town of Smithtown*, 1996).

Apparently permissible under current law are:

- state regulations setting limits on available capacity at disposal sites (*Fort Gratiot Sanitary Landfill v. Michigan Department of Natural Resources*, 1992);

- state regulations which require separation of out-of-state solid waste according to types of material and apply equally to in-state waste (*National Solid Waste Management Association v. Meyer*, 1999);
- restrictions on acceptance of out-of-state waste at publicly-owned and controlled facilities, if adopted by state or local government in the capacity of a market participant, including a ban or higher fee on out-of-state waste (e.g., *SSC Corp. v. Town of Smithtown*, 1996);
- state and local government contracts with haulers for collection and transportation of waste to a designated disposal facility where (a) the government entity has a put-or-pay agreement with the facility and the contract with the hauler provides for reimbursement of the tip fee; or (b) the hauler is permitted to tip for free at the disposal facility and the system is financed by taxes and fees charged to generators of waste (*SSC Corp. v. Town of Smithtown*, 1996; *USA Recycling, Inc. v. Town of Babylon*, 1995; but see *Huish Detergents, Inc. v. Warren County*, 2000);
- local government flow control regulations that require haulers to collect and transport solid waste collected within the municipality to designated private facility or facilities selected by an open, fair and competitive bid process that is even-handed toward out-of-state interests or conducted pursuant to nondiscriminatory criteria (*Harvey & Harvey, Inc. v. County of Chester*, 1995; *Maharg, Inc. v. Van Wert Solid Waste Management District*, 2001; *Houlton Citizens' Coalition v. Town of Houlton*, 1999);

- state and local government regulations requiring residents to subscribe to solid waste collection and disposal service provided by State, municipality or exclusive contractor, provided exclusive contractor is selected by open, fair and competitive bid process (*Sal Tinnerello & Sons v. Town of Stonington*, 1998; *Houlton Citizens Coalition v. Town of Houlton*, 1999).

Finally, flow control strategies which may be permissible, but remain subject to a degree of continuing controversy include:

- state and local government flow control regulations requiring haulers to collect and transport solid waste collected within a given municipality and destined for in-state disposal to a designated private facility, provided the requirement does not apply to waste destined for out-of-state disposal (*Ben Oehrleins & Sons & Daughter v. Hennepin County*, 1997; *United Waste Systems of Iowa, Inc. v. Wilson*, 1999; but see *U&I Sanitation v. City of Columbus*, 2000);
- local government flow control regulations requiring that all or part of solid waste generated within the municipality be directed to publicly owned facilities (*United Hauler Association v. Oneida-Herkimer Solid Waste Management Authority*, 2001; but see *Waste Management of Tennessee v. Metropolitan Government of Nashville & Davidson County*, 1997).

Although the precise contours of the Commerce Clause are not always easy to discern, it is at least clear that the Constitution does not deprive the State or its political subdivisions of the power to regulate the solid waste hauling and disposal industries. Moreover, the range of options available to address market power problems without offending the Commerce Clause is relatively broad. For example, the State could

legitimately consider a provision imposing a moratorium on acquisitions of solid waste assets within the State by vertically integrated companies, or requiring divorcement of hauling and disposal operations. Other states have required analogous divestiture of retail outlets by petroleum refiners. (See *Exxon Corp. v. Governor of Maryland* [1978], where a petroleum divorcement measure was upheld over due process and Commerce Clause challenges)

Commerce Clause jurisprudence affecting the solid waste industry remains a work in progress, so this summary is necessarily provisional and incomplete. However, the overall impact of this jurisprudence on competition in solid waste markets has probably been marginal. The central tenet of dormant Commerce Clause doctrine is the prohibition against protectionist measures. To the extent they have been faithful to this purpose, the courts have sought to preserve competition in interstate markets. Where competition is waning, or competitive markets have failed to adequately address the considerable problems posed by solid waste management, state and local governments appear to retain a workable range of policy options.

Flow control has been a particular issue with respect to “put-or-pay” commitments made by communities before constitutional issues arose with regard to flow control. Communities may face significant penalties if they committed to sending commercial waste to a particular plant, and that waste goes somewhere else. The issue is similar for communities that build large disposal facilities, such as waste-to-energy incinerators, on the assumption that they could direct commercial waste to the facility.

Even so, communities with put-or-pay commitments or large dedicated disposal facilities are not without options. A community can subsidize commercial disposal at the

contracted facility. This makes economic sense for communities facing a put-or-pay penalty. For example, consider a town that faces a \$50 per ton penalty for falling below its contracted volume. Suppose that the disposal cost at the contracted site is \$50, while commercial customers are offered \$40 per ton at another site. The town would provide a subsidy of \$11 per ton to commercial customers, which lowers the effective rate to \$39 at the contract site for commercial customers. It is preferable to pay the subsidy of \$11/ton than the penalty of \$50/ton. When a municipally-owned disposal facility lowers its fees to compete for commercial customers, the lower price is economically identical to the subsidy above. Another option would be for the community to shift the entire cost of waste management to the municipal budget by collecting both residential and commercial waste in its community.

Towns are understandably distressed that their best response to the loss of flow control is to lower the revenues from commercial customers and to shift more of the cost of disposal onto the property tax base. One can debate the equity of this shift. In some cases, commercial fees under flow control were greater than the fees for municipal residential waste. In such cases, the effect of flow control was to create a local municipal monopoly that raised prices in the commercial market. But many communities entered into put-or-pay contracts that specified the same price for municipal and commercial waste. The communities were not attempting to subsidize local residential disposal from commercial disposal. Their volume commitment may have been an effort to insure that their businesses would have access to disposal at predictable rates. Perhaps unknowingly, these communities were accepting the risk that flow control would be invalidated at the same time competitive disposal fees fell. The owners of commercial

disposal sites may have understood the risks and thus negotiated a risk-sharing arrangement to their benefit.

Under one circumstance, market power issues may arise with respect to put-or-pay contracts. A vertically integrated firm with more than one disposal site may be able to manipulate its put-or-pay contracts with municipalities to its benefit. Consider the following example. Before flow control was called into question, a municipality Anytown passes an ordinance requiring all solid waste generated within the municipality to be hauled to Incinerator A. Anytown then enters a put-or-pay contract with Vertically Integrated, Inc., the owner of Incinerator A, pursuant to which

- all residential waste, comprising 40% of the tonnage generated within Anytown, will be tipped at Incinerator A for a fee of \$50/ton, to be paid by the municipality;
- all commercial waste, comprising 60% of the tonnage generated within Anytown, will be tipped at Incinerator A pursuant to the flow control ordinance for a fee of \$50 per ton, to be paid by the hauler;
- to the extent Incinerator A receives less than 100% of the tonnage generated within Anytown, the municipality will pay \$50/ton for each ton by which it falls short of its commitment.

Legal decisions prevent Anytown from enforcing its flow control ordinance. VI, Inc., a commercial hauler that is a subsidiary of Vertically Integrated, begins to haul commercial waste from Anytown to Landfill B, a second disposal facility also owned by Vertically Integrated. Thus, Vertically Integrated is able to charge twice for the same waste -- receiving payment once from the town at Incinerator A, and once from the hauler (and through the hauler, from commercial customers) at Landfill B.

Vertically Integrated, Inc. is uniquely situated to profit by diverting commercial waste from one disposal site to another. While a non-vertically integrated firm might

compete for commercial waste and so cause put-or-pay penalties to be incurred, it does not realize a competitive advantage from those penalties. Vertically Integrated does receive the benefit of those penalties, and thus has a competitive advantage in competing with other firms for commercial waste. The diversion of the waste in this scenario may therefore be described as an exercise of vertical market power. (Of course, two firms could collude to accomplish this effect, but such collusion would clearly violate Section 1 of the Sherman Act.)

A legislative remedy could be enacted to bar any company from receiving both payment for delivery of waste to one facility and at the same time a penalty for its non-delivery to another facility under put-or-pay contracts signed prior to some date. As we discuss in the following section, there seems no legal or constitutional difficulty with a limited regulatory intervention of this nature.

Federal legislation has been proposed to provide communities with a limited exemption to enforce flow-control ordinances signed prior to 1994 if the community had built a disposal site or had signed a long-term contract on the basis of the flow control ordinance. Such exemptions would be limited to the life of the facility or contract. While such relief seems a plausible response to the circumstances, it has not been enacted. States that want broader authority to control out-of-state waste have tied support for this limited relief to the broader and more contentious issue of limits on importation of waste.

Impairment of contracts and takings issues

Two other federal constitutional provisions have formed the basis for occasional challenges to regulations affecting the solid waste hauling and disposal industry: the

contract clause and the takings clause. Each has a counterpart in the state constitution that is interpreted in accordance with federal case law (*Clark v. Rust Engineering Co.*, 1991, with regard to the contract clause; *MC Associates v. Town of Cape Elizabeth*, 2001, with regard to the takings clause).

The federal contract clause provides in seemingly absolute terms that “[n]o state shall...pass any...law impairing the Obligation of Contracts.” However, the courts have made clear that this language does not absolutely prohibit the impairment of private or government contracts. Rather, “there is a need to harmonize the command of the [c]lause with a state’s police power to protect its citizens” (*Sal Tinnerello & Sons v. Town of Stonington*, 1998). To justify a challenge to a police power regulation, the complaining party must demonstrate that the resulting contractual impairment is substantial.

Moreover, the impairment will not be considered substantial if the regulation was reasonably foreseeable. (See *Houlton Citizens Coalition v. Town of Houlton* [1999, at 190]: “they would have had to be troglodytes not to have known that the waste collection and disposal industry is subject to fairly pervasive regulation.”) Even if this hurdle is passed, the law will be upheld if it is shown (a) that its provisions serve a significant public purpose; and (b) that the means chosen to accomplish that purpose are reasonable and appropriate (*Houlton Citizens Coalition v. Town of Houlton*, 1999).

Among the provisions upheld in recent contract clause challenges are flow control ordinances that effectively terminated contractual relationships with municipal residents (*Sal Tinnerello & Sons v. Town of Stonington*, 1998; *Houlton Citizens Coalition v. Town of Houlton*, 1999). Thus, a regulatory measure must be demonstrably arbitrary before it will be struck down under the state or federal contract clause. Measures designed to

address market power problems by placing restrictions on the enforceability of certain contract provisions (e.g., “evergreen” clauses) are, accordingly, unlikely to encounter constitutional difficulties.

The standards governing a claim of a regulatory violation of constitutional takings provisions are similar. The federal takings clause prohibits the taking of “private property ... for public use, without just compensation.” In evaluating a claim of regulatory taking, courts “weigh ... the character of the government action, its economic impact on the plaintiff, and the degree to which it interferes with the plaintiff’s reasonable, investment-backed expectations” (*Houlton Citizens Coalition v. Town of Houlton*, 1999, at 190). A reasonable exercise of the state’s police power whose purpose is the public welfare and whose chosen means bears a rational relationship to the intended goal is likely to survive constitutional attack. (See *Maine Beer & Wine Wholesalers v. State*, 1993.) Flow control ordinances and related exclusive hauling contracts are no more likely to run afoul of the takings clause than they do of the contracts clause (*Houlton Citizens Coalition v. Town of Houlton*, 1999). See also *Tri-State Rubbish, Inc. v. Waste Management, Inc.* (1993), which held that government can for public purposes impose general regulations that may severely limit the value of an ongoing business without compensation. A provision that survives scrutiny under the contracts clause, accordingly, is unlikely to be seriously jeopardized by a takings clause challenge.

Chapter 4

Maine's Solid Waste Industry

In 1999, Maine generated over 1.4 million tons of MSW and another 240,000 tons of CDD (see Table 4). Both of these streams have grown substantially since 1991, with 25% growth in MSW and 200% growth in CDD. Increased recycling has almost exactly offset the growth in MSW, so the total tonnage of MSW that is incinerated or landfilled has remained roughly constant. There has been a clear shift from landfill disposal of MSW to incineration. Part of the growth in CDD no doubt reflects a building boom associated with the strong economic growth of the 1990s. But much of the apparent growth in CDD almost certainly results from changes in disposal patterns of CDD. In the past, a large share of CDD disposal was through alternatives to licensed disposal sites, such as being burned, used as fill, or dumped in old gravel pits. As stricter environmental regulation has reduced options for CDD, more finds its way to licensed disposal sites.

Chapter 4 assembles the available information on Maine's disposal and collection industries. This information includes identification of major participants and historical information on pricing. The final section of the chapter discusses how state antitrust enforcement has affected the industry.

Table 4
Trends in Maine's MSW and CDD Flows

	1991		1995		1999	
	<u>MSW</u>	<u>CDD</u>	<u>MSW</u>	<u>CDD</u>	<u>MSW</u>	<u>CDD</u>
Incinerated	458,480		539,637		669,845	
Landfilled*	305,165	42,000	89,590	77,802	91,201	159,065
Recycled	319,635	38,260	538,485	18,311	645,152	39,469
Exported	82,210	**	60,456	15,072	50,862	40,412
Totals	1,165,490	80,260	1,327,960	111,185	1,457,060	238,946
Generated - tons	1,245,750		1,339,353		1,696,006	

* includes only unprocessed solid waste tonnage delivered

** figures for 1991 do not separate CDD from MSW in exported tonnages

Source: State Planning Office

Disposal sector

Waste disposal in Maine involves four waste-to-energy incinerators, two commercial landfills, seven municipal landfills, two municipal special waste (ash) landfills, twenty-four municipal CDD sites, six commercial CDD sites, and out-of-state disposal at two landfills in New Hampshire and at two landfills in New Brunswick.

Table 5 summarizes how MSW from municipalities in 2000 was distributed among these different disposal categories. (This information is based upon tonnage only for MSW reported by municipalities, and therefore does not include most commercial waste. The percentage data should roughly reflect the shares for the entire waste stream.)

Roughly 70% of the MSW went to the four waste-to-energy incinerators. The remaining 30% went to a variety of landfills. Note that these percentages do not include ash, FEPR, CDD and bulky goods, or materials that were recycled. As discussed earlier, this heavy reliance on waste-to-energy incinerators is a direct result of Maine policy in the late 1980s that strongly favored waste-to-energy incinerators.

Table 6 indicates that the pattern is completely different for CDD and bulky waste. Of the total CDD/bulky waste stream in 2000, 85% went to landfills. Note from Table 4, that the tonnage of CDD landfilled exceeds the tonnage of MSW that is directly landfilled. CDD is generally less dense than MSW, so it consumes more landfill space per ton. When comparing these flows, note however that the tonnage of ash and FEPR from incinerators would exceed the CDD tonnage. But it is clear that the growing stream of CDD and bulky goods to licensed disposal facilities represents a very significant demand on remaining landfill capacity. Of course, much of the CDD stream goes to the 24 municipal CDD disposal sites (below), where the capacity is specifically for CDD.

Table 5
Disposal Shares for Maine's Residential MSW
2000

	<u>Percent</u>
Waste-to-energy plants	69%
Commercial landfills	7%
Municipal landfills	14%
Disposal in New Hampshire	3%
Disposal in New Brunswick	3%

Source: Maine State Planning Office, 2000. Note that figures do not add to 100% because some towns use more than one disposal method and some or all of their waste is not attributed to these categories.

Table 6
Disposal Shares for Maine's Bulky Waste
2000

	<u>Percent</u>
Waste-to-energy	15%
Landfill	<u>85%</u>
Total	100%

Source: Maine State Planning Office, 2000.

Waste-to-energy incinerators. Maine has four waste-to-energy incinerators with a total annual capacity of 760,000 tons of MSW (see Table 7). Penobscot Energy Recovery Corporation (PERC) is a commercial incinerator with ENI/NRG Energy as the general partner. Its limited partners include towns in the Municipal Review Committee, ENI, and SET PERC Investment, LLC. Maine Energy Recovery Corporation is a commercial facility owned by Casella. Regional Waste Systems (RWS) and Mid-Maine Waste Action Corporation (MMWAC) are public entities owned by groups of municipalities. RWS has 21 member communities in the greater Portland region and York County. MMWAC has 12 member communities in the Auburn area.

Table 7
Maine's Waste-to-energy Facilities

<u>Facility</u>	<u>Owner(s)</u>	<u>Annual Capacity (tons)</u>	<u>Type</u>	<u>Ash Disposal</u>	<u>Year Incinerator opened</u>
Maine Energy Casella		250,000	RDF	Crossroads	<u>1987</u>
PERC	ENI/NRG , MRC towns, SET	270,000	RDF	PTL	1988
RWS	RWS	170,000	Mass burn	RWS	<u>1988</u>
MMWAC	MMWAC	70,000	Mass burn	Lewiston	<u>1992</u>

RDF: Refuse-derived fuel

Source: Capacity data from State Planning Office, 1998, p. 41

Maine has two types of incinerators: mass burn and refuse derived fuel. In a mass burn unit, all the waste that is small enough to go through the incinerator door is burned. In a refuse-derived fuel unit, the waste is first processed to remove some material with low BTU value. The removed material includes metals, organics, and glass. As a result of the removal of some of the waste, the waste stream going into the incinerator provides a better fuel. The metals that are removed are sold into recycling markets. The glass and grit removed prior to burning is called “front end process residue” or “FEPR”. This FEPR is essentially a kind of ground-up MSW and is landfilled. FEPR is sometimes used by landfills as a filling layer between MSW and the final layer of soil that encloses the landfill. Using FEPR as part of the landfill cover reduces the amount of soil required and is therefore often accepted by landfills at fees below ordinary MSW. Prior to 1999, FEPR was also used to shape old, closed landfills

before the final layer of soil was added. Both types of incinerators also generate a stream of “non-processibles”, such as furniture that is too large for the equipment to handle.

Like bulky waste and CDD, most non-processible material is landfilled.

All incinerators generate bottom ash and fly ash that requires disposal, and the refuse derived fuel units generate FEPR that requires disposal. Therefore, the markets for disposal of ash and FEPR are important to the economics of these plants. Ash is a special waste that requires somewhat higher landfill standards than MSW. Because ash is denser than MSW, a ton of ash requires less landfill space than a ton of MSW.

Each of the four waste-to-energy incinerators has different arrangements for its ash. PERC uses Pine Tree Landfill (PTL, owned by Casella; formerly SERF, Sawyer Environmental Recovery Facility). MMWAC has an agreement with Lewiston whereby MMWAC takes Lewiston MSW at a price of \$42.50/ton and Lewiston accepts MMWAC ash at its landfill for \$40.00/ton. The two revenue streams are approximately the same, so Lewiston essentially provides MMWAC with ash disposal in return for accepting about the same tonnage of its MSW. Because ash takes less space than an equivalent tonnage of MSW, Lewiston is extending the life of its landfill under this arrangement. RWS has its own landfill in Scarborough. Maine Energy currently sends its ash to WMI’s Crossroads landfill.

The two existing commercial waste-to-energy incinerators, Maine Energy and PERC, are granted an exemption under Maine’s ban on new commercial landfills to develop landfills for ash (and only for ash) under the standard environmental siting process. This special consideration is probably unimportant, however. An ash-only site for one incinerator will have higher costs than a larger special waste landfill, because

disposal volumes would be low. Casella, Maine Energy's owner, has access to its own landfill capacity at PTL and at out-of-state landfills. Given PERC's financial ties to MRC communities (see below), PERC and the MRC communities would probably find it advantageous to develop a municipal special waste landfill rather than a stand-alone ash site, were PERC to need additional ash disposal.

While PERC is a commercial incinerator, it has a special contractual relationship with the Municipal Review Committee (MRC). When PERC opened in 1988, it entered into contracts to provide waste disposal to communities in eastern Maine at very favorable rates. In 1990, after two years of operation, PERC announced that it could not honor those contracts and asked the municipalities to enter into contract renegotiations. The municipalities were not pleased with the prospect of higher disposal fees, but few options were available to them. The municipalities formed the MRC to negotiate with PERC, and the MRC has represented the interests of area communities with PERC since then. As a result of the 1990 renegotiations, the municipalities did agree to higher fees, but obtained a "performance credit" from PERC that allowed municipalities to share in any profits that the plant might generate. The MRC currently has 114 members, including municipalities, counties, waste districts and interlocal waste agreements, that represent 162 municipalities and counties.

In 1998, Bangor Hydro-Electric asked PERC and MRC to renegotiate PERC's electric contract. This renegotiation was part of an effort by Maine's utilities (in conjunction with regulators and the Legislature) to reduce the cost of alternative energy contracts. A central feature of the renegotiations was the use of public debt to replace the private debt of energy producers. Public debt has a lower interest rate than private debt,

because interest on state bonds is not subject to federal income taxes. The interest saved by refinancing can be used to reduce electric rates. In PERC's case, debt repayment was also extended by 14 years, from 2004 to 2018, thus lowering current debt payments.

PERC's financial structure was again altered when the electric contract was renegotiated. The MRC obtained the option for its members to become limited partners in PERC by pre-paying part of the bond debt. MRC towns currently own 21% of PERC and may purchase up to 50%. The MRC towns also have the option to purchase the PERC plant in 2018. The MRC communities, in turn, entered into put-or-pay agreements to deliver minimum MSW tonnages to PERC to insure financing by the Finance Authority of Maine (FAME). Under the terms of the agreement, PERC, MRC members, and Bangor Hydro shared the future performance credits equally.

Both MRC communities and the PERC partners received warrants to purchase Bangor Hydro stock at \$7.00 per share. These warrants had a value of approximately \$16 million for MRC communities when Emera purchased Bangor Hydro in 2000. At that point, there were 90 MRC members representing 116 municipalities; these members were designated as "Equity Charter Municipalities". These warrants were converted into a promissory note from Bangor Hydro to the MRC to be paid over seven years. The MRC has used the proceeds of the promissory note along with the performance credits to maintain an effective rate of \$45/ton for Equity Charter members. Funds above those needed to maintain the \$45 per ton rate are invested in PERC through repurchase of the outstanding bonds. Members who joined the MRC after July 1, 2000, were designated as "New Charter Municipalities"; there are 24 New Charter members representing 46

municipalities and one county. These New Charter members qualify for a rate that is 120% of the Equity Charter rate, which yields a current disposal rate of \$54/ton.

