Making waste management public (or falling back to sleep)

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Abstract  
Human-produced waste is a major environmental concern, with communities considering various waste management practices, such as increased recycling, landfilling, incineration, and waste-to-energy technologies. This article is concerned with how and why publics assemble around waste management issues. In particular, we explore Noortje Marres and Bruno Latour’s theory that publics do not exist prior to issues but rather assemble around objects, and through these assemblages, objects become matters of concern that sometimes become political. The article addresses this theory of making things public through a study of a small city in Ontario, Canada, whose landfill is closed and waste diversion options are saturated, and that faces unsustainable costs in shipping its waste to the United States, China, and other regions. The city’s officials are undertaking a cost–benefit assessment to determine the efficacy of siting a new landfill or other waste management facility. We are interested in emphasizing the complexity of making (or not making) landfills public, by exploring an object in action, where members of the public may or may not assemble, waste may or may not be made into an issue, and waste is sufficiently routinized that it is not typically transformed from an object to an issue. We hope to demonstrate Latour’s third and fifth senses of politics best account for waste management’s trajectory as a persistent yet inconsistent matter of public concern.

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Introduction

Canada is the world’s highest per capita municipal solid waste producer (Conference Board of Canada, 2013). Since 2000, Canadians have produced more waste per person than Americans. And since 2006, Canadians have produced over 1000 kg of annual waste per person (Statistics Canada, 2008: 7) – well above the Organisation for Economic Co-operation and Development (OECD) 17-country average of 610 kg per person, and almost twice as much as Japan (Conference Board of Canada, 2013). This translates into 35 million tonnes of waste in a single calendar year. The bulk of this waste – 27 million tonnes – is landfilled (Statistics Canada, 2008: 7). With many landfills reaching their approved capacity, Canadian cities must find ways to manage increasing waste production. Numerous municipalities have already, are currently, or will soon undertake new landfill siting and/or waste-to-energy technology cost–benefit assessment involving some provision for public consultation.

Given the vast regulatory, engineering, transportation, science, policy, governance, behavioral, and other considerations necessary to maintain our modern waste management (WM) system, it is remarkable that waste is, for the most part, so unremarkable. Arguing for a conception of politics defined around a topic that generates a public rather than understanding politics as a priori to public interests, Bruno Latour highlights the importance of understanding how things both become, and stop being, political. Like the ‘silent workings’ of the sewage system in Paris, for the most part, waste disposal in Canada ‘has become part of the daily routine of administration and management’ (Latour, 2007: 817). Unless there is a change or proposed change, WM is typically so routinized that it does not garner or sustain the public’s attention as an issue, and thus does not become political. As Noortje Marres (2005a) succinctly puts it, ‘no issue, no politics’ (p. 62). As this article will suggest, ‘no politics’ happens when objects such as WM are governed in such a way that they do not engender public interest. Foucault (1991) analyzed this process as governmentality; more recently, Latour (2007) refers to the process as Politics-5. Both theorizations, this article will suggest, must forefront the role of power in defining and framing WM as an issue or nonissue.

As scholars (e.g. Ali, 1999; Dodds and Hopwood, 2006; Healy, 2010; Petts, 1998, 2001) convincingly demonstrate, waste garners public interest and becomes an issue when existing landfills erode, explode, leak, or slide and thereby compromise human health and/or the environment. Waste is also brought into view by garbage collection strikes, new landfill sitings, non-divertible waste technology (including waste-to-energy technology) proposals, and so on. As such, waste does not become an issue or matter of concern (Latour, 2004) unless it is brought (back) into view and members of the public invest waste with particular meanings. These meanings have to do with known, unknown, and unknowable risks, health, consumerism, trust in science, property values and taxes, labor, environmental justice, and so on. Objects such as waste, in other words, require work to become political issues. This work, generally an ongoing activity involving human and nonhuman relations (Spector and Kitsuse, 1972), employs various
mechanisms – exploding landfills, feasibility studies, town hall meetings, and so on – to construct WM as an issue. Power relations frame these mechanisms so as to determine, to the fullest extent possible, whether WM will become a political issue or not. And even then, as Latour (2007) points out, issues tend to become matters of concern for short periods of time: ‘To make a thing public is only a moment in the life of an issue, an intense and uncertain episode to be sure, but neither its first nor its most final’ (p. 818). Moreover, not having to participate in any given matter of concern that calls for action, Latour argues, is the most prevalent public response. Understanding how topics become political, in other words, is as much about how publics ‘fall back to sleep’ as it is about the public’s mobilization to action (Latour, 2007: 819).