Prior to 1999, KTI was operator and majority general partner in PERC and Maine Energy. Energy National, Inc. (ENI) was the minority general partner. The plant also had ENI and SET PERC Limited, LLC, as limited partners. ENI is a wholly owned subsidiary of NRG Energy, a wholly owned subsidiary of Xcel Energy, a large publicly traded energy firm. When Casella acquired KTI in 1999, concerns were raised about the impact on competition in eastern Maine. Casella already owned the Sawyer Environmental Recovery Facility (SERF) (now PTL) and was the dominant hauler in eastern Maine in 1999. The Maine Attorney General entered into a consent decree to address some of the concerns (discussed in detail below).

In January 2000, the MRC filed a suit against PERC alleging that PERC had agreed to pay SERF too much for disposal of residues. ENI, the other partner in PERC, essentially supported the MRC's claims. Casella disputed the claim. The suit was settled in March 2001. The settlement included a five-year contract with a 33% reduction in disposal fees. Also in March 2001, Casella agreed to sell its interest in PERC to ENI/NRG Energy, while ENI/NRG Energy sold its interest in Maine Energy to Casella.

The waste-to-energy incinerators are required to file annual financial reports with the State Planning Office. In Table 8, the revenues per ton from electric revenues and from all other sources (which includes tipping fees and sales of recovered materials, such as metals) are summarized. Note that the 1995 data is missing one plant and therefore is not comparable to other years. In particular, the apparent increase in electric revenue per ton in 1995 is due to omitted data. In the early 1990s, tip fees at incinerators increased

substantially as it became clear that the early contracts for incineration were too optimistic. This is reflected in the 30% increase in other revenue per ton between 1992 and 1996. The renegotiation of electric contracts is reflected in the decline in electric revenues per ton after 1998. The renegotiation of electric contracts had only a small impact on tipping fees, because most of the reduction in electric revenue was offset by reductions in debt service. However, part of the renegotiation for some incinerators did involve trading lower electric prices (and hence higher tipping fees) in early years for higher electric prices (and hence lower tipping fees) in later years. That is, there were elements of rate stabilization for both electric rates and tipping fees implicit in the renegotiated contracts. Part of the increases in recent years reflects this rate stabilization.

Table 8
Summary of Waste-to-Energy Plant Revenues
1992-2001
(\$/ton)

Year	Other Revenue <u>per Ton</u>	Electric Revenue <u>per Ton</u>
1992	\$38.86	\$82.90
1993	\$43.02	\$70.32
1994	\$47.56	\$71.15
1995	\$45.32	\$81.91
1996	\$51.50	\$56.99
1997	\$51.82	\$48.39
1998	\$57.82	\$52.48
1999	\$57.58	\$48.26
2000	\$54.41	\$47.37
2001	\$59.84	\$43.10

Note: 1995 data is incomplete, as data is missing for one firm.

Source: Derived from annual reports filed with State Planning Office.

Landfills. Maine has two commercial landfills, seven municipal landfills for MSW, two municipally-owned special waste (ash) disposal landfills, 24 municipal CDD disposal sites, and 6 commercial CDD disposal sites (see Tables 9 and 10).

Pine Tree Landfill (PTL), a commercial landfill in Hampden that predates the ban on new commercial facilities, has been used for ash, FEPR, CDD, and incinerator non-processibles. Pine Tree Landfill has recently received permission to expand the landfill capacity by 3.1 million cubic yards. Under the expansion license, PTL may take MSW only from Maine's four incinerators. This may consist of MSW bypassed from PERC or MERC under municipal contract; or MSW from an entity with an interruptible contract with PERC, or work deliveries in excess of processing capacity from any of the incinerators. The amount of MSW that PTL may take from MERC is currently capped at 310,000 tons. (Litigation with the Town of Hampden that had delayed final action on the expansion has now ended.) Because of the physical limitations at the site, this expansion is expected to be the last major expansion of the Pine Tree Landfill. PTL is owned by Casella, the sixth largest U.S. waste management firm, with operations in New England and New York.

The Crossroads Landfill, in Norridgewock, is also a commercial facility that was licensed prior to the current ban on new commercial waste facilities. Crossroads accepts MSW, CDD, FEPR and special waste, including incinerator ash. A 4,000,000 cubic yard expansion of the Crossroads facility was recently approved. Crossroads Is owned by WMI, the largest waste management company in the U.S.

Table 9
Landfills for MSW and Ash Disposal in Maine

Location	Licensee	Permit year	Capacity	Life
<u>Municipal landfills</u>				
Augusta	City of Augusta	1991	586,000 CY	6 yrs.
Bath	City of Bath	1982		11-20 yrs
Brunswick	Town of Brunswick	1983, 1991	1,055,000 CY	20 yrs.
Fort Fairfield	Tri-Community Landfill	1995	1,176,000 CY	18-26yrs.
Moosehead Junction Twp.	Town of Greenville	1985, 1995	72,800 CY	40 yrs.
Presque Isle	City of Presque Isle	1981, 1994	682,650 CY	30 yrs.
West Forks	Caratunk, Forks, West Forks	1989, 1997	38,000 CY	40 yrs.
<u>Commercial Landfills</u>				
Hampden	Pine Tree Landfill	1998	3,300,000 CY	15-20 yrs.
Norridgewock	Waste Management Disposal Services of Maine, Inc.	1985, 1995	4,410,000 CY	10 yrs.
<u>Municipal Special Waste (Ash) Landfills</u>				
Lewiston	City of Lewiston	1989	801,800 CY	11 yrs.
Scarborough	Regional Waste Systems	1986	755,000 CY	9 yrs.

Source: Maine Department of Environmental Protection website

The legislation that banned new commercial waste disposal facilities also specified limits on expansion of the existing commercial landfills. The two landfills are allowed to expand onto contiguous land that was owned prior to December 31, 1989, if that land is suitable for landfill space. One option that could increase future landfill capacity in Maine would be to modify the exemption to expand the two existing commercial landfills to include adjacent property acquired within some period after 1989. Both facilities apparently own land that might qualify as adjacent but purchased after 1989. The general assessment is that such expansion is likely to be more feasible at Crossroads than at PTL.

Two municipal landfills are used for ash disposal. RWS has a landfill in Scarborough for its own ash needs. This facility is the subject of a currently pending application for expansion which, if approved, would add 1.4 million cubic yards of capacity. The Lewiston landfill is licensed for MSW, CDD, and special waste. It is currently used to dispose of ash from MMWAC and for CDD/bulky waste. Under the contract between MMWAC and Lewiston, Lewiston sends its MSW to MMWAC. (Lewiston is not a member of MMWAC.)

Seven additional municipal landfills accept MSW. Six of these the facilities in Bath, in Brunswick, at Hatch Hill in Augusta, in Presque Isle, in West Forks, and Greenville's facility in Moose Township, are located at sites where municipalities had operated older landfills. One, the Tri-Community Landfill, is a new facility that opened in 1995.

Table 10
CDD Disposal Sites

Location	Licensee	Permit year	Capacity	Life
<u>Municipal CDD Sites</u>				
Baileyville	Town of Baileyville	1996	155,428 CY	40-117 yrs.
Blue Hill	Town of Blue Hill	1984, 1994		11 yrs.
Brewer	City of Brewer	1994	100,000 CY	5 yrs.
Brunswick	Town of Brunswick	1984 (Expired, Applying)		
Corinna	Mid-Maine Solid Waste Ass'n.	1989, 1996		30 yrs.
Corinth	Central Penobscot Solid Waste	1995	130,060 CY	84 yrs.
Dover-Foxcroft	Town of Dover-Foxcroft	1995	80,000 CY	20-25 yrs.
Freeport	Town of Freeport	Schedule of Compliance		2 –3 yrs.
Glenburn	Town of Glenburn	1973, 1993	16,500 CY	
Greenbush	Town of Greenbush	1995	30,445 CY	47 yrs.
Kittery	Town of Kittery	1992		
Limestone	Loring Development Auth.	1999	36,000 TONS	18 mths.
Marion Twp.	Marion Transfer Station, Inc.	1999	120,000 CY	20 yrs.
Mechanic Falls	Town of Mechanic Falls	1992	61,000 CY	41 yrs.
Norway	Norway-Paris Solid Waste	1992		
Oakland	Town of Oakland	1994	257,000 CY	43 yrs.
Old Town	City of Old Town	1990, Renewal Pending		
Orono	Town of Orono	1995	110,600 CY	30.2 yrs.
Rangeley	Town of Rangeley	Renewal Pending		
Camden/Rockport	Mid-Coast Solid Waste Corp.	(license decision pending)		
Waldoboro	Town of Waldoboro	Renewal Pending		
Yarmouth	Town of Yarmouth	(application pending)		
Kittery	Town of Kittery	1994		
Milo	Penquis Solid Waste Corp.	1999	79,000 CY	20 yrs.

Source: Maine Department of Environmental Protection website

The Tri-Community landfill is a quasi-municipal entity established by an interlocal agreement between Caribou, Fort Fairfield, and Limestone. It serves an additional 35 communities in northern Maine. Tri-Community is licensed to accept some special waste, such as contaminated soil and sand blast sand. Although not currently licensed to accept incinerator ash, it could probably be licensed for that disposal if some operational changes were made.

Maine has 24 municipal CDD sites; currently, no commercial CDD sites are in operation¹ (see Table 10). Virtually all of these sites are less than six acres in size. Municipal CDD landfills under six acres are subject to less stringent regulatory standards than larger CDD sites or MSW sites. As CDD options have diminished and CDD/bulky goods waste streams grow, municipalities have opened new CDD landfills. It seems likely that additional municipal and perhaps commercial CDD sites will be constructed in the future.

Collection and hauling

The collection and hauling of MSW and related waste streams includes several somewhat distinct services, including private curbside collection, municipal and municipally-contracted curbside collection, commercial canister (dumpster) collection, compactor service, roll-on/roll-off service, hauling from transfer stations to disposal sites, and hauling of ash/FEPR/incinerator overflow. Because many small firms are involved in this industry, collection and hauling cannot be delineated as completely as disposal. It is probably impossible to assemble an authoritative list of who is engaged in collection and hauling of MSW and CDD at any given point in time. While a state license is required to transport MSW, that license is so broad that many firms not involved in hauling MSW or CDD for hire are licensed.

Collection and hauling market participants. This sector is relatively diverse, and includes both a large number of small firms and a few large entities. The available data indicates that the two largest firms in collection and hauling are Casella and WMI and suggests 50%-65% as a reasonable estimate for their share of MSW collection in most

¹ Per conversation with Paula Clark, Director, Division of Solid Waste Management, Department of Environmental Protection.

areas of Maine. There are some regional differences in the relative shares of these two firms and also in the market share of smaller participants.

Private curbside collection involves a large number of firms, many very small. Particularly in areas without municipally-supplied curbside collection, many small owner-operators collect small volumes of trash and haul it to a transfer station. Because the scale of operation is so small, entry and exit is common. It is not possible to identify all those serving this part of the market.

Municipal reports provide data on firms that contract to provide municipal curbside collection. Of Maine's population, 30% lives in communities with curbside collection by private firms under municipal contract and another 16% lives in communities where municipal employees provide curbside collection. Table 11 presents data derived from municipal reports submitted to the State Planning Office for 2000. In Table 11, the populations of the towns are used as a proxy for the volume of MSW collected. The first column in Table 11 expresses each company's share as a percent of all contracts for municipal collection; the second column expresses each company's share as a percent of total population served by curbside pickup, including collection by municipal employees.

Table 11
Population Weighted Shares of Municipal Curbside Collection Contracts
2000

<u>Company</u>	<u>% of Contracted Collection</u>	<u>% of Total Collection</u>
Casella	46%	30%
WMI	9%	6%
BBI Waste	7%	5%
Bestway Disposal	6%	4%
Griffin	6%	4%
Archie's	5%	3%
Herrick	5%	3%
Others (14)	16%	10%
Municipal	---	34%
Total	100%	100%

Source: Calculations by authors from municipal annual reports submitted to the State Planning Office . Percentages based upon populations of towns served

The owners of Maine's two commercial landfills, Casella and WMI, together provide over half the curbside collection contracted by municipalities, or slightly more than one-third of total collection (when municipal employee collection is included). There are five additional firms with at least 5% of municipal contract collection and 14 smaller firms. Until recently, WMI did not serve eastern Maine and thus did not compete for municipal curbside collection there. Casella accounts for slightly over 50% of municipal contracted curbside collection in eastern and northern Maine.

Firms providing small commercial container service require investments in containers and collection trucks. The minimum investment is above that required for simple curbside collection. While there are fewer participants in the commercial container business, it is still possible for a relatively small firm to enter with a few containers and a back-loading truck, which might also be used in curbside collection.

There is no centralized data on this sector, and direct survey of the participants is likely to be seriously biased by non-response, particularly from smaller firms (who may not even be identified).

We did attempt to obtain data from disposal sites on volumes delivered by individual commercial haulers. This approach has some inherent limitations, because not all loads of commercial waste delivered to disposal sites are billed to the hauler. For example, some towns are billed for disposal of commercial waste from their communities. In other cases, the generating firm may be billed directly. Large institutions like hospitals often negotiate disposal contracts directly and then seek separate bids for hauling. And material delivered to transfer stations cannot be captured from disposal site information.

Despite these inherent limitations, data from the disposal sites is the only feasible way to assess the hauling market. We asked the four incinerators and the Crossroads landfill to provide any available data on deliveries of commercial MSW. (PTL did not accept MSW at that time.) RWS and MMWAC responded. Some data from a one-time survey at Tri-Community Landfill was also available. Casella and PERC indicated that their accounting systems did not allow them to generate such information. WMI did not provide data.

Data submitted by RWS appears in Table 12. The RWS data show that in its fiscal year 1992- 93, there was one large hauler (the old WMI, with nearly a 40% share) and an additional six firms with at least a 5% share. By 2000- 01, three firms, WMI, Pine Tree (Casella), and Troiano, account for virtually all the commercial waste disposed at RWS. This concentration has occurred largely because of mergers, such as Casella's

acquisitions of Pine Tree, Enviropac and Yarmouth Rubbish Removal, United's acquisition of Harris, and WMI's subsequent acquisition of United Waste. One independent, Troiano, has substantially increased its share of deliveries to RWS during this period.

MMWAC reported that for its 2001 fiscal year, Casella and WMI accounted for 76% of the waste hauled to its facility by commercial haulers.

The 2000 Legislative Task Force asked the State Planning Office to work with Tri-Community landfill to obtain data on deliveries for a period in 2000. The results of that sampling are reported in Table 13. Boyds, a Casella unit, delivers all waste from Houlton to Tri-Community under a contract with the town. This accounts for about 40% of the Tri-Community receipts during the sample period. Outside of Houlton, no single firm has a large share of Tri-Community area waste.

New entry in collection and hauling. Because there are no unique licensing requirements for firms that enter commercial collection and hauling, new entrants are not easily identified. Entry at a very small scale is possible, such as a single small truck that collects curbside. Existing trucking firms can readily enter services such as roll-on/roll-off or hauling for transfer stations as a sideline to other trucking businesses. The assets involved in collection and hauling are easily moved to other locations or sold for other uses, so exit from a market is also easy. This makes it very difficult to identify exactly who is active in collection and hauling.

Table 12
RWS Hauler Shares
FY 92/93 to FY 00/01

	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01
	% of total	% of total	% of total	% of total	% of total	% of total	% of total	% of total	% of total
Astro	11.35%	12.05%	13.24%	8.93%	10.34%	10.29%	5.43%	0.00%	0.00%
BFI	2.40%	3.16%	6.98%	7.50%	4.27%	3.45%	0.00%	0.00%	0.00%
Carey	5.26%	4.84%	4.72%	1.21%	1.94%	1.49%	1.56%	0.65%	0.42%
Coadco	0.00%	0.00%	0.00%	1.14%	1.19%	0.58%	0.00%	0.00%	0.00%
Enviropac	8.91%	9.72%	5.38%	3.75%	14.65%	13.24%	0.00%	0.00%	0.00%
Harris	6.58%	6.01%	6.45%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
United Waste	0.00%	0.00%	0.00%	9.64%	11.09%	7.78%	1.56%	0.00%	0.00%
Herrick	2.19%	2.04%	1.73%	0.76%	1.70%	1.52%	1.12%	1.94%	3.36%
McCormick	0.81%	0.80%	0.90%	1.13%	0.61%	0.49%	0.51%	0.51%	0.53%
Pine Tree	0.00%	0.00%	0.00%	0.00%	0.00%	8.57%	24.23%	28.84%	23.64%
WMI	38.99%	36.54%	38.31%	45.53%	25.67%	25.59%	37.19%	39.80%	35.24%
Troiano Waste	13.46%	16.13%	17.97%	16.17%	21.24%	20.77%	24.48%	28.01%	36.82%
Yarmouth Rubbish	10.04%	8.71%	4.31%	4.24%	7.30%	6.24%	3.93%	0.26%	0.00%
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Provided by RWS.

Table 13
Commercial Deliveries to Tri-Community Landfill
2000 (partial year)

<u>Hauler</u>	<u>Share (%)</u>
Adams	7
Bob's	<1
Boyd's (Casella)	41
Bouchard	3
Brooker	1
City Sanitation	5
Crown of Maine	8
Deschaine	2
Gary's Sanitation	1
Gil's Sanitation	1
Landeen	2
Maple Grove	5
McNeal's	10
Saucier	6
Searles	2
Star City	<1
Residential	6

Source: Maine Legislature Task Force, 2000, Appendix D.

We invited the largest disposal sites to identify firms that they believed to be new entrants within the last five years. Data submitted by RWS did not indicate new entry in the past five years (see Table 12). Casella responded to our request with a list of 26 firms. (PERC also identified a few of the entrants identified by Casella.) Table 14 lists nine firms for whom we verified entry had occurred since 1990. (Of the remaining 16 identified by Casella, five had been in business prior to 1990, two did not handle solid waste, and nine we were unable to contact.)

The level of entry into the industry is consistent with our earlier conclusion that financial and technical barriers to entry are low. The type of entry is varied. Some firms

have entered the full range of collection and hauling services. Some firms have entered only the curbside and container business. As suggested in the economic analysis, entry by construction firms into roll-on/roll-off and hauling from transfer stations seems relatively easy.

There seems to have been significant interest in entry into the greater Bangor and eastern Maine areas in recent years. In addition to the entrants in Table 14, Waste Management has extended its service territory into eastern Maine, where it had not previously operated. The consent decree with Casella, which places limits on the use of restrictive customer contracts by Casella (see below), makes it easier for new entrants to secure customers in eastern Maine. Moreover, in 2001, Casella sold its interests in PERC and thus ended Casella's strong vertical integration in eastern Maine. These significant changes in market conditions may have generated increased interest in entry in eastern Maine.

Vertical integration of disposal and hauling. Vertical integration has been an important development in the waste management industry in Maine. The owners of Maine's only two commercial landfills, Casella and WMI, are also the two largest firms in collection and hauling, by a significant margin. Casella now owns Maine Energy and had a financial interest in PERC during 1999-2001. These two firms also have a strong market presence in other New England states. This increasing vertical and horizontal integration is typical of changes in the national waste management industry.

Table 14
New Entrants in Hauling and Collection
1990-2001

<u>Entrant</u>	<u>Business location</u>	<u>Year entered</u>	<u>Services</u>
Evergreen	Bangor, Old Town area	2000	Curbside, container, roll-on/roll-off
Griffin's Disposal	Bangor, Orono area	unknown	Curbside, container
Northern Waste and Recycling Services	Penobscot County and unorganized territories	1996	Curbside, container, roll-on/roll-off
DM&J	Eastern Maine	1995	Roll-on/roll-off, transfer
Mark Wright Construction	Hancock, Washington Counties	2000	Container, roll-on/roll-off
John Goodwin	Mount Desert	2002	Roll-on/roll-off
All Mighty Waste	Auburn	1994	Curbside, container, roll-on/roll-off, transfer
Black Bear Waste	Augusta south	2000	Roll-on/roll-off (Plans to enter curbside, container)
Johnson Trash Removal	Knox County	1990	Curbside, container, roll-on/roll-off, transfer

Source: Compiled as part of study.

Table 15
Casella Waste Hauling Acquisitions
1996-present

	<u>Company</u>	<u>Year Acquired</u>
Bangor/Coastal Area	Sawyer	1996
	BFI	1996
	Ray's Trucking	1996
	Jordan Trucking	1997
	Coastal Disposal	1997
	Pinkerton Disposal	1999
	Penway Waste	1998
	Ted's Rubbish	1999
	Bickford Disposal	1998
Houlton Area	Boyd's Sanitation	1998
	Andino's	1998
	Spellman's Trucking	1998
	White Knight	1998
Augusta/Waterville area	Capitol City Transfer	1999
	Larry Choate	1999
	Charriers Disposal	2000
Southern Maine	Pine Tree Waste	1997
	Enviropac	1996
	T & R Associates	1997
	Yarmouth Rubbish Removal	1999
	D & E Sanitation	1997
	Welton's Waste	2000

Source: Casella reply to Task Force, Maine Legislature 2000, Appendix B.

Casella's acquisitions in the late 1990s led to involvement in some related waste material processing activities, such as tire processing. In 2001, however, Casella announced divestiture plans that focused its activities more narrowly on solid waste disposal, waste collection and hauling, and recycling activities directly connected to disposal. Casella's decision to sell its interest in PERC in 2001 was especially notable because it reversed the trend towards greater vertical integration. Casella's recent application to accept MSW at PTL, which was granted in part, may be seen as an effort to restore its vertical integration in eastern Maine.

WMI is also vertically integrated in Maine and in nearby New England states. It operates the Crossroads disposal site in Maine and a number of disposal sites in New Hampshire and Massachusetts. WMI is a much larger, international company and is involved in a broader range of waste services, including handling hazardous wastes. WMI also owns a controlling interest in Wheelabrator Sherman, an electric power plant in Sherman that is fueled by wood waste and wood chips.