This article explores WM as a particular site of neoliberal governmentality, or as Latour would have it, Politics-5. This form of governance leads to the configuration of WM as a technological issue supported by norms and practices of individual responsibilization. That is, WM is largely structured as a matter of responding to individual citizens’ waste ‘needs’ through industry and technology, rather than, for instance, as a socio-ethical issue requiring forms of democratic deliberation on issues of over-consumption and economics based on relentless growth. Framing WM as a technological issue circumscribes discussions to focus on better WM technologies (longer serving landfill liners, better ways of disposing of incinerator fly ash, and so on) and diversion (primarily recycling), the latter being something for which members of the public are largely held responsible. This articulation of governmentality, then, instrumentalizes a particular public in relation to waste, one that conceptualizes waste at the individual level and to be resolved with downstream techno-scientific innovations, which in turn leads to differential assessments of WM risk among scientists, members of the public, community group members, government officials, and so on. From this starting point, we are interested in the processes through which waste does and does not become an issue, creating or not creating a concerned public that engages in time-limited distributed responses. Through a critical review of existing Canadian case studies, coupled with results of our own empirical case study, this article examines the processes through which an apparently mundane and unremarkable object becomes an issue and then a matter of concern, how it attracts attention, gathers momentum, and calls for action – or does not. With Marres (2007), we argue that issue formation and dissolution is an important dimension of the democratic process.

Neoliberal governmentality and the ‘down-streaming’ of WM

A number of scholars have documented historical shifts in the governance of waste in North America from individual cartage and disposal operators to much larger corporations such as Browning-Ferris Industries (BFI) and Waste Management Incorporated (Crooks, 1993; Davies, 2008; Melosi, 2005). These publicly traded corporations have invested heavily in all aspects of WM, including waste containers, collection and haulage vehicles, and the landfills and other WM facilities themselves, garnering enormous profits from municipalities that spend millions in contracts with the industry. Embedded in this privatization and individual responsibilization in Canada (through reduction,
reuse, and recycling) is a form of neoliberalism that emphasizes a market economy, enhanced privatization, an overall decrease in government control of the economy, and a general entrepreneurial approach to profit maximization (Crooks, 1993; Foote and Mazzolini, 2012; for general discussions of governmentality, see Burchell et al., 1991; Foucault, 1984, 1988). The emphasis on individual responsibility operates within a capitalist rationale to manage waste in ways that do not disturb circuits of mass production and mass consumption (and industry profit), effecting an almost exclusive orientation toward ‘downstream’ responses to waste (Hawkins, 2006; Kollikkathara et al., 2009; Lynas, 2011). Indeed, this shift from waste as a site of public contestation and protest in the mid-20th century to waste’s largely uncontested ‘management’ speaks to the success of neoliberal governmentality (Foote and Mazzolini, 2012; Luton, 1996; and more generally, Beck, 1995) as well as the contemporary framing of WM risk (see Beck, 1992; Dean, 1999a, 1999b; Luton, 1996).

Concomitant with the incitement of individuals to assume responsibility for the waste produced through consumption, downstream approaches to waste heavily focus on techno-scientific ameliorations as ‘solutions’ to current and future waste disposal ‘needs’. These solutions, though, create further waste issues. For instance, reprocessing materials requires a great deal of energy, often using nonrenewable fossil fuels that pollute the soil and atmosphere (Center for Sustainability, 2012; MacBride, 2012). Recycling may release hazardous wastes into the environment through by-product emissions and/or require the use of toxic materials. Recycling paper requires the significant use of toxic chemicals to remove ink and generates its own waste – sludge – that is more difficult to dispose of than paper (US Department of Energy, 2006). Moreover, recycled materials are generally only suitable for one or two subsequent uses and usually only in lesser quality products. Finally, without an ongoing market for many recycled materials, the ‘consequence is that materials thought by the public to be headed for recycling end up in landfills’ (Rowe, 2012: 6). In sum, diversion practices are presented as a societal and environmental ‘good’, but the reality of diversion is more complicated, and certainly not a complete solution to waste issues.