Mergers and Acquisitions. Mergers and acquisitions have been largely responsible for the horizontal concentration and vertical integration in this industry in the 1990s. Both Casella and WMI entered Maine through mergers and acquisitions, and both have expanded their initial activities through additional mergers and acquisitions. Table 15 presents Casella acquisitions in waste collection and hauling since its entry into the state in 1996. Note that information upon which this table relies (Maine Legislature, 2000) does not reflect merger activity by firms acquired by Casella before they were acquired. For example, BFI had acquired Grant's, an independent in the Bangor area, prior to Casella's acquisition of BFI assets in Maine. Similarly, the Task Force

information does not reflect mergers by the “old” WMI, prior to its acquisition by USA Waste in 1998. (Because USA Waste chose to assume the name of the acquired Waste Management, some confusion can arise when discussing the corporate history of WMI.) For example, the “old” WMI became the owner of the Crossroads landfill through the acquisition of Consolidated Waste Services (CWS). These earlier mergers are difficult to track, because some of the acquisitions involved non-publicly traded corporations and because large firms like WMI do not identify smaller acquisitions in financial documents.

The merger activity in Maine parallels national merger activity, which was discussed earlier. The vertical and horizontal integration by WMI and Casella are not remarkable in the national context. Nor is the decision by another national firm, BFI, to exit Maine’s market after some initial acquisitions unusual. The firms involved in the consolidation of the national waste industry frequently dispose of assets in markets where they are unable to establish a strong, vertically integrated market position.

Pricing in Maine’s municipal waste markets

This study was motivated in part by concerns that Maine’s municipalities and businesses may face higher costs and fewer options for waste management services. This section gathers information on the recent history of disposal fees at Maine’s MSW disposal sites. The study also conducted a stratified random sample of municipalities to gather information on municipal waste management costs. Finally, some comparative national data was gathered.

The study did not gather information on pricing for commercial collection and hauling services. Because these contracts are individually priced, this price data is very difficult to gather. Direct surveys of commercial customers could be conducted, but low

response rates, especially when historical data is sought, make direct surveys unattractive. This is unfortunate, because competition in commercial collection is certainly an important issue.

Disposal Fees. Tables 16 to 24 present disposal fee information for most Maine MSW disposal sites. Table 16 presents RWS tipping fees for commercial waste, waste from corporate towns (members of RWS) and associate towns (non-members) for 1979 to the present. The “assessments” to RWS communities cover the difference between total facility costs and tipping fee revenues. Table 17 presents gate fees for MSW, CDD, and special waste at WMI’s Crossroads Landfill for selected years between 1990 and 2001. Because these are gate rates, they probably overstate average prices paid for disposal. Table 18 presents Tri-Community’s MSW fees since 1995, when the current secure landfill was opened. Table 19 presents tipping fees for MSW and CDD at the Bath landfill for 1988 to the present. Table 20 presents the tipping fee structure at the Hatch Hill Solid Waste Facility in Augusta for 1987 to the present.

Table 21 presents tipping fees at MMWAC for member communities, for commercial firms from member communities, and for commercial waste from non-member towns for 1995 to the present. Recall that Lewiston’s waste enters MMWAC under a special contract that also covers ash disposal at Lewiston’s landfill. The MMWAC member fees do not include debt payments on its \$43 million investment nor any MMWAC distributions back to members. In 2001, the debt service payments of members totaled \$4.4 million, while members received distributions back of \$403,000. The distribution in 2001 was the exception rather than the historical rule for MMWAC.

The debt service is nearly \$60 per ton of annual plant capacity, which probably gives the plant the highest per ton disposal costs in the state.

Table 22 presents PERC's average tipping fees for 1992 to 2001 for MSW from MRC charter communities and for in-state and out-of-state spot markets. The first column represents PERC's computed charges to member communities, not including the performance credit. The second column represents the MRC's effective rate to Equity Charter communities after the performance credit and after the effect of asset management by the MRC. The performance credit became effective in 1994. (The difference between PERC and MRC figures for 1992 and 1993 represent minor computational differences only.) The MRC asset management program began with the 1998 financial restructuring of PERC. The Bangor Hydro payments became part of the asset management program in 2000. For New Charter members, who joined after July 1, 2000, the rate is 120% of the Equity Charter rate (\$54/ton in 2001). The MRC net rate also does not include the MRC membership fee, which was \$1.25/ton for 2001.

Table 16
Regional Waste Systems Tipping Fees and Assessments
1979-2002

(\$/ton)

Fiscal Year	Effective Date	Tip Fees & Assessments				
		Commercial	Corporate			Associate
		Tip Fees	Tip Fees	Assessment	Total	Tip Fees
78/79	7/1/78	\$ 8.60	\$ -	\$ 8.60	\$ 8.60	n/a
79/80	7/1/79	\$ 9.75	\$ -	\$ 9.75	\$ 9.75	n/a
80/81	7/1/80	\$ 11.75	\$ -	\$ 11.75	\$ 11.75	n/a
81/82	7/1/81	\$ 14.00	\$ -	\$ 14.00	\$ 14.00	n/a
82/83	7/1/82	\$ 15.00	\$ -	\$ 14.00	\$ 14.00	n/a
83/84	7/1/83	\$ 15.80	\$ -	\$ 14.00	\$ 14.00	n/a
84/85	7/1/84	\$ 16.80	\$ -	\$ 14.00	\$ 14.00	n/a
85/86	7/1/85	\$ 17.80	\$ -	\$ 16.00	\$ 16.00	n/a
86/87	7/1/86	\$ 26.00	\$ -	\$ 16.00	\$ 16.00	n/a
87/88	7/1/87	\$ 31.60	\$ -	\$ 16.00	\$ 16.00	n/a
88/89	7/1/88	\$ 40.00	\$ -	\$ 25.00	\$ 25.00	n/a
89/90	7/1/89	\$ 48.00	\$ -	\$ 31.00	\$ 31.00	n/a
90/91	7/1/90	\$ 58.00	\$ -	\$ 40.00	\$ 40.00	\$ 48.00
91/92	7/1/91	\$ 58.00	\$ -	\$ 40.00	\$ 40.00	\$ 48.00
92/93	7/1/92	\$ 61.00	\$ -	\$ 43.00	\$ 43.00	\$ 51.60
93/94	7/1/93	\$ 68.00	\$ -	\$ 50.00	\$ 50.00	\$ 60.00
94/95	7/1/94	\$ 68.00	\$ -	\$ 55.00	\$ 55.00	\$ 66.00
	2/1/95	\$ 55.00	\$ -	\$ 55.00	\$ 55.00	\$ 66.00
95/96	7/1/95	\$ 55.00	\$ -	\$ 85.00	\$ 85.00	\$ 85.00
	5/1/96	\$ 40.00	\$ 40.00	\$ 55.00	\$ 95.00	\$ 85.00
96/97	7/1/96	\$ 40.00	\$ 40.00	\$ 55.00	\$ 95.00	\$ 85.00
	6/15/97	\$ 43.00	\$ 43.00	\$ 52.00	\$ 95.00	\$ 85.00
97/98	7/1/97	\$ 43.00	\$ 43.00	\$ 52.00	\$ 95.00	\$ 85.00
	9/15/97	\$ 49.00	\$ 49.00	\$ 46.00	\$ 95.00	\$ 85.00
98/99	7/1/98	\$ 49.00	\$ 49.00	\$ 46.00	\$ 95.00	\$ 85.00
	10/5/98	\$ 53.00	\$ 53.00	\$ 42.00	\$ 95.00	\$ 85.00
99/00	7/1/99	\$ 60.00	\$ 60.00	\$ 25.00	\$ 85.00	\$ 85.00
	3/13/00	\$ 69.00	\$ 69.00	\$ 16.00	\$ 85.00	\$ 85.00
00/01	7/1/00	\$ 74.00	\$ 74.00	\$ 24.00	\$ 98.00	\$ 98.00 or 117.60
01/02	7/1/01	\$ 80.00	\$ 80.00	\$ 22.00	\$ 102.00	\$ 101.04, 102.00, 122.40

Source: Supplied by RWS.

Table 17
Crossroads Landfill (WMI) Gate Fees
1990-2001 (selected years)
(\$/ton)

Year	MSW	CDD	Special Waste
1990	\$55.00	\$57.50	\$50.00
1992	\$57.50	\$62.00	\$55.00
1995	\$60.00	\$65.00	\$55.00
1998	\$62.50	\$67.50	\$55.00
2001	\$66.50	\$71.50	\$60.00

Source: Supplied by WMI.

Table 18
Tri-Community Landfill Tipping Fees
1995-2001
(\$/ton)

<u>Effective date</u>	<u>Tipping fee</u>
1995	\$64.18
1999	\$58.00

Source: Supplied by Tri-Community Landfill.

Table 19
Bath Landfill Disposal Fees
1992-2002
(\$/ton)

Effective date	Tipping fees	
	MSW	CDD
1988	\$20.00	\$20.00
1990	\$36.00	\$36.00
1992	\$48.00	\$48.00
1994	\$46.00	\$46.00
2000	\$60.00	\$50.00

Source: Supplied by Town of Bath.

Table 20
Hatch Hill Solid Waste Facility Tipping Fees
1987-2002
(\$/ton)

Effective date	Material	Tipping Fee
January 1987	All	\$15.00
January 1989	All	\$30.00
July 1989	All	\$45.00
August 1991	MSW	\$55.00
	Recyclables	\$35.00
	Tires	\$90.00
July 1994	MSW	\$58.00
	Recyclables	\$35.00
	Tires	\$90.00
July 1995	MSW	\$58.00
	Residential recyclables	\$25.00
	Recyclable wood and asphalt	\$40.00
	Tires	\$90.00
July 2001	MSW	\$58.00
	Residential recyclables	\$25.00
	Recyclable wood and asphalt	\$45.00
	Tires	\$90.00

Source: Supplied by Public Works Department, City of Augusta.

Table 21
MMWAC Tipping Fees
1995-2002
(\$/ton)

Year	Member MSW	Member Commercial	Non-member Commercial
FY95	\$80.00	\$80.00	\$38.00
FY96	\$55.00	\$48.00	\$44.00
FY97	\$52.00	\$48.00	\$50.00
FY98	\$42.00	\$48.00	\$55.00
FY99	\$39.00	\$48.00	\$62.50
FY00	\$35.00	\$48.00	\$62.50
FY01	\$31.50	\$48.00	\$65.00
FY02	\$30.00	\$48.00	\$68.25

Note: Member MSW fee excludes debt service.

Source: Supplied by MMWAC. Fiscal years are 7/1-6/30.

Table 22
PERC Disposal Fees
1992-2001
(\$/ton)

Year	Municipal Charter	MRC Net	Spot Maine	Spot Other States
1992	\$22.79	\$22.52	\$34.47	\$17.35
1993	\$34.97	\$35.01	\$38.51	\$17.87
1994	\$41.13	\$38.76	\$43.23	\$25.03
1995	\$45.50	\$37.52	\$47.42	\$25.00
1996	\$47.02	\$43.81	\$52.05	\$25.36
1997	\$49.18	\$43.32	\$50.75	\$21.45
1998	\$52.52	\$41.02	\$48.20	\$25.01
1999	\$56.13	\$45.00	\$61.62	\$28.89
2000	\$56.93	\$45.00	\$61.95	\$31.96
2001	\$56.37	\$45.00	\$62.02	\$27.14

Source: Supplied by PERC. MRC net supplied by MRC.

Table 23
Pine Tree Landfill Disposal Fees
1996-2001
(\$/ton)

Year	PERC Ash	PERC FEPR	PERC NP	Maine Energy FEPR	Maine Energy NP	C&D (local)	C&D (long-haul)
1996	\$58.40	\$36.03	\$36.03	n/a	n/a	\$65.00	n/a
1997	\$59.62	\$37.10	\$37.10	\$18.00	\$18.00	\$82.00	n/a
1998	\$58.82	\$38.36	\$38.36	\$18.00	\$18.00	\$82.00	n/a
1999	\$60.26	\$42.00	\$42.00	\$48.50	\$48.50	\$92.00	n/a
2000	\$60.51	\$34.00	\$39.00	\$45.50	\$45.50	\$85-\$100	\$40-\$50
2001	\$60.51	\$34.00	\$39.00	\$45.50	\$45.50	\$85-\$100	\$42-\$52

NP: non-processibles

Fees for Ash, FEPR, and NP include transportation and state fee.

Source: Supplied by Casella. Fiscal year data.

Table 24
Maine Energy Tipping Fees
1995-2001
(\$/ton)

Year	Long-term Municipal	Short-term Municipal	Commercial	Spot
1995	\$41.66	\$37.41	\$39.88	\$33.77
1996	\$38.30	\$38.87	\$37.82	\$35.32
1997	\$34.77	\$39.63	\$42.18	\$34.88
1998	\$34.82	\$40.14	\$43.51	\$39.93
1999	\$41.61	\$43.64	\$51.58	\$51.24
2000	\$41.71	\$55.21	\$67.65	\$60.51
2001	\$50.59	\$55.26	\$54.45	\$45.30

Source: Supplied by Casella.

Table 23 presents Pine Tree Landfill fees for ash, FEPR, incinerator non-processibles, and CDD for 1996 to 2001. Note that the fees for Maine Energy and PERC disposal at PTL include transportation and a state fee. Casella indicated that the increase in FEPR and non-processible fees for Maine Energy in 1998 occurred when these materials stopped being used to shape closed landfills. Table 24 presents Maine Energy's tipping fees for municipal waste, commercial waste, and spot markets for 1995-2001.

Brunswick reported that the tipping fee at its landfill went from \$38.00/ton to \$44.00/ton in 1993 and has remained at \$44.00 since. Presque Isle reported that the current commercial tipping fee at its facility is \$40.00 per ton. There are no tipping fees at the two smallest landfills, which are the Greenville and the West Forks facilities. These two facilities are financed directly from tax revenues.

Survey of Municipalities. This study mailed surveys to 65 towns to obtain information on municipal waste management costs in 1996 and 2001. The survey instrument is presented in Appendix A. A stratified random sample was drawn from a list of towns and disposal districts that reported municipal waste management information to the State Planning Office in 2001. (A town that belonged to a waste disposal district was not directly sampled.) The sample design intentionally over-sampled towns with curbside collection under municipal contract to obtain better information on those contracts. Approximately half the sample had curbside municipal collection under a contract with a commercial hauler. Of the surveys mailed, 46 (71%) were returned. A list of the 46 towns in the final sample appears in Appendix B.

Table 25 reports the results of that survey for the following cost categories: curbside collection contracts; per-ton disposal fees for MSW, CDD and tires; and

hauling costs for MSW from transfer stations and for CDD. Only towns that reported data in a given category for both 1996 and 2001 are represented in Table 25, so data for the two years are pairwise comparable.

Many towns were unable to provide comparable data for 1996 and 2001. Towns were usually able to report data for 2001, but not for the earlier year. For example, 36 of 46 towns reported a per-ton MSW disposal fee for 2001, but only 26 reported it for 1996. Not all towns pay for CDD or tire disposal, so response rates in these categories are necessarily lower. But response rates in these categories were also twice as high for 2001 as for 1996. Town officials are quite aware of current waste management costs. But older data must be retrieved from files, if available at all, so busy town officials are less likely to provide older data. To obtain a useful time series on municipal disposal costs, an annual survey would be preferable to one-time efforts like the present study.

The data in Table 25 indicates that some categories of waste services purchased by towns are increasing more rapidly than inflation. The rate of inflation between 1996 and 2001 was approximately 9.5%, as measured by the GDP implicit price deflator. The rapid rise (33%) in tire disposal costs was consistent with informal reports by municipal officials. Increases in excess of 20% for both tipping fees and municipal collection contracts were reported. In light of recent reports of significant increases in CDD tipping fees, the 9% increase was perhaps lower than expected. The increase in the cost of hauling CDD and MSW from transfer stations was roughly at the rate of inflation.

Table 25
Municipal Waste Management Costs
1996 and 2001

<u>Expense Category</u>	<u>Number of Observations</u>	<u>1996</u>	<u>2001</u>	<u>% change</u>
Collection contract (cost/year)	13	\$37,924	\$45,864	21%
MSW disposal (\$/ton)	26	\$51.99	\$63.47	22%
CDD disposal (\$/ton)	11	\$66.09	\$71.82	9%
Tire disposal (\$/ton)	8	\$73.18	\$97.66	33%
MSW hauling (\$/trip)	10	\$130.46	\$142.54	9%
CDD hauling (\$/trip)	6	\$184.17	\$207.48	13%

Source: Survey of municipalities conducted by study.

National Comparisons. For comparison, data on disposal costs in Maine and other states was obtained from two sources: Chartwell's disposal price index from *Solid Waste Management* and *Biocycle's* annual nationwide survey. The Chartwell data for September 2001 is reported in Table 26. The *Biocycle* data for 1994 and 2000 is reported in Table 27.

These two surveys rely upon different methodologies and hence are not directly comparable. The Chartwell index is proprietary and is based upon Chartwell's ongoing monitoring of the industry. The *Biocycle* data is based upon a survey sent to state agencies in every state. This data therefore reflects estimates by state officials.

The patterns in the two sources are generally similar. Disposal fees in Maine are generally somewhat below disposal fees in other New England states, although the

Biocycle survey reports substantially lower fees in Rhode Island. Both data sources agree that New England fees are now the highest in the nation and are well above the national average disposal fees.

The *Biocycle* data indicate that New England fees increased more rapidly than those in the rest of the country between 1994 and 2000 and that New England has replaced the Mid-Atlantic as the most expensive disposal region. Because of incomplete reporting, *Biocycle* did not compute regional or national average disposal fees for 2001. However, Vermont, Massachusetts, New Hampshire, and Maine (in that order) finished as the top four states with the most expensive landfill fees in the 2001 survey, in that order. Although fewer states reported incinerator fees in the 2001 survey, New England fees again lead the nation. Alaska had the highest incinerator fees, with New Hampshire, Massachusetts, Maine and Connecticut in second through fifth places, respectively. Rhode Island and Vermont reported no incinerators operating in 2001.

Table 26
Chartwell Northeast Region Solid Waste Price Index
September 2001
(\$/ton)

<u>State</u>	<u>Disposal fee index</u>
Maine	\$52.81
New Hampshire	\$63.87
Vermont	\$57.67
Massachusetts	\$66.92
Connecticut	\$61.50
Rhode Island	\$60.64
New York	\$60.74
Pennsylvania	\$52.70
New Jersey	\$59.48
Maryland	\$50.39
Delaware	\$47.06
Northeast region	\$56.41
U.S.	\$36.97*

Source: Chartwell, Inc., *Solid Waste Digest, Northeast Edition*, September 2001.

*U.S. average is for October 2001, as cited in Goldstein and Madtes (2001).

Table 27
Biocycle Disposal Fees
1994 and 2000
(\$/ton)

<u>State/Region</u>	1994		2000	
	<u>Landfill</u>	<u>Incinerator</u>	<u>Landfill</u>	<u>Incinerator</u>
Maine	\$45	\$38	\$65	\$60
New Hampshire	\$50	\$45	\$66	\$74
Vermont	\$75	\$60	\$75	n/a
Massachusetts	\$55	\$50	\$67	\$66
Connecticut	\$60	\$73	n/r	\$57
Rhode Island	\$32	n/a	\$40	n/a
Mid-Atlantic	\$56	--	--	--
New England	\$48	--	--	--
Great Lakes	\$33	--	--	--
West	\$29	--	--	--
South	\$26	--	--	--
Midwest	\$24	--	--	--
Rocky Mountain	\$16	--	--	--
U.S. weighted ave.	\$31	\$47	--	--

n/a indicates not applicable, because state had no facility of indicated type

n/r indicates not reported by state

-- indicates averages were not computed by survey authors

Source: Steuteville (1995), Goldstein and Madtes (2001)

Maine Antitrust Enforcement

Like many other states, Maine has enacted a state analog to each of the federal antitrust laws. Maine possesses a “mini-Sherman Act”, a merger statute, and the Unfair Trade Practices Act, modeled on the federal FTC Act (10 M.R.S.A. §§1101--1102-A; 5 M.R.S.A. § 207). These state statutes receive the same legal interpretations as their federal counterparts (*Tri-State Rubbish v. Waste Management, Inc.*, 1993; 5 M.R.S.A. § 207).

Despite limited resources, the Maine Attorney General has played an active role over the past two decades in enforcing antitrust law in the solid waste industry. In particular, in 1999 the Attorney General brought a lawsuit challenging the acquisition of KTI, Inc. by Casella Waste Systems, Inc. (*State of Maine v. Casella Waste Systems, Inc.*, 1999). Because this case presents a microcosm of the market power problems that are the focus of this report, and indeed provided some of the impetus for this report, it bears discussion.

The acquisition enabled Casella to increase its share of Maine’s disposal capacity and to increase its vertical integration by adding Maine Energy and an interest in PERC. The Attorney General was concerned by both the horizontal and the vertical market power implications of the proposed acquisition. The acquisition was eventually permitted to proceed under the conditions set forth in a consent decree.

The Casella Consent Decree placed three conditions on the proposed acquisition. First, the Consent Decree restricted Casella’s ability to employ evergreen contracts in commercial collection and hauling markets in Maine’s nine northern and easternmost counties, where the merger allowed Casella to increase its already substantial market

share. This condition was designed to address horizontal market power concerns. Under the Consent Decree, Casella's commercial hauling contracts in the nine affected counties must permit termination on 30 days notice by mail, fax or email. Such contracts can exact early termination penalties no greater than the lesser of: \$75; twice the current monthly charge; or twice the average monthly charge incurred under the contract. The Attorney General hoped this condition would promote new entry and a resurgence of competition, and there are some indications that it has had the desired effect.

The second and third conditions imposed by the Consent Decree were designed to address vertical and horizontal market power in northern and eastern hauling and disposal markets. The Consent Decree required Casella to operate the gate, scalehouse and disposal area at PERC in a nondiscriminatory fashion—*i.e.*, without favoring its own hauling operations. The decree also required Casella to let contracts for PERC residue disposal pursuant to a competitive procurement process. These conditions reflected the Attorney General's concern that Casella's status as a vertically integrated company combining hauling, incineration, and ash/residue disposal might allow Casella to increase rivals' costs and to enhance its profits at the expense of PERC's municipal partners.

Since the Consent Decree was entered, the Attorney General's vertical market concerns with this merger have been mitigated to some degree by Casella's divestiture of its interest in PERC. Some vertical concerns persist with Casella's continuing integration of the PTL disposal facility (whose license was recently modified) with its hauling operations. In addition, the Attorney General continues to have serious concerns with regard to horizontal concentration in commercial collection and hauling markets.

Negotiation of the Casella Consent Decree represents the most significant instance of state antitrust enforcement in this industry in recent years. This was not, however, an isolated foray but part of an enforcement record that extends over two decades. Investigations and formal actions have focused on alleged collusion and monopolization offenses as well as mergers (*e.g. State of Maine v. Truck-A-Way System*, 1984, market allocation and predatory pricing; *State of Maine v. Trainor*, 1987, monopolization; *In Re Proposed Merger of Consolidated Waste Services, Inc., and WM Maine I, Inc.*, 1990, merger).

Chapter 5

Assessing Competition in Maine's Waste Management Industry

The economic analysis of competition examines three aspects of a market: structure, conduct and performance. Structure includes the number and relative size of existing competitors and also the ease or difficulty of entry. Conduct includes business practices that may reduce competition, such as restrictive contracts. Finally, performance attributes include prices, range of services available to buyers, and profits in the industry.

Structure is the most fundamental and important issue. In a market without effective competition, the existing firms will eventually increase prices and profits. In a market with easy entry of new firms, the existing firms will not be able to raise prices without attracting new competitors.

Conduct is primarily an issue in markets that fall between the extremes of completely blocked entry and completely free access. In markets where there are a few firms and where entry is difficult, but not totally impossible, the existing firms may adopt formal or informal arrangements to reduce competition among themselves and to increase the difficulty of new entry. Various kinds of restrictive contracts and predatory behavior towards new entrants are examples of such conduct.

To evaluate the performance of an industry, economists examine whether prices are in line with costs, whether prices are rising disproportionately to similar industries, whether profits are high relative to the rest of the economy, and whether customers are offered an appropriate range of services. Strong competition among firms results in lower

prices, a level of profit just sufficient to cover the cost of capital, and market responsiveness to the needs of customers.

This chapter will use the information from previous chapters to identify and assess key issues in the structure, conduct, and performance of Maine's waste management industry.

Structure: Disposal Capacity and New Entry in Disposal

A fundamental structural issue in Maine's waste management industry is limited disposal capacity in Maine and throughout New England. Maine's ban on new commercial waste facilities creates the potential for significant market power for existing commercial facilities. A crucial component of market competition—the threat of new commercial entry—is absent. The significance of that ban for competition depends upon the competition that existing facilities face from the non-commercial disposal facilities within Maine and from capacity elsewhere in New England and in Canada. Whether state or municipal governments in Maine will install new disposal capacity to compete with existing (and declining) commercial capacity is a key question.

There are three somewhat distinct sub-markets for disposal: MSW/FEPR, CDD/bulky waste/incinerator non-processibles, and incinerator ash. These sub-markets are created because many facilities process only one of these types of waste. The four waste-to-energy incinerators process only MSW. The 24 municipal CDD sites handle only CDD and bulky waste. Most municipal landfills handle only MSW, although they may also handle CDD, bulky waste, and FEPR (in some cases). The disposal of incinerator ash is handled at four special waste landfills, which must meet higher regulatory standards than most municipal landfills currently meet. These markets are

interconnected, because three of the four special waste landfills are also licensed to handle MSW and/or CDD.

New England Alternatives. Disposal in New Hampshire is the primary out-of-state alternative for Maine's waste. This is not simply because New Hampshire is the nearest state; capacity in other New England states is very limited and declining. The Northeast Waste Management Officials Association assembled data on net imports/exports of waste for the six New England states and New York (cited in New Hampshire, 2001, pp. 6-7). Maine and New Hampshire are the only net importers of waste in this seven state region; the other four New England states and New York are net exporters. Maine currently sends waste to two sites in New Hampshire: WMI's Turnkey landfill in Rochester and Casella's North Country Environmental Services landfill in Bethlehem.

New Hampshire depends more heavily upon privately owned disposal facilities than does Maine (data from New Hampshire, 2001). In addition to the WMI and Casella landfills, there is a Pulp and Paper Company of America landfill in Berlin. (The Berlin landfill uses MSW to stabilize mill sludge. American Tissue, the parent of Pulp and Paper Company of America, has been in bankruptcy proceedings and the Berlin mill has been idle. The landfill has continued to operate, however.) These three landfills receive 55% of the waste stream. An additional 22% of the waste stream goes to two waste-to-energy facilities in Claremont and Penacook, which are owned by Wheelabrator, Inc., a WMI subsidiary.

The State of New Hampshire (New Hampshire, 2001), as part of its comprehensive assessment of waste management in that state, surveyed disposal sites to

obtain a history of disposal fees. Ten of 16 sites responded; the report does not indicate how this response rate might impact results. The data are reported in Table 28.

Table 28
New Hampshire Disposal Fees
1990-1999
(\$/ton)

Year	Gate rate	Municipal rate	Contract rate	Commercial rate
1990	\$52.00	\$52.93	\$38.67	\$52.67
1991	\$52.00	\$53.63	\$42.21	\$52.33
1992	\$52.00	\$45.82	\$41.12	\$45.25
1993	\$52.00	\$47.95	\$40.49	\$44.87
1994	\$52.17	\$50.18	\$44.71	\$46.22
1995	\$52.17	\$49.97	\$48.82	\$49.58
1996	\$52.17	\$51.08	\$43.12	\$49.10
1997	\$52.50	\$52.32	\$39.82	\$50.15
1998	\$58.00	\$52.73	\$39.76	\$51.60
1999	\$71.38	\$59.05	\$43.54	\$57.50

Source: New Hampshire, 2001.

These fees were generally stable in dollar terms (and therefore decreasing slightly when inflation is considered) from 1990 to 1997. The gate rate increased substantially in 1998 and 1999. All fees showed increases near 10% between 1998 and 1999.

The State of New Hampshire (New Hampshire, 2001, pp. 5-6) has recently “crafted a mutually agreed upon permit modification” with WMI to reduce the volume of waste imported from out-of-state to the Turnkey facility. As a result, total New Hampshire out-of-state waste receipts fell by about 50% between 1998 and 2000.

The Chartwell and *Biocycle* data in Tables 26 and 27 clearly show that New England has the most expensive disposal fees in the country. The *Biocycle* data indicate substantial increases in disposal fees in New England in the past five years, which is

completely consistent with the data gathered by New Hampshire. With New Hampshire's recent action to reduce imports of waste to Turnkey, the pressure on disposal fees can only increase. Moreover, New Hampshire provides limited competition for the owners of commercial facilities in Maine, WMI and Casella. Those two firms also own four of the five commercial disposal sites (two incinerators and three landfills) in New Hampshire.

In summary, while waste capacity in New Hampshire does create disposal alternatives in southern Maine, the competitive impact of out-of-state disposal is limited and declining.

Canadian disposal alternatives. Two landfills in Canada currently accept municipal solid waste from Maine. The Hemlock Knoll landfill in Lawrence Station accepts waste from Calais and the Washington County Waste Disposal District, whose members include Cherryfield, Cutler, Eastport, Baileyville, Princeton, and Whiting. The COGERNO landfill in Rivière-Verte accepts waste from seven communities in northern Aroostook County. The availability of disposal capacity in Canada could be an important factor in the market for disposal in Maine, particularly in eastern and northern Maine.

Six relatively large state-of-the-art landfills operate in New Brunswick. The Province of New Brunswick mandated the creation of twelve regional solid waste districts. These districts were drawn along county lines. Landfills are operated by six of the regional waste commissions. The remaining six districts dispose of waste at the six landfills operated by other commissions. Part of the construction costs of the landfills was borne by the province, so fees charged to New Brunswick municipalities are partially subsidized.

The South West Solid Waste Commission opened the Hemlock Knoll landfill in 1997 on a 1000-acre site. It accepts approximately 300 metric tons of municipal solid waste per day. At current fill rates, the landfill will last approximately 500 years. The site also includes a construction and wood debris site. The waste district provides a full range of recycling services, which are funded from tipping fees. Tipping fees for members are currently \$68.90 Canadian/metric ton (approximately US\$37/short ton). The district charges \$58.90 Canadian/metric ton for disposal by municipalities that do not use its recycling services. For construction debris, the rate is \$20 Canadian/metric ton. Construction debris is a relatively minor part of its operations.

The rate charged to Calais and the Washington County Waste Disposal District reflects the full (unsubsidized costs) of the landfill, but not recycling services. That rate is currently \$80 Canadian/metric ton, or approximately US\$43/short ton. Hemlock Knoll does not have any contracts to accept demolition debris from Washington County. License restrictions make importation of CDD unattractive for Hemlock Knoll. The Maine communities entered into 25-year contracts with the South West Solid Waste Commission in 1997, when the landfill opened. The management of the landfill indicated that there was an implicit agreement with Calais and the other towns that any additional towns from Washington County, who were given the option of joining in 1997, would receive less favorable rates if they decided to contract with Hemlock Knoll at a later date.

Hemlock Knoll uses some processed (ground-up) construction debris from Maine in the cover mix for its landfill. Approximately two to three truckloads of this material are used per day. In the past, Hemlock Knoll has used front-end process residue (FEPR)

from PERC as part of its cover material. Provincial permit modifications were granted to use these materials from Maine.

The provincial regulations that govern Hemlock Knoll currently allow the landfill to accept U.S.-generated MSW only from Washington County. While these provincial regulations could conceivably be changed in the future, Hemlock Knoll will likely remain an alternative only for Washington County municipalities and for some limited CDD/FEPR for cover material.

The COGERNO facility in Rivière-Verte is operated by the Commission de gestion enviro ressources du Nord-Ouest. That facility currently accepts MSW from the Van Buren transfer station, the Upper St. John Valley waste district (St. Francis and St. John), and the Northern Aroostook waste district (Fort Kent, Frenchville, St. Agatha, and Madawaska). That material enters at a rate of \$70 Canadian/metric ton, or roughly \$US37/short ton. COGERNO has accepted a limited volume of U.S. CDD, but that waste must go into the secure landfill at the same \$70/metric ton rate as MSW. COGERNO would prefer not to accept U.S. CDD (which takes more space than MSW). The contracts with Van Buren and the Upper St. John Valley district are three years, while the Northern Aroostook district contract is for 25 years. However, both sides have considerable flexibility to end the contracts. The facility currently handles 48,000 metric tons per year, of which 10,600 metric tons are imported. At current fill rates, the COGERNO facility has a projected life of 165 years.

The situation at COGERNO with regard to U.S. waste is quite similar to that of Hemlock Knoll. COGERNO does take some ground-up CDD for cover. Provincial approval would be necessary to accept U.S. waste from any source other than the current

three contracts. Adding additional communities from northern Aroostook County is a conceivable development; adding substantial volumes from outside Aroostook County (and even from the larger communities in southern Aroostook County) seems very unlikely.

Waste disposal commissions in New Brunswick face new provincial guidelines to reduce the type and volume of wastes that are landfilled. For example, by 2006, the commissions face guidelines for diversion of most organic materials from landfills. These new guidelines are still under development, and how exactly they will impact the landfill operations is not completely known. The South West Solid Waste Commission already operates a composting facility to divert some organics, and other steps will be required to meet the 2006 requirement. The two facilities expect that imported waste will not face exactly the same standards as waste from Canadian sources, but Maine communities may need to show analogous efforts to reduce waste going into landfills. Maine, of course, already has recycling standards of its own, so communities already have taken some steps to reduce disposal tonnage.

For Washington County and northern Aroostook County, disposal at the two Canadian landfills is a very attractive alternative. Disposal fees are low by Maine standards and both landfills have very substantial capacity. However, this capacity is very unlikely to be available to communities elsewhere in Maine, so the competitive impact of these facilities for the state as a whole is small.

Long-term Municipal Waste-to-energy Commitments. Maine communities were encouraged by state policy to build waste-to-energy plants or to enter into long-term contracts with commercial waste-to-energy plants. Several outside forces, including

energy policy and federal court decisions, have substantially impacted those long-term commitments. In general, communities have seen substantially higher disposal costs than they anticipated when the commitments were made.

Many Maine communities have formed multi-town agreements or non-profit corporations to operate or to contract with disposal facilities. MMWAC and RWS operate two of Maine's waste-to-energy incinerators. Tri-Community and the Caratunk region both operate landfills. There are also a number of smaller inter-local arrangements to share a transfer station and perhaps a CDD site, such as the Central Penobscot Solid Waste Facility and the Marion Transfer Station. Approximately 160 communities are represented by the Municipal Review Committee in their relationship with PERC.

These various commitments have three important consequences for markets. First, the MRC, in particular, seems large enough to wield countervailing market power. Second, some communities are in these markets as both consumers and suppliers. Third, a large fraction of MSW enters disposal markets through long-term, irreversible commitments.

The MRC was created precisely because the communities in eastern Maine wanted countervailing power in their dealings with PERC. For much of eastern Maine, PERC is essentially the only disposal option. The nearest alternative for most towns would be 75 miles further away at the Crossroads Landfill in Norridgewock. The MRC and PERC have been essentially a bilateral monopoly (*e.g.*, a single buyer and a single seller who each have no option but to reach agreement). Economic theory suggests that, in general, a bilateral monopoly is preferable to a monopolist who has many customers. The bargaining process in a bilateral monopoly will typically lead to a lower price and

higher output than a simple monopolist. And the record between the MRC and PERC suggests some balance in bargaining power. While the initial renegotiation let PERC out of its long-term rate commitments, the MRC did extract concessions with potential benefits for MRC members. And the 1998 electric rate renegotiations gave the MRC an option to acquire up to a 50% equity interest in PERC and an option to acquire the facility in 2018. The MRC communities have acquired 21% of PERC to date. It is notable that Casella decided to divest its interests in PERC, but not in Maine Energy, as part of its corporate divestiture decisions in 2001. Maine Energy and PERC are similar plants that originally had essentially identical financial structures. A plausible explanation would be that the MRC's representation of community financial interests made PERC less attractive to Casella.

Municipalities (or groups of municipalities) that run their own disposal facilities are both consumers and suppliers of disposal services. As a supplier of disposal services, a municipality may be in the position of favoring higher disposal fees. Typically, these facilities process their own residential waste and accept waste at market rates from commercial haulers and perhaps also from non-member towns. When commercial (and perhaps non-member) rates can be raised because of market conditions, less revenue needs to be raised by the member communities. To understand the economic position of these municipalities, consider a facility with per ton costs of \$70/ton, where 50% of the waste comes from member municipalities and 50% from commercial sources. If the market dictates a commercial rate of \$50/ton, then the member communities will have costs of \$90/ton for their own waste. Conversely, if commercial rates increase to

\$90/ton, the member communities will face costs of only \$50/ton for their own waste. Municipal budgets benefit when commercial disposal fees increase.

On the other hand, a community or group of communities that entered into commitments with relatively low costs can decide to make those low rates available to commercial users in its jurisdiction. That is, it can treat trash as any other public service that it provides to its residents and businesses.

There are communities in Maine in both of these positions. RWS and MMWAC both have relatively high costs per ton. As commercial fees increased in the late 1990s, the net costs to member communities of those organizations fell. On the other hand, most of the municipal landfills have essentially a single-rate policy. And while PERC does accept commercial waste from the spot market, the MRC and PERC pursue a policy of enlisting all of the communities in their service territory under the member rate. This policy reflects the long-term bilateral interests of PERC in a steady flow of waste and a predictable revenue stream and of the MRC in predictable disposal fees for members.

Municipal participation in disposal markets means that a large share of MSW is covered by long-term commitments or contracts. Municipalities that have financed waste-to-energy plants are particularly committed. Because municipalities have the power to tax, they cannot avoid bond commitments by declaring bankruptcy. Under economic conditions that would cause a stand-alone commercial disposal facility to declare bankruptcy, a municipal facility might well continue to operate. Trash under these long-term commitments is insensitive to short-term market changes. As a result, spot markets may be more volatile, as the effects of changes in supply and demand are seen entirely in the spot market.

The federal court decisions on flow control left communities which were committed to put-or-pay contracts or bond payments without the ability to direct commercial waste to specific sites. Some would argue that municipalities should have known that flow control would face serious problems with the Commerce Clause. However, a Maine state statute [38 M.R.S.A. § 1304-B] purported to authorize flow control. As discussed above in Chapter 3, municipalities can overcome most of the obstacles to flow control presented by the Commerce Clause. To do so, however, the municipality must typically shift some (although not necessarily all) of the cost of waste management from fees onto property taxes. This has in fact occurred in Maine. Towns in central Maine who have seen waste diverted from PERC to Norridgewock have lowered disposal fees at their transfer stations to get waste back to PERC. RWS lowered its commercial fees in the mid-1990s when flow control was restricted.

Chapter 3 also discussed whether vertically integrated firms are able to exploit put-or-pay contracts to increase revenues and to reduce competition. Recall from the earlier discussion that a vertically integrated firm with two disposal sites might collect twice for the same waste and hence obtain a significant advantage over other, non-integrated haulers. The current municipal concerns about put-or-pay clauses do not seem to fit this scenario. The instances identified involve two sites owned by different firms (*i.e.*, PERC and Crossroads landfill), rather than two sites owned by the same firm.

State planning role for new MSW capacity. Because of the ban on new commercial facilities, any new capacity will be state or municipal capacity. New capacity will almost certainly be in the form of landfills. Additional waste-to-energy plants are very unlikely. Without the very favorable electric rates that Maine accorded

alternative energy providers in the 1980s, waste-to-energy plants will have difficulty achieving disposal costs that are competitive with new landfill capacity. Moreover, waste-to-energy plants still require landfill disposal of ash, FEPR, and non-processibles.

The capacity for MSW disposal in Maine is roughly in line with current volumes generated, and this rough balance is expected to continue for the next 10 years. The adequacy of disposal capacity might suggest that Maine can delay the difficult issue of siting new landfill capacity. This is incorrect for several reasons. First, the stream of construction debris and bulky goods seems to be growing. These items cannot be incinerated, so they must go to landfills. Second, the options for disposal of incinerator ash are limited and there is reason to worry about competition for this disposal in the near future. Third, it takes several years to site and open a new landfill. Last minute decisions are more likely to result in costly, irreversible errors. Fourth, as capacity in Maine and nearby New England states continues to decline, the risks increase that small market changes will result in dramatic price increases. For example, the closure of even one major disposal facility in Maine would put very significant pressure on prices.

As we discussed in Chapter 2, we do not believe that pricing decisions by market participants are constrained by the proposed Carpenter Ridge landfill. The enabling legislation and the political context create substantial uncertainty about when and whether Carpenter Ridge might open. On the other hand, state policy about expansion at existing commercial landfills and about new municipal sites is likely to affect capacity in the next ten years.

It seems quite possible that within the next ten years Maine will reconsider the current statutory limitations on the expansion of at least one of the two commercial

landfills. Expansion of an existing site is typically less contentious (although hardly without controversy) than siting a completely new facility. Both because of community opposition and site characteristics, expansion of PTL seems less likely than expansion at Crossroads. If expansion at Crossroads were to be the only, or the only significant, capacity expansion in the next ten years while other capacity continues to decline, Crossroads would have a much more dominant market position than it has today.

A key issue for competition will be whether municipalities add new disposal capacity. State policy can have a strong impact on these municipal decisions. Municipalities, many of whom faced significant expense when their old landfills closed, seem wary of the financial risks that any new landfill might pose. There seems to be great reluctance by municipalities to site new MSW landfills, even though new landfills are probably able to achieve costs that are quite competitive with current disposal fees in Maine. Siting a landfill is contentious, and there is a risk that significant funds can be spent on a site without assurance that the site will open. And the scale of investment in a RCRA Subtitle D landfill is large in relation to the resources of any single municipality, so a multi-community facility is probably required.

Under the current siting process, the state has the approval authority while all the risks fall on municipalities. Because the addition of disposal capacity by a single town (or group of communities) will indirectly benefit the entire state, it might be appropriate to consider shifting some of the risk of new landfill development from individual municipalities to the state.

Rapid changes in CDD disposal markets. Three factors are driving the CDD sub-market, all driven to some extent by evolving environmental regulations. Whether CDD capacity becomes a major issue will depend upon the interplay of these factors.

First, CDD disposal at licensed sites is growing rapidly. This is primarily because other disposal options are disappearing. For example, burning of old buildings is rapidly disappearing as a disposal option because of concerns over the environmental impact of burning toxic materials. And disposal of CDD as fill or in old gravel pits is being more heavily regulated. Second, local communities continue to open new CDD sites. Because the licensing requirements and investments for these sites are significantly lower than for new MSW landfills, these CDD-only facilities are being opened much more readily than MSW landfills. Most of this capacity is being opened by small to medium-sized communities. This may perhaps be related to the six-acre limit. Larger communities would rapidly exhaust capacity at such small sites and would therefore frequently be in the position of siting new CDD capacity. Third, state environmental policy will affect how much CDD is diverted to beneficial re-use. At present, the primary re-use is as wood chips for fuel at biomass plants. CDD contains materials, such as sulfur in wallboard, lead in paint, and preservatives in treated lumber, that are subject to maximum concentrations under environmental regulations if used as fuel. The higher the environmental standards, the less the material that can be diverted to wood chips for fuel.

“Thin” markets for ash disposal. The market for ash disposal is a “thin” market, in the sense that there are a very limited number of buyers and sellers. Ash disposal contracts are typically long-term, with terms of five years or more common. There are four generators of ash and four disposal sites; two of the generators (RWS and Casella)

also own ash disposal sites. The two commercial sites account for about two-thirds of the ash disposal, so commercial sites account for a much larger share of ash disposal than of MSW and CDD disposal.