Landfills, like all other forms of WM (except reduction and reuse), have their own issues. Canadians are typically concerned with landfills in the vicinity of housing, schools, and other public spaces. The basis of these concerns lies with problems arising from old, un-engineered dumps, especially those that at one time accepted liquid hazardous waste and those that had no liner (Rowe, 2012). Myriad factors affect the efficacy of modern landfill technology: the three primary subsystems of barrier, landfill operations, and cover require considerable attention to siting, design, construction, operations, and post-closure care (i.e. the need to maintain a closed landfill for decades to centuries). Moreover, landfill regulations do not always address issues such as ‘contaminants of emerging concern’ (Çelik et al., 2009; LaPensee et al., 2009; Rowe, 2012; Takai et al., 2000). In addition, calculating landfill risk must consider the myriad indirect risks incurred from transporting waste to landfill sites, the climate change implications of using fossil fuels in waste’s transportation, and so on (Rowe, 2012).

A number of alternative WM technologies in use or advanced as appropriate present their own complications and risks. While recovering useful energy, incinerators may also affect human health due to toxic air emissions if the equipment malfunctions (Thompson
and Anthony, 2008) and produce waste ash that is potentially more hazardous than the original municipal solid waste (Rowe, 2012). This waste ash is currently landfilled, which means concentrated levels of heavy metals are buried in the ground amidst other landfilled materials as well as other constituents (such as calcium) that accelerate leachate collection system clogging, increasing the risk of leachate leakage (Rowe, 2012). When ash hydrates within landfills, it generates substantial heat that could compromise liner systems that could be, but typically are not, designed to accommodate these temperatures. Additionally, incinerator gases entering the atmosphere via incinerator stacks can produce particulate pollution associated with cardiovascular and cerebrovascular mortality. Many of these emissions occur during day-to-day facility operations as well as the ‘very high releases of dioxin that arise during start-up and shutdown of incinerators’ (Thompson and Anthony, 2008: 2).

**WM risk**

The complexities of WM illuminate the kinds of issues that need to be considered in deciding what to do about waste. They bring to the fore risk assessment as a contemporary response to techno-scientific complexities. Indeed, the extensive risk literature (see Beck, 1992) notes that members of the public are increasingly being asked to deliberate on environmental, health, and other issues for which the risks are inherently indeterminate (Macfarlane, 2003). Issues such as contaminants of emerging concern are somewhere between what former US Secretary of Defense Donald Rumsfeld (2002) called ‘known knowns’, ‘known unknowns’, and ‘unknown unknowns’. Contemporary risk society is characterized by publics who know that inherent risks attend what politicians and industry term technological innovation (waste-to-energy technologies and so on) and are increasingly wary of immediate and short-term risk assessments that underplay the indeterminacy of risks attending technologies – the ‘unknown unknowns’. Indeed, as Michel Callon (1999) argues, nonspecialist members of the public make a rational decision not to trust governments who do not address the indeterminacy of risks endangering society.

When municipal governments undertake new landfill siting assessments, or are dealing with the effects of soil and water contamination by landfill leachate and its negative health effects on humans, animals, plants, the soil, and so on in the landfill vicinity, members of the public encounter what it means to live in a risk society: not only does risk assessment emphasize known risks at the expense of unknown risks, but it may also shift attention from prevention to permissible levels of contamination (Hale and Dilling, 2011). Drawing on Ulrich Beck’s well-known risk society theory to understand how members of the city of Guelph in Ontario, Canada, responded to a landfill siting exercise in their community, Ali (1999) notes with regard to landfills engineered prior to the 1990s, ‘the concentration of substances in landfill-generated leachate that can cause death may be parts per billion, that is, at a concentration that cannot be tasted or smelled in the drinking water’ (p. 4). Ali draws attention not only to the risks known to engineers and scientists, of which members of the public have no direct perception, but also to risks the public may see as unknown and unknowable to engineers and scientists. These risks are explained to the public in terms of a priori acceptable levels of negative impact. As Beck (1992) notes,
The really obvious demand for non-poisoning is rejected as utopian. At the same time, a bit of poisoning being set down becomes normality. It disappears behind the acceptable values. Acceptable values make possible a permanent ration of collective standardized poisoning. (p. 65)

Members of the public are thus wary of scientifically described risks – which are, by definition, known risks, typically involving numerical thresholds of acceptable environmental compromise – and want to focus instead on unpredicted effects, which scientists cannot address (Wynne, 2006: 216).

Making things public

It is within this context that members of the public are increasingly called upon to consider and ultimately accede to (because waste must go somewhere) the adoption of landfill and/or other WM technologies through public consultation exercises when a local disposal option is under consideration. (Alarmingly, exported waste never receives this type of scrutiny unless it is radioactive.) Here, we focus on how WM issues are brought to the public’s attention.