Because ash is denser than MSW and CDD, hauling costs per ton are lower. Therefore, the relevant market is somewhat larger for ash than for other wastes. There are some potential entrants in the ash market, which may constrain the pricing of ash disposal. RWS may have the option of expanding its ash disposal site to accommodate the needs of other incinerators. Tri-Community was constructed to standards that might permit it to be licensed for ash (with some operational changes). And were Carpenter Ridge to open, its most economic use would probably be for ash from PERC. Given the significant municipal commitment to PERC by MRC communities, MRC communities might consider siting a multi-purpose landfill to service both PERC and some of their own needs if PERC faced difficulties with ash disposal.

The historically contentious nature of the relationship among PERC, the MRC, and Casella/Sawyer/PTL is reflective of the thin market. When transactions are few, a great deal is at stake for every transaction. Each side would like to strengthen its bargaining position in contract negotiation. This contentiousness will inevitably be part of state legislative or regulatory decisions on ash disposal, because state policy can strongly influence this relationship.

Structure: The impact of consolidation on collection markets

Maine's waste management industry has become more concentrated, and the impact of mergers in the past decade is clear. There has been horizontal concentration in both disposal and collection. Two vertically integrated firms, Casella and WMI, are the

largest commercial firms in both disposal and collection. These two firms entered the market through acquisitions and have increased their market share and their degree of vertical integration through further acquisitions.

To assess competition in collection, we need to define a market and estimate the market concentration. The Department of Justice (1997) uses the “Herfindahl-Hirschman Index” (HHI) to classify markets for antitrust assessment of mergers. This measure is applied widely in assessing competition. The Department of Justice regards a market which registers an HHI of 1800 as highly concentrated, and describes a market falling into the HHI range of 1000- 1800 as moderately concentrated. A market with an HHI below 1000 is classified as unconcentrated.

The relevant market for collection services is less than statewide; a firm that operates from southern Maine clearly does not compete directly for business in eastern or northern Maine. Defining exact market boundaries for local services such as waste collection can be difficult, because the boundaries of individual markets inevitably overlap geographically. However, in the current context, the conclusions about market concentration are insensitive to whether narrow or broad market definitions are applied. Because Casella and WMI collectively supply a high percentage of collection services throughout most of the state, the conclusions about market concentration are insensitive to exact geographic boundaries of markets. The exception is Aroostook County north of Houlton, where neither firm has a major presence. Throughout the primary population centers along the I-95 corridor from York County to the Bangor area, the available evidence leads us to estimate that Casella and WMI account for 50-65% of the commercial collection business. These estimates of market share produce HHI values for

waste collection markets in Maine in the range of 1500 to 2400. These estimates support the conclusion that collection markets in Maine are at least moderately concentrated and probably would be considered highly concentrated.

The consolidation that yielded this market concentration gives rise to two questions: First, has competition been reduced by the horizontal concentration in collection? Second, has competition been reduced in collection and hauling because of the vertical integration?

Collection of trash is a basically a material handling industry. The capital, human resources, and technology in the movement of waste material are very similar to those in the movement of other products. Entry into the trucking industry is generally considered easy. The total investment to enter a trucking activity is relatively low. The necessary equipment is easily obtained, either as new or used equipment. A firm that chooses to leave the industry can easily sell the primary assets in used equipment markets. In markets with easy entry and exit, one would usually expect strong competition. Mergers that reduce the number of competitors will not increase prices because new entrants will quickly respond to any opportunities for profit.

Concern over consolidation in waste collection and hauling might arise if significant economies of route density cause new entrants to have much higher costs. The industry often argues that these economies are very significant. However, while it is clear that new entrants must cross some minimum threshold in terms of route density in order to achieve visibility, the argument that significant economies flow from increased route density does not appear to be supported by statistical or other available evidence.. That new firms continue to enter in this industry suggests that the economies of density

are not prohibitive. Even if there are some economies of scale in collection, we argued in Chapter 2 that these markets are contestable. That is, because the assets used in collection can be easily acquired and easily sold, the threat of rapid entry by new competitors constrains the pricing behavior of existing firms. From a structural viewpoint, the low barriers to entry would suggest little need for concern over concentration due to mergers. However, this industry routinely uses restrictive customer contracts that prevent new entrants from quickly achieving minimally competitive route densities. We examine those contracts separately, below.

An important issue is whether concentrated ownership of disposal facilities creates market power that can be transmitted into the collection sector. State law bars new entry into the commercial landfill industry in Maine; we concluded that this ban does reduce competition in disposal. In Chapter 2, we concluded that there is no evidence of significant economies of scope in operating vertically integrated collection and disposal activities. That leaves the issue of strategic behavior by a vertically integrated firm when competing with non-integrated collection firms. Entrants into the waste hauling industry require a crucial service: access to disposal facilities. If potential entrants believe that vertically integrated waste management firms will restrict their access to disposal facilities, then entry will be deterred. And terms of access involve more than simply price. Hours of operation, turn-around time at the disposal facility, and access to recycling or special waste disposal facilities may also be issues. Discrimination based on these components of service is inherently difficult to detect and to assess. We invited specific comment on this issue in our preliminary draft. Only Casella commented; Casella stated that this kind of discrimination does not occur.

The major national waste disposal firms display reluctance to compete as non-integrated haulers against incumbent vertically integrated competitors. BFI, for example, made some initial acquisitions of collection assets in Maine but eventually sold those interests to Casella. Waste Management entered eastern Maine only after Casella had sold its interest in PERC. The major national firms have a long history of selling assets in markets where their presence is small. Some of these sales are structured as concurrent asset “swaps” between the major national firms. (For example, see Anderson [1998, pp. 11-12] for a list of asset exchanges between major firms during 1997-98.)

The behavior of these national firms probably needs to be interpreted in light of a history of strategic (and even predatory) behavior in collection markets. As we noted in Chapter 2, antitrust enforcement has in the past prosecuted such predatory behavior. While this behavior may be less common today (perhaps in part due to antitrust enforcement), national firms do have a historical basis for believing that integrated competitors may be willing to use access to disposal as a strategic tool against non-integrated haulers. Furthermore, national firms are much more likely to enter new markets by acquisitions, rather than by *de novo* entry. Given the reluctance of national firms to enter vertically integrated markets, the conditions of entry for local firms are especially important.

Conduct: Evergreen contracts and right-to-compete clauses

An important issue for antitrust policy in the waste management industry has been the use of evergreen contracts. Contracts for container collection of commercial waste often specify that the contract will be automatically renewed unless advanced notice is given (hence the name “evergreen”). Typical terms are three-year initial contracts with

automatic renewal for one year. Thirty to 180 days' positive notice is typically required to avoid automatic renewal. Absent customer action within the specified window, the contract cannot be cancelled without significant "liquidated damages". Liquidated damage penalties of three to six months fee equivalent in the initial contract and damages of one to six months fee equivalent in renewed contracts are now typical.

The contracts often allow rate increases that are very generous to the hauler. Haulers may be permitted to increase fees both for direct cost increases in categories like gate fees, fuel, taxes, and changes in regulations and also for overall inflation. Thus, if all prices go up by 5%, the firm is allowed to increase fees by 5% for the general inflation plus some additional amounts for the increases in the named categories. The customer typically does not have the option of canceling the contract because of such automatic rate increases.

Some contracts have "right-to-compete" or "right-of-first-refusal" clauses that require the customer to accord the incumbent hauler the opportunity to match any competitor's price offer. These clauses facilitate predatory discounts against entrants. A firm holding an option to match prices by any new entrant is given advance notice of any new competition. Instead of lowering its prices to all customers to meet the new competition, the existing firm need only lower prices to the few customers the entrant attracts. These clauses also make it easier to enforce collusive agreements to raise prices. If a member of a collusive agreement cheats by lowering price, customers are contractually required to report that cheating to their current supplier.

Appendix C presents four small container contracts, two used by Casella and two used by WMI. These contracts illustrate the features discussed above.

The Casella Pine Tree contract (C1 in Appendix C) is used by Casella in those areas of the state not covered by the consent decree with the Maine Attorney General. This contract has a three-year initial term, automatic one-year renewal if notice is not given 30 days in advance, and 6 months liquidated damages (or the number of remaining months in the contract, if less than 6). The contract allows automatic cost increases for disposal rate changes, fuel, regulation changes, and taxes. Over and above the specified costs, the firm is also allowed to increase fees for changes in the Consumer Price Index (CPI) and “a reasonable margin”. The Casella Capitol contract (C2 in Appendix C) is an amended version of the Pine Tree contract that is used in those parts of the state subject to the consent decree. As specified in the consent decree, liquidated damages in this contract are limited to the lesser of \$75 or two months’ fees.

The first WMI contract (C3 in Appendix C) contains: a three-year initial term; automatic renewal for one year unless notice is given during a window of 90-180 days prior to contract expiration; liquidated damages of 6 months (or the number of remaining months if less than 6) for the initial term and 3 months for renewal terms (or the number of remaining months if less than 3); and a right of first refusal clause. The contract allows automatic cost increases for disposal costs, fuel, taxes, and regulation changes and also permits an overall increase for changes in the CPI.

The second WMI contract (C4 in Appendix C) contains a three-year initial term, automatic renewal for three years unless notice is given during a window 60-180 days prior to contract expiration, and liquidated damages equal to 30% of remaining fees. It contains the same price escalation clause as the first contract. This second contract uses a longer renewal (three year) and restructured liquidated damages, relative to the first

contract. For contracts with more than 18 months remaining, liquidated damages will be higher; for contracts with less than 18 months remaining, liquidated damages will be lower (relative to the flat 6-month liquidated damages).

National antitrust enforcement has had some restraining influence on these contracts. The long contracts, narrow cancellation windows, and high damages have been difficult to defend in antitrust enforcement actions. Some national firms have responded with shorter terms and lower damages. But, as seen in the current Casella and WMI contracts, long-duration self-renewing contracts remain the norm.

Noll (1991), a prominent antitrust economist, analyzed evergreen contracts and right-to-compete clauses in the context of a Canadian Competition Tribunal case against Laidlaw. Noll was analyzing an older contract with longer terms and higher liquidated damages, and the analysis was conducted in the context of other anticompetitive practices by Laidlaw. Noll's conclusions about those contracts, however, apply broadly.

With respect to the long-term contracts and liquidated damages, Noll (1991, p. 14-15) makes the following assessment:

“As discussed above, one normally associates exclusive long-term contracts and liquidated damages provisions to circumstances in which at least one party makes a relation-specific investment ... In waste disposal, the relation-specific investments are extremely limited, consisting primarily of the costs of negotiating the agreement ... Consequently, there is no economic rationale for either a long-term contract or liquidated damages ... Thus, there is no plausible explanation for these provisions other than to create an entry barrier by making customer purchase decisions inflexible.”

With respect to automatic renewal provisions, Noll (1991, pp. 16-17) concludes:

“The automatic rollover provision in the contract forms constitutes a barrier to entry yet has no significant efficiency benefit ... Even if there were relation-specific investments, they presumably are recovered by the first contract term, so the seller would experience no loss by automatic continuation on a short-term basis, and has no efficiency reason to rollover punitive liquidated damage provisions ... Thus, the long-term rollover provision — committing the buyer to another long period of inflexibility — has no efficiency rationale, and can be explained only on the basis of its function as a barrier to entry.”

On the right-to-compete clauses, Noll (1991, p. 17-18) finds:

“The right to compete and right of refusal provisions of contracts enable Laidlaw to reduce still further the incentive of others to offer competitive service ... The sole function is to allow Laidlaw to know who is competing with it and on what terms before the competitor succeeds in obtaining a single customer. Thus, Laidlaw does not have to respond to competition by lowering prices generally. Instead, it can target price reductions only on the customer a competitor seeks to acquire, thereby reducing the costs of effectively competing and, indeed, of using predatory or disciplinary pricing to dissuade price competition. Moreover, by reducing the likely success of a competitive offer, Laidlaw’s notification requirement serves to reduce the expected profitability of attempting to lure a customer from Laidlaw. The effect is not only to retard entry, but also to encourage collusive pricing if there are any other competitors in the market. Specifically, this contract provision enlists buyers as the agent for enforcing a

collusive pricing agreement, should one exist, by requiring that they immediately report any ‘cheating’ on the collusive agreement to the threatened competitor ... But the more pernicious effect is that it can force a customer to continue dealing with Laidlaw when the customer would be better off dealing with another containerized commercial solid waste disposal company. For, example, both companies may offer exactly the same terms, but Laidlaw’s competitor may have a reputation for pursuing a less aggressive policy with respect to cost pass-through provisions. Or the competitor may use less unsightly equipment and containers, or may employ workers who exercise more care in collecting waste, creating less litter and imposing less wear-and-tear on container storage sites. In general, contracts do not do a very good job in dealing with qualitative aspects of services...”

We find Noll’s analysis of these contracts compelling. As the decision in the Laidlaw case suggested (Canadian Competition Tribunal, 1992, pp. 94-96), the industry justification for these clauses seems to be that everyone else does the same. We would note that the Noll analysis was made ten years ago, is well known in the industry, and is frequently cited in antitrust analysis. Despite the role of this argument in antitrust cases in the intervening period, we could not find, nor did industry identify for us, any economic rebuttal of the Noll analysis.

In comments on our preliminary draft, WMI noted (as our presentation notes above) that the evergreen contracts in the Laidlaw case were part of a broader set of anti-competitive activities. WMI suggested that the Noll analysis should not be applied to evergreen contracts that are not part of a broader pattern of anti-competitive activity. We

disagree; the logic of the Noll argument in no way depends upon other anticompetitive actions. In an industry like commercial small container service, where the customer-specific investment is low, the only purpose of restrictive long-term, self-renewing contracts is to impede competition. Likewise, the only purpose of right-to-compete clauses is to deter entry and to promote collusive behavior.

In comments on the earlier draft, Casella correctly pointed out that the argument that customer-specific investments are low does not apply to some types of equipment used in commercial collection. For example, the non-recoverable costs of installing fixed compactor equipment may be large. We agree that the Noll argument applies specifically to small container (dumpster) collections and we clarified our recommendations to apply specifically to small container contracts.

Performance: Pricing

The purpose of protecting and enhancing competition in markets is to ensure competitive prices. One cannot directly determine whether prices are competitive, but one can make comparisons of prices in different markets or changes in price over time that may suggest whether prices are competitive.

MSW disposal. Interpretation of the price data presented in Chapter 4 is not without complications. First, some fees are “gate rates”, which may not reflect actual fees. At most commercial facilities and some public facilities, gate rates are essentially maximum prices. Second, there are features of rates that are specific to individual facilities, and especially to the public facilities. For example, in 1994 RWS substantially altered its commercial versus member rate structure in response to legal limits on flow control. The large increase in PERC fees in 1992 reflects the first contract renegotiation.

The increase in FEPR fees at Pine Tree Landfill in 1999 represents a switch from using FEPR to cap old landfills to secure landfilling. These idiosyncratic features must be considered in any assessment of prices.

Of the data available to this study, we believe that the survey of municipalities offers the best indication of the overall trend in waste disposal costs. The increase of 22% in disposal fees reported for 1996-2001 is in line with the increases reported by facilities. For example, the increase in “other revenue per ton” (which is primarily tipping fees) for the waste-to-energy plants was 16% between 1996 and 2001 (Table 8).

The *Biocycle* data (Table 27) suggest even higher rates of increase for disposal fees in Maine during a similar period. For 1994-2000, the *Biocycle* data indicate a 44% increase in landfill disposal fees and a 58% increase in incinerator fees. These increases do seem higher than the average rate of increase at the individual disposal sites in Maine. It is possible that the *Biocycle* data are more indicative of the short-term commercial market than of long-term municipal contracts. As discussed above, in markets where a large share of transactions occurs under long-term contracts, short-term prices may be especially volatile.

Within the overall pattern of higher waste disposal costs, there is distinct evidence of regional differences within the state, with greater price increases in southern Maine. This is not surprising. Capacity in the rest of New England is limited and declining. New Hampshire has recently taken steps that reduce its role as the primary importer of waste in New England. On the other hand, significant disposal capacity in Canada is available to communities in Aroostook and Washington Counties.

The price data from New Hampshire (Table 28), Chartwell (Table 26), and *Biocycle* (Table 27) all tell the same story: disposal in New England is the most expensive in the U.S. and the recent trend has seen significant increases. In New Hampshire, disposal fees were relatively constant from 1990 to 1997, but had very significant increases after 1997. Gate rates increased 36% between 1997 and 1999; municipal disposal fees increased 13%, contract fees 9% and commercial fees 15%. All these increases are substantially in excess of the overall inflation of only 2.5% in the same period. Likewise, *Biocycle* data show increases in excess of 20% for all New England states except Vermont between 1994 and 2000. (Vermont's rate of \$75/ton for 1994 did not increase in 2000, but this rate was the highest in the U.S. in both years.)

Commercial fees in southern Maine have likewise posted significant increases in the late 1990s. During 1998-2001, RWS raised its commercial tipping fee 63%. MMWAC raised commercial fees 47% between 1996 and 2001. Bath increased fees 30% between 1996 and 2000. At Maine Energy, short-term municipal fees increased 37% and commercial fees increased 25% for 1998-2001.

The situation in Aroostook County and Washington County is also clear. Tri-Community landfill was the only site to lower fees (by 10%) during the 1990s. Presque Isle accepts waste at \$40/ton. Waste goes to COGERNO at \$37/ton and to Hemlock Knoll at \$43/ton. For waste disposal at least, it is better to be far from the rest of New England and nearer to Canada. But only about 10% of Maine's population lives in these two counties.

The situation in eastern Maine is dominated by the MRC/PERC/PTL relationship. There is something close to a bilateral monopoly situation between the MRC and PERC

and also between PERC and PTL. These relationships have been contentious at times. But the net effect seems to have been to produce a relatively stable long-term price structure. The MRC currently pursues a pricing policy of stabilizing effective fees at \$54/ton for new members and \$45/ton for equity (pre-2000) members. The MRC times its equity investments in PERC to help achieve this stabilization. The MRC and PERC also have a goal of bringing all communities into a long-term membership position, rather than a short-term spot market relationship. The dominance of the MRC and PERC relationship in eastern Maine allows it to act more like a traditional monopoly supplier of a government service, with the same fees to all users. At least at present, the MRC/PERC relationship seems to be providing moderate and stable costs to both municipalities and commercial customers in eastern Maine.

For the Crossroads landfill, the other major disposal site in central Maine, the available data is limited to gate rates and may not necessarily reflect average disposal costs. The gate rates for both MSW and CDD increased 21% during 1990-1998 and by 6% during 1998-2001. These are almost exactly equal to the overall rate of inflation for the same period. PERC and Crossroads compete for customers in a broad section of central Maine, so we might expect stable prices at PERC to be matched by stable prices at Crossroads.

The pricing evidence suggests that new municipal landfill capacity can be cost-competitive. Tri-Community opened in 1995 with a rate of \$64.18/ton and dropped that rate to \$58.00/ton in 1999. By the standards of large commercial landfills, Tri-Community is relatively small; larger facilities could be expected to achieve somewhat lower costs. Hatch Hill fees have been at \$58.00/ton since 1994. Presque Isle has a

commercial rate of \$40/ton and Brunswick has had a \$44.00/ton rate since 1993. Of the municipal landfills, only the Bath facility significantly increased fees between 1996 and 2000, from \$46.00/ton to \$60.00/ton. (However, note that the Presque Isle, Bath, and Brunswick sites, which pre-date Subtitle D requirements for new facilities, may not be indicative of current cost structures.)

Evidence from outside Maine also indicates that new landfills can be very cost-competitive. The two large Canadian facilities report that the fees charged American communities, of less than \$45US/ton, reflect full costs. Large commercial facilities elsewhere in the U.S. also achieve disposal fees at or below the \$45/ton level. At \$45/ton, a new landfill could be located at a moderate distance from generating population centers. The difference between \$45/ton and current disposal costs in Maine of \$55-\$60/ton would permit new facilities to be competitive with facilities 50 to 100 miles closer to generation centers.

The lack of municipal interest in siting new landfills (other than in Aroostook County) is not because landfills could not compete on disposal cost. Rather, municipalities are very reluctant to confront two related problems: the contentious siting process and the financial risks of developing a proposal that is not approved.

The increase in tire disposal costs in the municipal survey is also noteworthy. A large fraction of tires are now chipped for fuel or roadbed construction. The high rate of re-use did not lower the costs of disposal, however. Tire disposal fees increased 33% between 1996 and 2001; the rate is now twice that of MSW disposal. Efforts to increase recycling fees generally may face the same economics: higher recycling fees may involve processing costs that substantially exceed the costs of landfill disposal. While

there may be environmental policy reasons to increase recycling fees, disposal fees are unlikely to be restrained by competition from recycling alternatives.

CDD disposal. The modest increase in CDD disposal fees reported in the municipal survey was something of a surprise. A number of towns in eastern Maine informally reported large increases in CDD disposal costs to us. These reports were consistent with Casella's 30% increase in local CDD fees at PTL between 1996 and 2001. There are two possible explanations for this inconsistency. First, the recent increases may not be fully reflected in the survey because of existing long-term contracts. Second, Casella's decision to increase CDD fees may have diverted CDD to other, less expensive, sites. CDD takes up more space per ton than ash or FEPR. As volume, not tonnage, is the limiting factor in a landfill, Casella may be repricing CDD to reflect the opportunity cost of the space. If PTL space is more valuable for ash and FEPR, it is logical from both Casella's business interest and from society's interest in conserving scarce secure landfill space to divert CDD to less expensive options, such as municipal CDD sites. As discussed above, CDD disposal is undergoing significant changes at present. Different forces are working both towards higher fees (growth in CDD; loss of some disposal options) and more stable fees (greater re-use; development of more 6-acre CDD sites).

Hauling and collections costs. Relatively little data is available to evaluate changes in hauling and collection fees. There is no source from which to evaluate commercial small container collection costs. Given the importance of this part of the market, this is a serious limitation.

The data from the municipal survey does contain some useful information. The costs of hauling CDD and of hauling MSW from transfer stations to disposal sites rose at roughly the rate of inflation. This part of the market faces the threat of immediate entry from construction firms, logging contractors, and other tractor/trailer fleet operators. Competition should be greatest in this market, thereby restraining rate increases.

The rate of increase in municipal collection contracts was nearly twice the rate of inflation. Although the survey design explicitly asked for collection costs separate from disposal costs (see Appendix A), it is possible that a few towns might have misinterpreted the survey. This could not, however, explain the entire increase. It is also possible that changes in services (such as more households or curbside collection of recyclables) might also explain part of the increase. But when combined with anecdotal reports from municipalities that fewer bids were received on collection contracts in the late 1990s, the increase in the cost of collection contracts does raise concerns over performance.

Chapter 6

Policy Recommendations

It remains for us to evaluate the legal and policy options available to address competitive issues in the solid waste industry in Maine. The two underlying structural issues are (1) the rapid horizontal consolidation and vertical integration within the industry and (2) Maine's ban on new commercial disposal facilities. These structural features raise questions about the strength of competition in disposal (especially as Maine's existing landfill capacity declines) and about any competitive advantages that vertically integrated firms may acquire through control of scarce landfill capacity. Our analysis identifies a clear policy option to insure effective competition in collection and hauling. In disposal, the choices are more complicated and more difficult. But we argue that those choices must be addressed soon, because the risk of higher disposal prices in Maine grows as landfill capacity is filled.

Collection: Promote Competition by Limiting Restrictive Contracts

The best protection for competition in the collection sector of the waste industry is the threat of new entry. The investment required to enter the collection industry is modest. The only significant barrier to entry is that restrictive evergreen contracts make it difficult for new entrants to achieve the route density required to attain competitive costs. These contracts often have multiple provisions that restrict competition, such as:

- automatic renewal provisions with burdensome notification requirements for non-renewal;

- excessively long duration and excessive cancellation penalties that bear no relation to costs incurred; and
- anticompetitive “first refusal” or “right-to-compete” requirements to report price and service offers by potential competitors.

The anticompetitive effects of these provisions seriously handicap new entrants into the collection market. To enter competitively, a new firm must assemble a set of customers on a route structure that has some minimum density. Evergreen contract provisions make it very difficult for new entrants to build efficient routes. The first refusal requirements mean that the incumbent firm knows the areas targeted by potential entrants and can selectively cut prices to deter entry. In some industries, long service contracts are economically justified to allow recovery of large customer-specific investments that cannot be recovered when the relationship ends. In the small container market, the customer-specific investments that cannot be recovered by moving the canister are minimal. Once the barrier to entry created by restrictive contracts is removed, the state can rely on competition to protect consumers. There is no legal or constitutional impediment to placing legislative restrictions on these types of contract terms.

In consent decrees in merger and monopolization cases, the U.S. Department of Justice and the Maine Attorney General have imposed *ad hoc* restrictions on the use of restrictive contracts in certain waste collection markets. The Maine Attorney General obtained consent decree restrictions on the use of evergreen contracts by Casella in Maine’s nine northern and easternmost counties, but no such provisions apply to other market participants or in any other part of the state. This lopsided restriction, while

salutary in some respects, can hardly be said to create a level playing field, as Casella has correctly pointed out. Casella is not the only company to use evergreen contracts. Such contracts can seriously inhibit competition even in markets less concentrated than those in northern and eastern Maine. We believe that promoting competition in the hauling sector argues for placing the entire industry under the same terms as those accepted by Casella in its consent decree. Therefore, we recommend:

Recommendation 1: That legislation be enacted to restrict small container (dumpster) commercial contracts as follows:

- (i) to require contracts to be clearly identified as contracts and to be easily readable;**
- (ii) to prohibit so-called “first refusal” or “right-to-compete” clauses that require that the incumbent hauler be provided notice of and/or an opportunity to match a new entrant’s offer;**
- (iii) to require that small container commercial contracts permit customers to terminate such contracts on 30 days notice by mail, fax, or e-mail;**
- (iv) to require such contracts to limit the financial charge for early termination of the contract to the lesser of Seventy-Five Dollars (\$75) or two times the current monthly charge or two times the average monthly charge over the most recent six month period;**
- (v) to allow collection companies to submit bids that would otherwise violate requirements (iii) and (iv) where competitive bid specifications by the customer request such terms and then to enforce the resulting contract; and**
- (vii.) to declare inconsistent provisions in existing contracts unenforceable.**

The specifics of this recommendation vary somewhat from those in our initial draft report. In its comments, Casella correctly pointed out that our earlier proposal was drawn too broadly, because it was not limited to the small container market. We concur and have therefore limited the recommendation to small containers. In some types of collection services, significant non-recoverable fixed investments, such as compactor installation, are made. We agree that when significant customer-specific investments are made and those investments cannot be recovered if a contract is cancelled, longer term contracts with larger cancellation penalties are warranted. We therefore do not recommend restrictions outside the small container market. Casella also argued that the terms in our original proposal were significantly less favorable to the collection firm than the terms in its current consent decree. The terms in the Casella consent decree meet the objectives we have set forth, and therefore this proposal tracks those terms closely.

In the context of past antitrust enforcement actions, the Attorney General has heard sporadic concerns that vertically integrated operators of waste disposal facilities may discriminate in the terms on which disposal service is provided to non-integrated haulers. Hard evidence on this issue is difficult to marshal. Legislation could be enacted to require that disposal facilities not discriminate among haulers on either rates or terms of access. While this standard seems simple in concept, complicated implementation issues may arise in enforcing such provisions. Prices are negotiated individually with haulers and generators; contract terms may be individualized. Nor are equal access requirements without complications. For example, disposal facilities must exercise some judgment in determining if a load of waste should be rejected for excess volumes of waste that the facility cannot or is not licensed to process. Loads of waste from

households or commercial facilities typically contain small amounts of waste that would be prohibited in large volumes. Distinguishing this legitimate discrimination from prohibited discrimination might be difficult. Because such legislation raises complex enforcement questions and absent compelling evidence of the need for such legislation, we decline to recommend legislation governing terms of access of haulers to disposal facilities.

Starting in 2000 and ending in 2002, a statutory provision required notice to the Attorney General of acquisitions of solid waste hauling assets (38 M.R.S.A. § 2111). That section was automatically repealed 90 days after adjournment of the last session of the Legislature. In the preliminary draft report, we had recommended renewal of that provision. We felt that renewal of the notification provision would help the Attorney General address specific concerns of the Legislature over consolidation in this industry. We also anticipated that the Legislature would not have time to address more fundamental issues in collection and disposal during that session. Renewal of the notice provision would have maintained some antitrust vigilance while the Legislature took time to consider more specific measures. We also argued that the notification provision did not impose undue burdens on the industry. In comments, the industry questioned the need for special treatment of this industry and argued that the notification provision could be burdensome in some cases.

We have decided not to recommend re-enactment of the notification provision. As we have stated previously, antitrust enforcement is an inherently limited response to deficiencies in competition. In this industry, the Legislature can guarantee competition in collection and hauling by restricting the use of evergreen contracts. With that step taken,

no need exists for a notification provision on acquisitions of hauling firms. If, however, no legislative action is taken to address the fundamental competitive issues in the solid waste collection industry, it may be appropriate to revisit the notification provision.

Disposal Costs: Completing Maine's Policy on Waste Disposal

The driving force behind change in the solid waste industry has been environmental regulation. Particularly in disposal, environmental regulation has led to fewer, larger facilities. The decline in the number of disposal facilities and the difficulty of siting new facilities has created opportunities for market power for some existing disposal facilities. Maine's ban on new commercial disposal facilities, in particular, means that all new competition in disposal must come from government facilities (38 M.R.S.A. § 1310-X). The central issue in Maine's disposal markets is how competition will be maintained in the absence of the threat of new commercial entry.

Given the ban on new commercial disposal facilities, antitrust enforcement can do little to maintain competitive prices in disposal. Merger of the two firms that operate landfills could, of course, be challenged under Maine's merger statute (10 M.R.S.A. § 1102-A). But antitrust policy cannot prevent the two firms from raising landfill prices as disposal capacity is depleted in Maine, as long as pricing decisions are made unilaterally, without illegal consultation between competitors. Exercise of market power bestowed by the state ban does not violate antitrust law or policy. This market power was conferred by state action and not obtained by actions that violate the antitrust statutes. Accordingly, antitrust enforcement has no useful role to play in maintaining competitive prices in disposal. Maine needs to look beyond antitrust enforcement to accomplish this task.

Under the ban on new commercial disposal facilities, Maine placed responsibility for the creation of new disposal capacity on state and/or municipal government. The Maine Waste Management Agency was tasked to track state disposal capacity, a function subsequently moved to the State Planning Office. Initial siting work was done for a state-owned facility at Carpenter Ridge, near Lincoln. The site is permitted for special waste, because it is primarily envisioned as an incinerator ash disposal site. While the Carpenter Ridge facility is to be state-owned, the intent is that it will be operated by a private entity. (A second site, closer to southern Maine, was originally envisioned, but planning for that site has not moved forward.) When less than four years of capacity remains, current law calls for the State Planning Office to seek legislative authorization for a plan to begin actual construction at Carpenter Ridge (38 M.R.S.A. § 2156-A).

The statutory criterion for opening Carpenter Ridge is narrow: Is Maine in imminent danger of running out of landfill capacity? This technical question of the availability of some minimally adequate landfill capacity may address the environmental concerns that have motivated waste management policy since the 1970s. But missing from the statutory criteria, and largely missing from underlying policy discussions, is any consideration as to how state siting policy will impact the cost of disposal to Maine's communities and businesses.

Waste disposal is not only an environmental issue; it is also a significant expense for businesses and governments. For local governments in Maine, waste management has become one of the top three or four budget categories and also one of the fastest growing. Municipalities are demanding greater emphasis on the cost of waste management in state policy. The formation of the Legislative Task Force on competition

in solid waste management in 2000 is indicative of the growing importance of price as a waste management policy issue. We believe that Maine's policy on disposal capacity is presently incomplete, because it fails to take account of the historical and prospective impact of policy choices on disposal prices.

In our preliminary draft, we suggested that the structure of the four-year capacity trigger for a State Planning Office recommendation to move ahead with Carpenter Ridge embodied deep-seated reluctance to open state-owned disposal capacity. The current statutory language does not authorize opening Carpenter Ridge; it simply directs the State Planning Office to ask the Legislature for permission to construct the facility. We also suggested that the *de facto* policy is to delay any decision to site additional capacity for as long as possible. The Department of Environmental Protection, in particular, did not agree with this assessment, pointing to the approved site permit for Carpenter Ridge in addition to the statutory calendar for opening it. However, we also received comments that expressed general agreement with our original assessment. The most recent policy document on Carpenter Ridge, the 1999 Task Force report (Maine State Planning Office, 1999) suggests the ambiguity about the role of Carpenter Ridge. Carpenter Ridge could be a near-term major addition to Maine's disposal capacity, or Carpenter Ridge could be simply an option of last resort that the state would in fact prefer not to open. While a majority on the task force endorsed the first alternative, the current four-year trigger would seem more consistent with the second alternative. We continue to believe that, under current policy, the opening of Carpenter Ridge remains highly speculative. We are even less sanguine about a second state-owned facility closer to southern Maine.

But even if we assume that the statutory calendar is followed, and construction duly authorized, Carpenter Ridge is unlikely to prevent escalation in disposal prices. When two years of construction work for the site are factored in, Maine will be, at most, two years from exhausting disposal capacity before the site opens. Upward pressure on landfill prices is inevitable under such a strategy of brinkmanship. Moreover, extra transportation costs to reach Carpenter Ridge further insulate existing landfills from competition from that facility. Trucks from Maine's population centers must travel 50 to 100 miles beyond existing commercial landfills to reach Carpenter Ridge. This creates an automatic cost disadvantage of something like \$10 per ton for Carpenter Ridge.

A necessary first step towards incorporating price and competition into disposal capacity decisions is to closely monitor the price of disposal. Because of the unique regulatory environment created by the ban, Maine government should be able to readily assess what is happening to disposal prices. Even with a fair degree of effort, we have been able to construct only a partial assessment of disposal pricing. This leads to our second recommendation:

Recommendation 2: That the State Planning Office expand its current data collection to gather more detailed disposal fee information. This recommendation would require some changes in data collection by the State Planning Office. It would also require legislative authority to collect revenue data from landfills, which creates a requirement analogous to one now imposed on incinerators. Further, we recommend that the five-year solid waste management plans and the biennial disposal capacity reports by the State Planning Office include analyses of how capacity changes are likely to impact prices. That analysis should assess whether

existing commercial disposal facilities are likely to earn windfall profits as disposal capacity declines.

The State Planning Office currently conducts an annual survey of municipal solid waste programs. Since 1997, that survey has collected budgetary information from municipalities. That survey has not required that towns provide budgetary information in any specific uniform format. Given the variations in the organization of waste management functions in communities, the State Planning Office asks only that communities submit financial data as presented in annual municipal reports. However, our own survey of towns indicates that most communities were well aware of current per-ton disposal costs for MSW, CDD, bulky goods, and tires (assuming that the municipality paid to dispose of a category of waste) and could readily submit per-unit disposal costs. We recommend that towns be asked a question such as: “Do you pay a per-ton fee to dispose of MSW? If yes, what was that fee on January 1?”, with similar questions for CDD, bulky goods, and tires. These four categories of waste account for most municipal disposal costs at present. Like any data collection activity, it is important to keep abreast of changes. Were additional disposal categories to become significant, the data collected should reflect the changing disposal patterns. Burn pile ash illustrates the type of change that might prompt collection of additional categories of disposal costs. Some communities have expressed concern that recent changes in the application of environmental standards might make burn pile ash a significant expense in the near future.

We also recommend expanding the current reporting requirements for incinerators to include municipal and commercial landfills. Under 38 M.R.S.A. § 2232, Maine’s four

incinerators provide annual data on tonnage and revenues. This data is reported in total and separately for municipalities, commercial accounts, and the spot market. We recommend expanding the statute to require landfills, both municipal and commercial, to report tonnage and revenue data to the State Planning Office in a form specified by that office. The statute should be framed broadly to allow the State Planning Office to adjust data collection to changing market conditions. Initially, the State Planning Office should collect tonnage and total revenues for the following categories of waste: MSW, CDD, bulky goods, FEPR, incinerator non-processibles, and incinerator ash. The tonnage and revenue data should be disaggregated by five major customer groups: municipalities and other government units, incinerators, instate commercial accounts, spot market from instate sources, and out-of-state sources. The current data collection from incinerator may require minor modification to conform to these categories.

We would note that state collection and dissemination of disposal price data is not unusual. A cursory search of the Internet shows that other states, including California, New Jersey, Pennsylvania, and Florida, collect and post facility-specific fees.

We are not recommending collection of data on the collection and hauling sector. There are significantly more firms in collection and hauling than in disposal. Because collection and hauling contracts are typically specific to individual customers, it would be difficult to collect data that provided meaningful comparisons either at a point in time or across years.

We have also not recommended collecting data from firms providing disposal services other than incineration and landfilling. Obviously, firms that reprocess waste materials, such as chipping tires or deriving wood fuel chips from CDD, provide an

important service that substitutes for incineration or landfilling. These services are much more varied than incineration and landfilling, and the nature of these services continues to evolve. Again, meaningful data collection would be difficult. Nor are there are obvious barriers to entry that raise competitive questions in this part of the market.

Having adequate data to monitor and assess changes in disposal prices is a preliminary step in the policy process. That data must then be fed into a decision process about disposal capacity. The current statutory criteria are based entirely on estimates of remaining capacity, so there is no place in the current policy process to integrate information on disposal costs. The policy process must be refined to respond appropriately to issues of competition and price in disposal.

In our preliminary report, we suggested that the necessary policy change required the state to assume a greater level of responsibility for development of new landfill capacity. Our logic involved two points. First, we suggested that it is clear that new landfill capacity will have to be provided by either the state or municipalities. Second, we argued that the economics of landfill construction and operation require large facilities whose scale is simply more appropriate for the state than for municipalities.

It is clear from the comments we received that, while there are those who agree with this policy direction, there is also significant resistance to this kind of policy change. For example, RWS in its comments argued that state policy is not and should not be to maintain low landfill disposal prices. RWS argued that because landfilling is the least desirable alternative in Maine's hierarchy of waste management options, the landfill prices should be higher to make other alternatives more economically viable. In a similar vein, the State Planning Office suggested that Maine might be willing to accept higher

disposal costs as a way to fund and to encourage higher recycling/reuse rates. At the discussion of our preliminary report before the Natural Resource Committee of the Legislature, committee members raised the possibility of amending the current ban to allow at least one of the existing commercial landfills to expand. Comments from the Department of Environmental Protection indicate that they do not agree that siting a new landfill is too large a responsibility for municipalities or groups of municipalities.

These comments, and others like them, have led us to a different recommendation on how to modify state policy on new landfill capacity. We want to emphasize that current policy has great potential to result in significantly higher landfill disposal fees, and therefore windfall profits for commercial disposal sites, in the next ten to fifteen years. There are a number of options to address this concern; the choice among these options involves broader solid waste management questions. Therefore, we recommend:

Recommendation 3: That legislation be enacted to affirm that municipalities and other customers should enjoy reasonable competitive options for the management and disposal of solid waste as landfill capacity declines. When the State Planning Office determines that a decline in disposal capacity has the potential to generate supracompetitive prices, it should be required to submit that finding and concurrently to submit a proposal for corrective legislation to the Legislature. It is not the purpose of this study to advocate for specific choices among available procompetitive solid waste policy options. We doubt that the Legislature intended that the ban on new commercial disposal facilities should allow existing commercial disposal facilities to earn higher profits, but some policy action is necessary to avoid exactly that outcome. Because the policy choices in landfill siting are inherently

difficult, it is important to insure that the issue is placed before the Legislature in a coherent and timely way.

The language in this third recommendation parallels the current legislation on opening Carpenter Ridge. When Maine's landfill capacity reaches levels that may increase the prices that landfills can charge, the State Planning Office would have to notify the Legislature of this development and to recommend a policy direction to avoid that outcome. These broader criteria would almost certainly be triggered before the current four-year capacity trigger for Carpenter Ridge.

To implement this expanded planning function, the State Planning Office will need to initiate, and pursue in conjunction with the Legislature, an analysis and dialogue over how to avoid potential windfall profits for commercial landfills. The policy choices here are difficult, and the State Planning Office obviously cannot design, review and select policy options in a vacuum. But a necessary first step is to assemble credible analysis as a guide to decision-making. Given the State Planning Office's central role in planning for disposal capacity, that office is positioned to conduct such analysis and to initiate the necessary dialogue. This recommendation links the current responsibility for monitoring capacity with responsibility for monitoring pricing implications of those capacity changes. With these joint responsibilities, combined with its broader economic analysis capabilities, the State Planning Office will be appropriately positioned to guide the difficult policy discussions that are necessary to resolve the competing goals of solid waste policy. Draft Legislation incorporating these recommendations is attached hereto as Appendix D.

There are a number of policy directions that the state can and should consider to promote competitive pricing of disposal in the context of the ban on new commercial disposal. We will briefly discuss some of those options to provide some sense of the directions that might be available to the State Planning Office.

First, the state could open Carpenter Ridge and additional state-owned capacity on a schedule that maintains stable disposal prices. As we suggested above, the relatively remote location of Carpenter Ridge limits the competitive impact of opening that site. It is unlikely that Carpenter Ridge alone will adequately restrain the growth in landfill prices. While this approach would seem consistent with (though not mandated by) current statutory language, comments received on our earlier draft lead us to believe that this outcome remains controversial.

Second, municipalities or groups of municipalities could open new disposal sites. In fact, current policy might be interpreted as preferring that municipalities assume that responsibility. The timetable for opening Carpenter Ridge is short, perhaps, because the state will open that facility only as last resort, after it is clear that municipalities will not open necessary capacity. The nature of the opposition to disposal sites might place municipalities in a better position than the state to site facilities. Local opposition to a disposal site may be lower if residents view a facility as addressing their own disposal problems, as compared to having waste shipped in from elsewhere.

If municipal siting were to be the center of Maine's disposal capacity, the state might consider reducing the financial risks that municipalities bear in developing new sites. The expense of obtaining options to purchase land, doing engineering work, and going through the environmental siting process represents a very sizable investment with

significant risks. The state could substantially reduce this risk by assuming a large share of the cost (perhaps as much as 80%) of this up-front, pre-construction investment. To reduce risk, the state would need to assume this expense whether or not the facility were opened. A subsidy for actual construction costs is probably less desirable. Because the risks are much lower once a permit is approved and construction begins, construction costs do not create the same degree of risks. And construction subsidies have the effect of lowering the cost of disposal, which may not be desirable in light of other policy objectives. The state could bear some or all of the risk that state or federal legislative or regulatory changes substantially increase the costs of operating a facility once it is opened or seriously reduce its effective life. And the state might devise some type of insurance program for unanticipated closure and post-closure costs. To provide incentives to municipalities to operate disposal sites diligently, an insurance program should probably not remove all post-closure risks from the municipalities.

A third option would be to allow at least one of the two existing commercial landfills to expand beyond the limitations in the current legislation. Such an expansion is probably more feasible at the Crossroads landfill in Norridgewock than at the Pine Tree Landfill in Hampden. If Maine is to rely heavily on a single commercial landfill, it will probably need to consider some form of public utility regulation to prevent price escalation. Based upon our review of West Virginia's efforts at price regulation of landfill disposal, this does not seem like an inherently difficult task. Price cap regulation may be more attractive than rate-base regulation. Price cap regulation requires less regulatory effort and avoids incentives to cross-subsidize competitive business activity from the regulated activities.