Writing in the 1920s, Walter Lippmann recognized that the world was becoming too multifaceted for people to grasp all of its complexities. Nevertheless, it is precisely within the context of complex problems that public determination of solutions is required:

… it is controversies of this kind, the hardest controversies to disentangle, that the public is called in to judge. Where the facts are most obscure, where precedents are lacking, where novelty and confusion pervade everything, the public in all its unfitness is compelled to make its most important decisions. The hardest problems are those which institutions cannot handle. They are the public’s problems. (Lippmann, 1993 [1927]: 121)

Rather than understanding members of the public, or publics, as already assembled in a preformed politics that then deliberates issues, the emerging literature suggests that people assemble around issues, which they create out of objects (Dewey (1954[1927]), Latour, 2004, 2005, 2007; Marres, 2005a, 2005b, 2007; Strathern, 2003). This is the case, we argue, with WM in Canada. Members of the public typically experience WM in terms of mundane practices of sorting through household waste, depositing waste and diversion material for curbside pickup, and occasionally divesting waste through transportation to specified hazardous waste depots, yard sales (in which case waste transforms into a resource), and the like. In other words, this form of governmentality focuses on individual attitudinal and behavioral responsibilization rather than deliberate larger questions, such as the association between economic growth and waste (see Schnaiberg, 1980).

Waste tends to shift from being an object to an issue when municipalities consider increased user fees for waste disposal or declare the need to site a new landfill and/or introduce other WM technologies such as incinerators. This shift may also occur when landfill leachate breaks free of its constraints, when particulates and organic compounds from incinerators infiltrate human lungs, when composting sites emit nauseating odor, when bioreactors malfunction, or when the masses of waste necessary to
'feed the beast’ of new technologies lead to the importation of other municipalities’ (or countries’) waste.

As such, WM, and our relationships with waste more broadly, typically need to be brought to our attention in some way, such that we become convinced of waste’s agency (see Clark, n.d.: 20; Hannigan, 1995). Emerging publics are not only assembled around arguments, values, and interests, but out of combinations of heterogeneous materials, processes, and nonhuman things (Mahony et al., 2010). As Latour (2007) notes, ‘every new non-human entity brought into connection with humans modifies the collective and forces everyone to redefine all the various cosmograms’ (p. 816). Indeed, when objects become matters of concern, they bring disparate communities together: politicians and waste ash, engineers and conservation, nongovernmental organizations, radio broadcasters and toxic chemicals, and so on.

**Politics and power**

In his article ‘Up and down with ecology’, Anthony Downs (1972) describes an ‘issue-attention cycle’ and the stages through which some objects become issues (his ‘pre-problem’ and ‘alarmed discovery and euphoric enthusiasm’ stages), may become framed in ways that set the parameters for solutions (the ‘realizing the cost of significant progress’ stage), and may garner less public interest as solutions appear unrealizable, threatening to lifestyles, or undesirable (the ‘gradual decline of intense public interest’ and ‘post-problem’ stages). How an object moves through these various stages is, as Downs notes, a function of power (see also Hannigan, 1995). This is particularly evident once an object has become an issue of concern and people begin to realize that ‘solving the problem’ would mean, for example, a significant reduction in, and reorientation to, consumer lifestyles. John Hannigan (1995) further illustrates how environmental claims are managed through various tactics and mechanisms, for instance, in the framing of waste as a techno-scientific issue that landfills, incinerators, or other technologies can solve.

More recently, Latour (2007) identifies five ways in which politics may assemble around issues. First, things may become political when a new entity (leachate, fly ash) is brought into connection with humans such that it modifies and forces others to redefine the collective: the entity, as Dewey (1954 [1927]) observes, exceeds the procedures of institutional politics. A second, related, form of politics emerges when an issue ‘entangles many unanticipated actors without [experts] having developed … instruments to represent, follow, take care of, or anticipate those unexpected entanglements’ (Latour, 2007: 816), generating an unsettled public. A third form emerges when a government attempts to frame an issue in terms of a clear general will or common good, and fails. As analyses of various WM siting assessment exercises throughout the world attest, WM industries, operating in tandem with municipal governments, increasingly ask members of the public to accede to formulaic assessment exercises that circumscribe the parameters to, for example, discussions of disposal. Once these major parameters are set in advance, discussions are further circumscribed to decisions on a limited number of sites, technologies, consultation and discussion events, and consultation time frames (Ali, 1999; Coninck et al., 1999; Dodds and Hopwood, 2006; Einsiedel et al., 2001; Healy, 2010; Petts, 1998, 2001). Power circulates through this framing, which is increasingly managed by multinational corporations.
specializing in waste technology assessment, siting, construction, operations, monitoring, closure, and aftercare. With on-site engineers and scientists, networks with government, and sophisticated, well-budgeted, in-house public relations management teams, these new brokers increasingly manage municipal and public discussions of WM through feasibility reports, town hall meetings, presentations, and other forms of consultation (Allen, 2007; Corse, 2012; Marres, 2005b: 2; Van de Poel, 2008). Indeed, neoliberal governance enhances industry’s monopoly by embedding techniques such as public consultations and feasibility studies within industry’s remit. Latour’s third sense of politics emerges when these techniques fail—when, for instance, members of the public become skeptical that they are not getting the full story.