Fourth, Maine might consider strategies that increase the price of landfill disposal, but with the proceeds of higher prices flowing to state or municipal governments, rather than to commercial disposal sites. As RWS and the State Planning Office comments suggest, higher landfill disposal prices encourage recycling and incineration. Simply allowing landfill rates to increase as the existing capacity is filled will generate windfall profits for commercial disposal sites. A preferable strategy may be to tax all landfilling of waste. While the tax would probably be collected on a per-ton basis, the tax might be differentiated by material to reflect the relative use of landfill space by different materials. For example, the per-ton tax on incinerator ash might be lower than the per-ton tax on MSW or bulky waste. This would provide an incentive use landfill space efficiently. To offset the impact of such a tax on municipal budgets, the revenues could be returned to communities to finance waste management budgets. For example, the entire proceeds from a per-ton landfill fee could be returned to communities on a per capita basis. The per-ton landfill fee would reward recycling and incineration, while the per-capita return of the fees would minimize budgetary impacts. A tax on landfilling would encourage recycling and reuse, because the tax could be avoided entirely for material removed from the waste stream. A tax on landfilling would encourage incineration, because incinerators reduce the tonnage and volume of waste. A tax on all landfill disposal, from all sources, would also have the effect of discouraging imports and encouraging exports of waste. If the goal is to stretch out existing landfill capacity for as long as possible, the tax on landfilling should be implemented well before we start to run out of capacity.

These policy options are not mutually exclusive. They could be combined to achieve various combinations of policy objectives. There are likely other policy choices to address the impact of declining landfill capacity on disposal prices. We are not advocating here for a particular policy choice. But we do argue that this policy discussion needs to begin. The longer we delay addressing this difficult policy area, the fewer options the state will have to reconcile competing policy objectives.

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APPENDIX A

Municipal Solid Waste Survey

This questionnaire asks for the fees your municipality paid for: **1) disposal**; and **2) hauling** of:

- municipal solid waste
- construction and demolition debris
- burn pile ash, and
- tires.

In addition, the questionnaire asks for any costs your municipality **paid private vendors** for curbside pick-up of municipal solid waste. Do **not** report the costs of curbside pick-up performed by municipal employees.

We are asking for those municipal costs in both 2001 and in 1996. Because fiscal years and contracts vary, we are asking about the fees specified in contracts that were in effect on January 1 of each of those years. If, for some reason, information for 1996 is not available, we ask that you provide information for 1995 or 1997 and change the year accordingly on the questionnaire.

Upon completion of the study, our report will be made available on the Margaret Chase Smith Center's website, www.umaine.edu/mcsc. In that report, the information you provide on this questionnaire will not be associated with you personally or with the name of your municipality.

Please complete and return this questionnaire in the enclosed postage-paid envelope as soon as possible. If you have any questions about the study or the questionnaire, please contact Charles E. Morris at the Margaret Chase Smith Center for Public Policy, 5715 Coburn Hall, University of Maine, Orono, Maine 04469; phone, 581-4135; email, charlie.morris@umit.maine.edu.

We thank you in advance for your assistance in this important study.

The following is being asked so that we may contact you for clarification if necessary.

Name of municipality/disposal district:

Name & title of person responding:

Phone number: _____ email address:

Fiscal year begins on: Month: _____ Day: _____

Municipal Solid Waste (MSW)

Curbside Pick-Up	2001	1996
Did municipal employees provide curbside pick-up of MSW?	Yes No	Yes No
Did your town contract with a private firm for pick-up of MSW?	Yes No	Yes No
IF YES, what is the annual contract cost (not including tipping / disposal fees) for the contract in force that included January 1?	\$ __, __ __ __, __ __ __	\$ __, __ __ __, __ __ __
Disposal	2001	1996
Did your town pay a per-ton disposal ("tipping") fee for MSW?	Yes No	Yes No
IF YES, what was the per-ton tipping fee on January 1?	\$ __ __ __ . __ __	\$ __ __ __ . __ __
What disposal site did you use in 2001? _____		
What disposal site did you use in 1996? _____		
Please describe any other fees your town paid or rebates your town may have received on disposal of Municipal Solid Waste		
in 2001 _____ _____		
in 1996 _____ _____		
<input type="checkbox"/>		
Hauling	2001	1996
Did your town pay an independent contractor to haul municipal solid waste from a transfer station to a disposal site?	Yes No	Yes No
IF YES, did the hauling cost include a fee per-trip ?	Yes No	Yes No
What was the fee per-trip on January 1?	\$ __, __ __ __ . __ __ __	\$ __, __ __ __ . __ __ __
IF YES, did the hauling cost include a fee per-ton ?	Yes No	Yes No
What was the fee per-ton on January 1?	\$ __ __ __ . __ __	\$ __ __ __ . __ __
Please describe any other fees your town paid for hauling Municipal Solid Waste		
in 2001 _____ _____		
in 1996 _____ _____		
<input type="checkbox"/>		

Construction and Demolition Debris (CDD)

Disposal	2001	1996
Did your town pay for disposal of construction and demolition debris?	Yes No	Yes No
IF YES, what was the tipping fee per-ton of CDD on January 1?	\$ ____ . ____	\$ ____ . ____
What disposal site did your town use for CDD in 2001? _____		
What disposal site did your town use for CDD in 1996? _____		
Please describe any other fees your town paid for disposal of construction and demolition debris		
in 2001 _____		

in 1996 _____		
_____ <input type="checkbox"/>		
If your town did not pay for CDD disposal , how was CDD disposed?		
in 2001 _____		

in 1996 _____		
_____ <input type="checkbox"/>		
Hauling	2001	1996
Did your town pay an independent contractor to haul construction and demolition debris to a disposal site?	Yes No	Yes No
IF YES, did the hauling cost include a fee per-trip ?	Yes No	Yes No
What was the fee per-trip on January 1?	\$ __ , ____ . ____	\$ __ , ____ . ____
IF YES, did the hauling cost include a fee per-ton ?	Yes No	Yes No
What was the fee per-ton on January 1?	\$ ____ . ____	\$ ____ . ____
Please describe any other fees your town paid for hauling construction and demolition debris		
in 2001 _____		

in 1996 _____		
_____ <input type="checkbox"/>		

Burn Pile Ash

Disposal	2001	1996
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Did your town pay for disposal of ash from a burn pile?	Yes No	Yes No
IF YES, what was the tipping fee per-ton of ash on January 1?	\$ ____ . ____	\$ ____ . ____
What disposal site did your town use for ash in 2001 ? _____		
What disposal site did your town use for ash in 1996 ? _____		
Hauling	2001	1996
Did your town pay an independent contractor to haul burn pile ash?	Yes No	Yes No
IF YES, did the hauling cost include a fee per-trip ?	Yes No	Yes No
What was the fee per-trip on January 1?	\$ __ , ____ . ____	\$ __ , ____ . ____
IF YES, did the hauling cost include a fee per-ton ?	Yes No	Yes No
What was the fee per-ton on January 1?	\$ ____ . ____	\$ ____ . ____

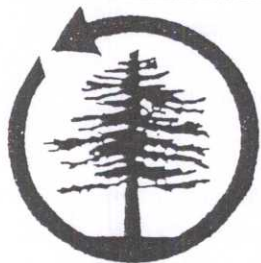
Tires

Disposal	2001	1996
Did your town pay for disposal of tires (other than combining them with municipal solid waste)?	Yes No	Yes No
Did the disposal cost include a fee per-ton ?	Yes No	Yes No
What was the fee per-ton on January 1?	\$ ____ . ____	\$ ____ . ____
Did the disposal cost include a fee per-tire ?	Yes No	Yes No
IF YES, what was the fee per-passenger tire on January 1?	\$ ____ . ____	\$ ____ . ____
IF YES, what was the fee per-truck tire on January 1?	\$ ____ . ____	\$ ____ . ____
IF YES, what was the fee per-skidder tire on January 1?	\$ ____ . ____	\$ ____ . ____
Did these tire disposal fees include hauling costs ?	Yes No	Yes No
IF NO, what tire hauling fees did you pay in 2001 ? _____		
What tire hauling fees did you pay in 1996 ? _____		
What disposal site did your town use for tires in 2001 ? _____		
What disposal site did your town use for tires in 1996 ? _____ <input type="checkbox"/>		

APPENDIX B

LIST OF TOWNS AND DISTRICTS IN SURVEY SAMPLE

Acton	Kennebunkport
Belmont	Leeds
Berwick	Medford
Biddeford	Monson Region
Brewer	Newry
Brownfield	Otisfield
Carthage	Passadumkeag
Central Penobscot SWF	Portland
Clifton	Pownal
Dedham	Rome
Durham	Sabattus
Eddington	Saco
Embden	Sebago
Etna	South Berwick
Falmouth	Standish
Fayette	Stonington
Fryeburg	Van Buren
Greene	Veazie
Hartford	Vienna
Haynesville	Waldoboro Solid Waste Facility
Holden	Oxford County Regional Solid Waste Corp.
Islesboro	Winterport
Kenduskeag	Yarmouth



Pine Tree Waste, Inc.

33 Rigby Road, So. Portland, ME 04106
Phone (207) 773-1122 Fax (207) 773-2125

Service Contract Non-Hazardous Waste

- ☐ New Customer
☐ Current Account
☐ New Location
☐ Change
☐ Increase
☐ Decrease
☐ Compactor Rental
☐ Contract Renewal

Customer P.O.# _____

☐ Current ☐ Arrears

Other _____

Locks Slant Plastic Lids Side Door
 Toter Wheels Dock Cont.

Customer

Customer Name: _____ Acct # _____

Billing Address: _____

Service Address: _____

Customer Contact: _____

Telephone Number: _____

Delivery Date _____ Effective Date _____

Container Specification (NEW)

Quantity	Size	Container Type (RO/FL/RL/ETC.)	Material Type (Disposal)	Frequency	Price

Container Specification (OLD)

Quantity	Size	Container Type (RO/FL/RL/ETC.)	Material Type (Disposal)	Frequency	Price

Service Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Waste							
Recycle							
OCC							
Other							

Waste Types and Amounts:

Special Instructions:

Customer Authorization for Solid Waste and Recycling Services:

Authorized Signature: _____

Title: _____

Date: _____

Pine Tree Waste, Inc.

Representative Signature: _____

Representative Title: _____

Date: _____

Terms and Conditions on Reverse Side

Services The Contractor will provide the Customer with collection, transportation, disposal, and recycling services for non-hazardous materials, and will have the exclusive right to do so. Adjustments in service may be mutually agreed upon by Customer and Contractor during any term, provided that Contractor's exclusivity is maintained.

Waste Materials The Waste Material to be collected and disposed of by the Contractor pursuant to this Service Contract is all solid waste (including recyclable materials) generated by the customer (the "Waste Material"). Waste Material specifically excludes and the customer agrees not to deposit in Contractor's equipment any radioactive, volatile, corrosive, highly flammable, explosive, biomedical, infectious, or hazardous ("Excluded Waste") materials as defined by applicable federal, state, provincial or local laws or regulations. Contractor shall acquire title to the Waste Material when it is loaded into Contractor's trucks. Title to and liability for Excluded Wastes shall remain with the Customer and Customer expressly agrees to indemnify and hold harmless Contractor from and against all damages, penalties, liabilities, and fines resulting from or arising out of the deposit of Excluded Waste in Contractor's trucks, containers or other equipment.

Equipment The Equipment furnished by the Contractor shall remain the property of the Contractor. Customer will be responsible for loss or damage caused by theft or any negligent use of the equipment. Customer will not overload by weight or volume, or alter the equipment and will take reasonable precautions from preventing others from doing so. The equipment will be used only for its intended purpose. Unobstructed access to the equipment shall be provided on the service day(s). If equipment is not accessible, or is continuously overloaded by weight or volume, the Customer will be subject to an additional charge or adjustments to the monthly rate. The Customer accepts all liability of personal injury associated with loading of Contractor's equipment, excluding the Contractor's employees.

Term The initial term of this agreement shall be for three years from the effective date and shall be automatically renewed for one year terms unless either party terminates the agreement by giving the other party notice of intent to terminate at least thirty days prior to the expiration of the current term. Such notice shall be by certified mail or facsimile. If this agreement is terminated prior to the end of any term, the Customer will pay liquidated damages in the amount of six times the most recent monthly charge, or the remaining number of months in the term, which ever is less, plus any outstanding balances, and any reasonable attorneys fees incurred by contractor in collection of damages.

Fees and Payment Customer agrees to pay the Contractor for the fees set fourth herein in accordance with the payment terms on Contractor invoice. Fees may be increased from time to time in accordance with the Equipment clause above, and to reflect changes in disposal and processing fees, fuel prices, regulations and taxes, the CPI, and other operating expenses plus a reasonable margin. Subject to customer approval, fees may be adjusted for other reasons, such adjustments requiring approval may be agreed to verbally, in writing, or by actions such as payment of invoice. Contractor reserves the right to charge a late fee no greater than that allowed by law on outstanding balances. In the event of default, in addition to the finance charges, the customer agrees to pay all attorneys fees or collections fees, court costs and other expenses reasonably incurred. If disposal is listed as a separate component of the fees, a reasonable and appropriate handling charge may be added.

Pavement damage Contractor will not be responsible for damages to Customer's pavement or driving surface resulting from the weight of our equipment or vehicles in providing service to the Customer. If damage other than pavement occurs through the gross negligence of the contractor, the contractor will assume responsibility.

Miscellaneous The Agreement will be governed by the laws of the state in which services are performed, and is binding on the successors and heirs of both parties. This Agreement supersedes any prior Service Agreement between Contractor and Customer for locations or services covered by this Agreement. If Customer should move during any term, and the new location is within the Contractor's (including subsidiaries) service area, the Agreement shall remain in effect. A fax signature of any party shall be considered to have the same binding legal effect as an original signature.

Contractor



3 Talford Road
Waterville, Maine 04905
800-639-0462 • (207) 873-5664

Service Contract Non-Hazardous Waste

- ☐ New Customer
☐ Current Account
☐ New Location
☐ Change
☐ Increase
☐ Decrease
☐ Compactor Rental
☐ Contract Renewal

Customer P.O.# _____

☐ Current ☐ Arrears

Other _____

Locks Slant Plastic Lids Side Door
Toter Wheels Dock Cont.

Customer

Customer Name: _____ Acct # _____

Billing Address: _____

Service Address: _____

Customer Contact: _____

Telephone Number: _____

Delivery Date _____ Effective Date _____

Container Specification (NEW)

Quantity	Size	Container Type (RO/FL/RL/ETC.)	Material Type (Disposal)	Frequency	Price

Container Specification (OLD)

Quantity	Size	Container Type (RO/FL/RL/ETC.)	Material Type (Disposal)	Frequency	Price

Service Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Waste							
Recycle							
OCC							
Other							

Waste Types and Amounts:

Special Instructions:

Customer Authorization for Solid Waste and Recycling Services:

Authorized Signature: _____

Title: _____

Date: _____

Capitol City Transfer

Representative Signature: _____

Representative Title: _____

Date: _____

Terms and Conditions on Reverse Side

FORM NO. 177-055 (REV. 10/01)

Services The Contractor will provide the Customer with collection, transportation, disposal, and recycling services for non-hazardous materials, and will have the exclusive right to do so. Adjustments in service may be mutually agreed upon by Customer and Contractor during any term, provided that Contractor's exclusivity is maintained.

Waste Materials The Waste Material to be collected and disposed of by the Contractor pursuant to this Service Contract is all solid waste (including recyclable materials) generated by the customer (the "Waste Material"). Waste Material specifically excludes and the customer agrees not to deposit in Contractor's equipment any radioactive, volatile, corrosive, highly flammable, explosive, biomedical, infectious, or hazardous ("Excluded Waste") materials as defined by applicable federal, state, provincial or local laws or regulations. Contractor shall acquire title to the Waste Material when it is loaded into Contractor's trucks. Title to and liability for Excluded Wastes shall remain with the Customer and Customer expressly agrees to indemnify and hold harmless Contractor from and against all damages, penalties, liabilities, and fines resulting from or arising out of the deposit of Excluded Waste in Contractor's trucks, containers or other equipment.

Equipment The Equipment furnished by the Contractor shall remain the property of the Contractor. Customer will be responsible for loss or damage caused by theft or any negligent use of the equipment. Customer will not overload by weight or volume, or alter the equipment and will take reasonable precautions from preventing others from doing so. The equipment will be used only for its intended purpose. Unobstructed access to the equipment shall be provided on the service day(s). If equipment is not accessible, or is continuously overloaded by weight or volume, the Customer will be subject to an additional charge or adjustments to the monthly rate. The Customer accepts all liability of personal injury associated with loading of Contractor's equipment, excluding the Contractor's employees.

Term The initial term of this agreement shall be for three years from the effective date and shall be automatically renewed for one year terms unless either party terminates the agreement by giving the other party notice of intent to terminate at least thirty days prior to the expiration of the current term, or thirty days prior to the intended date of termination. Such notice shall be by mail, e-mail, or facsimile. If this agreement is terminated by the Customer prior to the end of any term, the Customer will pay liquidated damages in the amount of \$75.00, or two times the current monthly charge, or two times the average monthly charge over the most recent six month period, whichever is less, plus any outstanding balances, and any reasonable attorneys fees incurred by contractor in collection of damages.

Fees and Payment Customer agrees to pay the Contractor for the fees set fourth herein in accordance with the payment terms on Contractor invoice. Fees may be increased from time to time to reflect changes in disposal and processing fees, fuel prices, regulations and taxes, the CPI, and other operating expenses plus a reasonable margin. Subject to customer approval, fees may be adjusted for other reasons, such adjustments requiring approval may be agreed to verbally, in writing, or by actions such as payment of invoice. Contractor reserves the right to charge a late fee no greater than that allowed by law on outstanding balances. In the event of default, in addition to the finance charges, the customer agrees to pay all attorneys fees or collections fees, court costs and other expenses reasonably incurred. If disposal is listed as a separate component of the fees, a reasonable and appropriate handling charge may be added.

Pavement damage Contractor will not be responsible for damages to Customer's pavement or driving surface resulting from the weight of our equipment or vehicles in providing service to the Customer. If damage other than pavement occurs through the gross negligence of the contractor, the contractor will assume responsibility.

Miscellaneous The Agreement will be governed by the laws of the state in which services are performed, and is binding on the successors and heirs of both parties. This Agreement supersedes any prior Service Agreement between Contractor and Customer for locations or services covered by this Agreement. If Customer should move during any term, and the new location is within the Contractor's (including subsidiaries) service area, the Agreement shall remain in effect. A fax signature of any party shall be considered to have the same binding legal effect as an original signature.



Appendix C-3

SERVICE AGREEMENT
NON-HAZARDOUS WASTES

District Name	
District Address	
City	
State, Zip Code	
Phone #	

Renewal Contract	<input type="checkbox"/>
SIC Code	
Type of Business	

Account Name	
Service Address	
City, Zip	
County	
Telephone #	
Fax#	
Contact	

WM Service Agreement No.	
Customer Account No.	
Reason Code	
Effective Date	/ /

Billing Name	
Billing Address	
City, Zip	
County	
Telephone #	
Fax #	
Contact	

EQUIPMENT/SERVICE SPECIFICATIONS

Loc	System	Quantity	Size	Lids	Wheels	Lock	Frequency	On Call	Schedule & Route No.							Charge(s)
									Mon	Tues	Wed.	Thur.	Fri.	Sat.	Sun	
									Rt.#	Rt.#	Rt.#	Rt.#	Rt.#	Rt.#	Rt.#	\$
																Month <input type="checkbox"/>
																Lift <input type="checkbox"/>
																\$
																Month <input type="checkbox"/>
																Lift <input type="checkbox"/>
																\$
																Month <input type="checkbox"/>
																Lift <input type="checkbox"/>
																\$
																Month <input type="checkbox"/>
																Lift <input type="checkbox"/>
Map Code/Driver Notes:																Total \$
																Month <input type="checkbox"/>
																Lift <input type="checkbox"/>
																\$
																Month <input type="checkbox"/>
																Lift <input type="checkbox"/>
																\$
																Month <input type="checkbox"/>
																Lift <input type="checkbox"/>
																\$
																Month <input type="checkbox"/>
																Lift <input type="checkbox"/>
Net Charge																\$
																Month <input type="checkbox"/>
																Lift <input type="checkbox"/>

SPECIAL INSTRUCTIONS

WM No.

CUSTOMER DEPOSIT		RENEWABLE		Schedule of Charges	
DATE	/ /	TERM		Service Charge per Month	\$
P.O. NUMBER				Casters/Locks	\$
JOB NUMBER				Extra Pickup Charges:	
RECEIPT REQUIRED		BILL TO ACCT#		- Per Lift	\$
TAXABLE		DISPOSAL SITE		- Per Yard	\$
				- Per Ton	\$
THE UNDERSIGNED INDIVIDUAL SIGNING THIS AGREEMENT HAS READ AND UNDERSTANDS THE TERMS AND CONDITIONS OF THIS AGREEMENT AND HAS THE AUTHORITY TO SIGN ON BEHALF OF CUSTOMER.				Hauling per Load	\$
				Disposal per Ton	\$
				Disposal per Load	\$
				Total per Load	\$
				Delivery Charge	\$
				Schedule Charge	\$
				Removal Charge	\$
				Trip Charge	\$
				Franchise Fees	\$
TERMS: NET 10 DAYS					
Customer		Contractor			
(Authorized Signature)		(Authorized Signature)			
(TITLE)	/ /	Territory Number	/ /		
	(DATE)		(DATE)		

SERVICE AGREEMENT NON-HAZARDOUS WASTES

Collection Service Agreement Terms And Conditions

1. **SERVICES RENDERED; WASTE MATERIALS.** Customer grants to Company the exclusive right, and Company shall furnish equipment and services, to collect and dispose of and/or recycle all of Customer's Waste Materials. Customer represents and warrants that the materials to be collected under this Agreement shall be only "Waste Materials" as defined herein. For purposes of this Agreement, "Waste Materials" means all non-hazardous putrescible and non-putrescible solid waste and recyclable materials generated by Customer or at Customer's Service Address. Waste Materials includes Special Waste, such as industrial process wastes, asbestos containing material, petroleum contaminated soils, treated/de-characterized wastes, and demolition debris, provided that Customer has completed a Waste Profile for such Special Waste which has been approved by Company in writing. Waste Materials specifically excludes, and Customer agrees not to deposit or permit the deposit for collection of, any radioactive, volatile, corrosive, flammable, explosive, biomedical, infectious, biohazardous, regulated medical or hazardous waste, toxic substance or material, as defined by, characterized or listed under applicable federal, state, or local laws or regulations, or Special Waste not approved in writing by Company (collectively, "Excluded Materials"). Title to and liability for Excluded Material shall remain with Customer at all times.

2. **TERM.** The initial term ("Term") of this Agreement is thirty-six (36) months from the Effective Date set forth above ("Initial Term"). This Agreement shall automatically renew thereafter for additional terms of twelve (12) months each ("Renewal Term") unless either party gives to the other party written notice (See Section 10) of termination at least ninety (90) days, but not more than one hundred eighty (180) days, prior to the termination of the then-existing term.

3. **SERVICES GUARANTY.** If the Company fails to perform the services described within five business days of its receipt of a written demand from Customer (See Section 10), Customer may terminate this Agreement with the payment of all monies due through the termination date.

4. **CHARGES; PAYMENTS; ADJUSTMENTS.** Customer shall pay for the services and/or equipment (including repair and maintenance) furnished by Company in accordance with the charges on the reverse side, as adjusted hereunder, within ten (10) days of the date of Company's invoice. Customer shall pay a service charge on all past due amounts accruing from the date of the invoice at a rate of eighteen percent (18%) per annum or, if less, the maximum rate allowed by law. Company may increase the charges to account for: any increase in disposal, fuel or transportation costs; any change in the composition of the Waste Materials or increases in the average weight per container of Waste Materials; increased costs due to uncontrollable circumstances, including, without limitation, changes in local, state or federal laws or regulations, imposition of taxes, fees or surcharges and acts of God such as floods, fires, etc. Company may also increase the charges to reflect increases in the Consumer Price Index for the municipal or regional area in which the Service Address is located. Increases in charges for reasons other than as provided above require the consent of Customer which may be evidenced verbally, in writing or by the actions and practices of the parties.

5. **CHANGES.** Changes in the frequency of collection service, schedule, number, capacity and/or type of equipment may be agreed to orally, in writing, or by the actions and practices of the parties.

6. **EQUIPMENT, ACCESS.** All equipment furnished by Company shall remain the property of Company; however, Customer shall have care, custody and control of the equipment and shall bear responsibility and liability for all loss or damage to the equipment and for its contents while at Customer's location. Customer shall not overload, move or alter the equipment and shall use the equipment only for its intended purpose. At the termination of this Agreement, Customer shall return the equipment to Company in the condition in which it was provided, normal wear and tear excepted. Customer shall provide unobstructed access to the equipment on the scheduled collection day. Customer shall pay, if charged by Company, an additional fee for any service modifications caused by or resulting from Customer's failure to provide access. Company shall not be responsible for any damage to Customer's property, including pavement, subsurface or curbing, resulting from Company's provision of services hereunder. Customer warrants that Customer's right of way is sufficient to bear the weight of Company's equipment and vehicles.

7. **LIQUIDATED DAMAGES.** In the event Customer terminates this Agreement prior to the expiration of any term for any reason other than a default by Company, or in the event Company terminates this Agreement for Customer's

default, Customer shall pay the following liquidated damages in addition to the Company's legal fees: 1) if the remaining Initial Term under this Agreement is six or more months, Customer shall pay its most recent monthly charges multiplied by six; 2) if the remaining Initial Term under this Agreement is less than six months, Customer shall pay its most recent monthly charges multiplied by the number of months remaining in the Term; 3) if the remaining Renewal Term under this Agreement is three or more months, Customer shall pay its most recent monthly charges multiplied by three; or 4) if the remaining Renewal Term under this Agreement is less than three months, Customer shall pay its most recent monthly charges multiplied by the number of months remaining in the Renewal Term. Customer acknowledges that the actual damage to Company in the event of termination is difficult to fix or prove, and the foregoing liquidated damages amount is reasonable and commensurate with the anticipated loss to Company resulting from such termination and is an agreed upon fee and is not imposed as a penalty. Company shall not be liable under any circumstances for any special, incidental or consequential damages arising out of or in connection with performance of this Agreement.

8. **INDEMNITY.** The Company agrees to indemnify, defend and save Customer harmless from and against any and all liability which Customer may be responsible for or pay out as a result of bodily injuries (including death), property damage, or any violation or alleged violation of law, to the extent caused by any negligent act, negligent omission or willful misconduct of the Company or its employees, which occurs (1) during the collection or transportation of Customer's Waste Materials, or (2) as a result of the disposal of Customer's Waste Materials, after the date of this Agreement, in a facility owned by a subsidiary of Waste Management, Inc., provided that the Company's indemnification obligations will not apply to occurrences involving Excluded Materials.

Customer agrees to indemnify, defend and save the Company harmless from and against any and all liability which the Company may be responsible for or pay out as a result of bodily injuries (including death), property damage, or any violation or alleged violation of law to the extent caused by Customer's breach of this Agreement or by any negligent act, negligent omission or willful misconduct of the Customer or its employees, agents or contractors in the performance of this Agreement or Customer's use, operation or possession of any equipment furnished by the Company. Neither party shall be liable to the other for consequential, incidental or punitive damages arising out of the performance of this Agreement.

9. **RIGHT OF FIRST REFUSAL.** Customer grants to Company a right of first refusal to match any offer relating to services similar to those provided hereunder which Customer receives (or intends to make) upon termination of this Agreement for any reason and Customer shall give Company prompt written notice of any such offer and a reasonable opportunity to respond to it.

10. **MISCELLANEOUS.** (a) Except for the obligation to make payments hereunder, neither party shall be in default for its failure to perform or delay in performance caused by events beyond its reasonable control, including, but not limited to, strikes, riots, imposition of laws or governmental orders, fires, acts of God, and inability to obtain equipment, and the affected party shall be excused from performance during the occurrence of such events; (b) This Agreement shall be binding on and shall inure to the benefit of the parties hereto and their respective successors and assigns; (c) This Agreement represents the entire agreement between the parties and supersedes any and all other agreements, whether written or oral, that may exist between the parties; (d) This Agreement shall be construed in accordance with the law of the state in which the services are provided; and (e) All written notification required by this Agreement shall be by Certified Mail, Return Receipt Requested. If any provision of this Agreement is declared invalid or unenforceable, then such provision shall be severed from and shall not affect the remainder of this Agreement; however, the parties shall amend this Agreement to give effect, to the maximum extent allowed, to the intent and meaning of the severed provision. In the event the Company successfully enforces its rights against Customer hereunder, the Customer shall be required to pay the Company's attorneys' fees and court costs.

Contractor	(Territory)	/ /
(Authorized Signature)		(Date)

Customer	(TITLE)	/ /
(Authorized Signature)		(DATE)



SERVICE AGREEMENT

NON HAZARDOUS WASTES

No. 0594350

WASTE MANAGEMENT OF
NEW HAMPSHIRE, INC.P.O. BOX 7065
GONIC, NH 03839
1-800-847-5303 • 603-332-2386
FAX: 603-330-2180

Appendix C-4

CUSTOMER ACCOUNT NO. _____

REASON CODE _____

EFFECTIVE DATE _____

ACCOUNT
NAME _____SERVICE
ADDRESS _____

CITY, ZIP _____

COUNTY _____

TEL. # _____ FAX # _____

CONTACT _____

BILLING
NAME _____BILLING
ADDRESS _____

CITY, ZIP _____

COUNTY _____

TEL. # _____ FAX # _____

CONTACT _____

EQUIPMENT/SERVICE SPECIFICATIONS

Loc.	System	Quantity	Size	Lids	Wheels	Lock	Frequency	Schedule & Route No.	Charge(s)
								Mon. ___ Tues. ___ Wed. ___ Thur. ___ Fri. ___ Sat. ___	\$ _____ Month Lift <input type="checkbox"/>
								Mon. ___ Tues. ___ Wed. ___ Thur. ___ Fri. ___ Sat. ___	\$ _____ Month Lift <input type="checkbox"/>
								Mon. ___ Tues. ___ Wed. ___ Thur. ___ Fri. ___ Sat. ___	\$ _____ Month Lift <input type="checkbox"/>
								Mon. ___ Tues. ___ Wed. ___ Thur. ___ Fri. ___ Sat. ___	\$ _____ Month Lift <input type="checkbox"/>
Map Code / Driver Notes:								Mon. ___ Tues. ___ Wed. ___ Thur. ___ Fri. ___ Sat. ___	\$ _____ Month Lift <input type="checkbox"/>
									\$ _____ Total Month Lift <input type="checkbox"/>
								Mon. ___ Tues. ___ Wed. ___ Thur. ___ Fri. ___ Sat. ___	\$ _____ Month Lift <input type="checkbox"/>
								Mon. ___ Tues. ___ Wed. ___ Thur. ___ Fri. ___ Sat. ___	\$ _____ Month Lift <input type="checkbox"/>
								Mon. ___ Tues. ___ Wed. ___ Thur. ___ Fri. ___ Sat. ___	\$ _____ Month Lift <input type="checkbox"/>
								NET CHANGE	\$ _____ Month Lift <input type="checkbox"/>

SPECIAL INSTRUCTIONS _____

CUSTOMER DEPOSIT _____

P.O. NUMBER _____

JOB NUMBER _____

RECEIPT REQUIRED? ☐TAXABLE ☐

SIC _____

BILL TO ACCT # _____

DISPOSAL SITE _____

SCHEDULE OF CHARGES

Service Charge per Month	\$ _____
Casters/Locks	\$ _____
Extra Pick-up Charges	\$ _____
Per Lift	\$ _____
Per Yard/Ton	\$ _____
Hauling per Load	\$ _____
Disposal per Load	\$ _____
Total per Load	\$ _____
Delivery Charge	\$ _____
Scheduled Charge	\$ _____
Removal Charge	\$ _____
Equipment Rental	\$ _____

THE UNDERSIGNED INDIVIDUAL SIGNING THIS AGREEMENT ON BEHALF OF CUSTOMER ACKNOWLEDGES THAT HE/SHE HAS READ AND UNDERSTANDS THE TERMS AND CONDITIONS OF THIS AGREEMENT, ON REVERSE SIDE, AND THAT HE/SHE HAS THE AUTHORITY TO SIGN ON BEHALF OF CUSTOMER.

CUSTOMER

(AUTHORIZED SIGNATURE) _____

NAME (PRINT OR TYPE) _____

CONTRACTOR

(AUTHORIZED SIGNATURE) _____

TERRITORY NUMBER _____

(DATE) _____

(1) **TERM.** The term of this Agreement shall be for thirty-six (36) months from the effective date of service, and shall be automatically renewed for thirty (30) months thereafter unless either party shall give written notice of termination (Certified Mail) to the other party at least sixty (60) days but not more than one hundred eighty (180) days prior to the termination of the initial term or any renewal term.

(2) **SERVICES RENDERED.** Customer grants to the undersigned, WM, the exclusive right to collect and dispose of all of Customer's Waste Materials (which include recyclable materials) and agrees to make the payments as provided for herein and WM agrees to furnish such services and equipment specified above, all in accordance with the terms of this Agreement.

(3) **CHARGES AND PAYMENT.** Customer shall pay Contractor on a monthly basis for the collection and disposal service provided by Contractor (including charges for equipment maintenance) in accordance with the schedule of charges shown on the reverse side of this Agreement.

Payment shall be made by Customer within ten (10) days after receipt of an invoice from Contractor. Contractor may impose, and Customer agrees to pay, a late fee and interest for all past due payments not to exceed the maximum rate allowed by applicable law. In the event that any payment is not made when due, Contractor may, at its sole option, terminate the Agreement on notice to the Customer and recover all past due payments, recover any equipment on the premises of the Customer and to recover liquidated damages from Customer as set forth below.

(4) **RATE ADJUSTMENTS.** Because disposal and fuel costs constitute a significant portion of the cost of Contractor's services provided hereunder, Customer agrees that Contractor may increase the rates hereunder proportionately to adjust for any increase in such costs or any increases in transportation costs due to changes in location of the disposal facility. Customer agrees that Contractor may also increase the rates from time to time to adjust for increases in the Consumer Price Index, and Customer agrees that Contractor may also proportionately pass through to Customer increases in the average weight per container yard of the Customer's Waste Materials, increases in Contractor's costs due to changes in local, state or federal rules, ordinances or regulations applicable to Contractor's operations or the services provided hereunder, and increases in taxes, fees or other governmental charges assessed against or passed through to Contractor (other than income or real property taxes), and shall not be withheld by the Customer. Contractor may only increase rates for reasons other than set forth above with the consent of the Customer. Such consent may be evidenced verbally, in writing or by the actions and practices of the parties.

(5) **CHANGES.** Changes in the Schedule of Charges, frequency of collection service, number, capacity and/or type of equipment may be agreed to orally, in writing, or by the actions and practices of the parties.

(6) **WASTE MATERIAL.** Customer represents and warrants that the materials placed in the equipment shall be "waste material" as defined herein and shall contain no other substances. The term "waste material" as used in these Terms and Conditions shall mean solid waste generated by Customer excluding radioactive, volatile, highly flammable, explosive, biomedical, infectious, toxic or hazardous material. The term "hazardous material" shall include but not be limited to, any amount of waste listed or characterized as hazardous by the United States Environmental Protection Agency or any state agency pursuant to the Resource Conservation and Recovery Act of 1976, as amended, or applicable state law. Contractor shall acquire title to the waste material when it is loaded into Contractor's trucks. Title to and liability for any waste excluded above shall remain with Customer and Customer expressly agrees to defend, indemnify and hold harmless Contractor from and against all, and all damages, penalties, fines and liabilities resulting from or arising out of such waste excluded above.

(7) **DRIVEWAYS AND PARKING AREAS.** Customer warrants that any right of way provided by Customer for Contractor's equipment location to the most convenient public way is sufficient to bear the weight of all of Contractor's equipment and vehicles reasonable required to perform the service herein contracted. Contractor shall not be responsible for damage to any private pavement or accompanying sub-surface of any route reasonably necessary to perform the services herein contracted and Customer assumes all liabilities for damage to pavement or road service.

(8) **EQUIPMENT.**

(a) **Responsibility.** The equipment furnished hereunder by Contractor shall remain the property of Contractor; however, Customer acknowledges that it has care, custody and control of the equipment while at the Customer's location and accepts responsibility for all loss or damage to the equipment (except for normal wear and tear or for loss or damage resulting from Contractor's handling of the equipment) and for its contents. Customer agrees not to overload (by weight or volume), move or alter the equipment, and shall use the equipment only for its proper and intended purpose. Customer agrees to indemnify, defend and hold harmless Contractor against all claims, damages, suits, penalties, fines and liabilities for injury or death to persons or loss or damage to property arising out of customer's use, operation or possession of the equipment.

(b) **Access.** Customer agrees to provide unobstructed access to the equipment on the scheduled collection day. If the equipment is inaccessible so that the regularly scheduled pick up cannot be made, Contractor will promptly notify the Customer and afford the Customer a reasonable opportunity to provide the required access; however, Contractor reserves the right to charge an additional fee for any additional collection service required by Customer's failure to provide such access.

(c) **Definition.** The word "equipment" as used in these Terms and Conditions shall mean all containers used for the storage of waste material including stationary compaction units, stationary baling units, waste material loading devices, tanks, tankers, and such other on-site devices as may be specified on the face of this Agreement.

(9) **LIQUIDATED DAMAGES.** If Customer defaults or attempts to cancel Contractor's services or this Agreement, Customer agrees that the Contractor's actual damages would be difficult, if not impossible, to calculate. Therefore, Customer agrees that in such event it shall pay all past due sums and, in addition, shall pay as liquidated damages and not as a penalty an amount equal to 30% of the product of the last monthly charge at the time of default or cancellation multiplied by the number of months then remaining in the current term of the Agreement, plus all attorney's fees Contractor needs to enforce its rights against Customer for cancellation of said contract.

(10) **ATTORNEY'S FEES.** In the event of a breach of this Agreement by either party, the breaching party shall pay all reasonable attorney's fees, collection fees and costs of the other party incident to any action brought to enforce this Agreement. In the event Customer fails to pay Contractor all amounts which become due under this Agreement, or fails to perform its obligations hereunder, and Contractor refers such matter to an attorney, Customer agrees to pay, in addition to the amount due, any and all costs incurred by Contractor as a result of such action, including, to the extent permitted by law, reasonable attorneys' fees.

(11) **ASSIGNMENT AND BENEFIT.** This Agreement shall not be affected by any changes in the Customer's service address if such new address is located within Contractor's service area. This Agreement shall be binding on the parties and their successors and assigns.

(12) **EXCUSED PERFORMANCE.** Neither party hereto shall be liable for its failure to perform or delay in performance hereunder due to contingencies beyond its reasonable control including, but not limited to, strikes, riots or compliance with laws or governmental orders, inability to get to container, fires and acts of God and such failure shall not constitute a Default under this Agreement.

Appendix D

An Act To Promote And Monitor Competition In The Solid Waste Industry.

Be it enacted by the people of the State of Maine as follows:

Sec. 1. Title 38 § _____ is enacted to read:

§ _____. Small container contract restrictions.

1. Definitions. As used in this section, the following terms have the following meanings.

- A. “Small containerized solid waste hauling service” means providing solid waste collection, removal and hauling service to customers by providing the customer with a small container or dumpster that is picked up and emptied mechanically using a frontload or rearload truck, and expressly excludes hand pickup service, and service using a compactor that is attached to or part of a small container.
- B. “Small container” means a 2 to 10 cubic yard container or dumpster.
- C. “Solid waste hauling” means the collection, removal and transportation to a solid waste transfer station or disposal site of trash and garbage (but not construction and demolition debris, medical waste, hazardous waste, organic waste, special waste such as contaminated soil or sludge, or recyclable materials) from residential, commercial and industrial customers.

2. All contracts for the provision of small containerized solid waste hauling service to customers located in this State shall:

- A. Permit customers to terminate such contracts by providing no more than 30 days notice prior to termination by any reasonable method, including, at a minimum, mail, fax and email; and
- B. Limit the financial charge for early termination of the contract to a maximum of the lesser of: \$75; or two times the current monthly charge; or two times the average monthly charge during the most recent six-month period.

3. Notwithstanding the provisions of subsection (2) of this section, contracts for the provision of small containerized solid waste hauling service to customers located in this State may contain contract terms that do not conform to the requirements of subsection (2) when those alternative terms are specified in a bona fide request for proposals or request for bids initiated by the consumer.

4. Contracts for the provision of small containerized solid waste hauling service to customers located in this State may not require customers to inform a contractor concerning prices or other terms offered by competitors, or require customers to afford the contractor an opportunity to match or respond to a competitor’s offer.

5. Provisions in contracts in force on the effective date of this enactment that do not conform to the requirements of this section shall be unenforceable.

Sec. 2. Title 38 §2101, as enacted by P.L. 1989 C. 585 §A, 7, is amended by adding a new subsection 2 following subsection 1 as follows:

2. **Competition.** It is the policy of the State to ensure that municipalities and businesses enjoy reasonable competitive options for the management and disposal of solid waste.

Sec. 3. Title 38 §2124-A as enacted by P.L. 1995 c. 588 §4 is amended by adding the following:

The report shall include an analysis of how changes in available disposal capacity have affected or are likely to affect disposal prices. When the office determines that a decline in available landfill capacity has generated or has the potential to generate supracompetitive prices, it shall include this finding in its report, and shall submit therewith a proposal for corrective legislation.

Sec. 4. Title 38 § 2231 as enacted by P.L. 1991 c. 676 § 1 by adding a new subsection 1-A following subsection 1, as follows:

1-A. Landfill. "Landfill" means a facility that accepts municipal solid waste, FEPR, CDD, bulky waste, incinerator nonprocessibles, and incinerator ash, or any of the foregoing, and disposes of the waste through landfilling; and includes both commercial and municipal facilities.

Sec. 5. Title 38 § 2232 as enacted by 1991 c. 676 § 1 and amended by P.L. 1995 c. 656 §§ A-65-A-66, and further amended by P.L. 1999 c. 657 § 27, is further amended to read as follows:

Incineration facilities and landfills shall submit an annual report to the office no later than 90 days after the end of the facility's fiscal year. For reasonable cause shown and upon written application by an incineration facility or landfill, the office may grant an extension of the 90-day period. The report must be certified by an appropriate executive officer of the facility as being complete and accurate. The office may prescribe the form of the annual report and the number of copies that must be submitted. The report must include the following information:

1. Waste. The total weight in tons of all solid waste received by the incineration facility or landfill in the last completed fiscal year and each month of that year and a breakdown of these totals according to the waste types and waste source categories, as specified by the office;

2. Tipping fee. A schedule of various tipping fees imposed by the incineration facility or landfill on the facility's municipal and commercial customers over the last completed fiscal year including an identification of all changes in those fees and a similar schedule of fees to be imposed on municipal and commercial customers for the next fiscal year. The tipping fees for commercial customers must be set out separately by each rate charged to each category of commercial customer;

3. Revenue. The total revenue of the incineration facility or landfill from all sources for the last completed fiscal year and each month of that year. Revenue figures must identify revenues from each revenue source, including, but not limited to, revenues from disposal fees, disaggregated by waste type and waste source category as specified by the office, tipping fees and any revenue from sales of electricity to transmission and distribution utilities;

4. Other information. Any other information required by the office to comply with its obligations under this chapter.

SUMMARY

This bill imposes restrictions on the use of so-called “evergreen” contract clauses in small container commercial trash hauling contracts. The bill declares that it is the policy of the State to ensure that municipalities and businesses enjoy reasonable competitive options for the management and disposal of solid waste, and broadens the data collection and reporting responsibilities of the State Planning Office.