A fourth politics emerges in what De Vries (2007) describes as the deliberation of ‘mini-kings’, or when ‘fully conscious citizens, endowed with the ability to speak, to calculate, to compromise and to discuss together, meet in order to “solve problems” that have been raised by science and technology’ (Latour, 2007: 817). An example includes the citizens of Ryedale (North Yorkshire, UK) who assembled with engineers and scientists to resolve the issue of recurrent flooding in their community (see Landström et al., 2011; Lane et al., 2011; Whatmore, 2009).

A fifth form of politics, Politics-5, emerges from objects that are so naturalized they do not appear to raise issues:

all those institutions [that] appear on the surface to be absolutely apolitical, and yet in their silent, ordinary, fully routinized ways they are perversely the most important aspects of what we mean by living together – even though no one raises hell about them and they hardly stir congressmen out of their parliamentary somnolence. (Latour, 2007: 817)

Latour identifies Foucault’s governmentality theory with this sense of politics. Current neoliberal governance enables the routinizing and apolitical appearance of WM by adopting a discourse of ‘efficiency’ and ‘cutting red tape’, refusing to fund expert third-party review and/or hold public hearings where all the issues can be raised, cutting the technical expertise available among its own regulators, and reducing approvals to a narrow bureaucratic process rather than one that seriously considers broad technical and social issues. Politics, then, may equally turn on issues returning to objects, as people ‘fall back to sleep’, as it does on ‘convening, mobilizing, and sustaining a public’ (Latour, 2007: 817).

New landfill siting and the adoption of other WM technologies require these technologies to be made, to some degree at least, public. And it is this process that we are interested in. We want to better understand the operations of power through which municipalities identify, present, and thereby attempt to stabilize an object in particular ways (DeSilvey, 2006): which authorities (industry, engineers, scientists, government officials) are gathered in assessment exercises and how these exercises are defined (Latour, 2005). When, and how are members of the public invited or uninvited in public assessment consultations (Coninck et al., 1999; Einsiedel et al., 2001; Goven, 2003, 2006)? And how do these processes attempt to create a certain kind of public (such as ‘consumer’ and ‘good citizen’)? We want to determine whether or not people assemble around already - defined objects or create new issues, for how long issues are sustained,
and the consequences of making an issue public. This last point requires, as Wynne observes, assessing options not taken along the route to issue resolution.

Politics in the making?

WM may constitute an emerging issue in the small city of Kingston, Ontario. Our study employed a survey, key informant interviews, participant observation, and archival research to garner data concerning Kingston’s past and present WM practices and claims-making. The data from the web-based survey are detailed elsewhere (see Hird and Lougheed, n.d.). We interviewed a total of 14 key informants, including 6 elected members of Kingston’s City Council whose remit includes WM and whose constituencies cover the areas of Kingston where previous landfills have existed or areas where new landfills have been sited and failed to gain approval; the manager of Kingston’s main waste processing center, who is accountable to the City Council and responsible for contracting Kingston’s waste to various private companies; representatives of various community groups that concern themselves with environmental issues, including WM; and two WM industry representatives. All interviews were semi-structured and varied in duration from 1 to 2½ hours in length. We also gathered observational data from waste processing center tours, and town hall meetings, and used archival sources of data, including the WM industry documents commissioned by Kingston City Council, the WM processing center and City Council web-based documents available to the public, and approximately 90 newspaper reports concerned with past WM issues in Kingston. Our study identified four key stakeholders: municipal government representatives (City Councilors, City of Kingston staff members, and others), industry, media, and individual citizens or ‘the public’. We analyze how each of these stakeholders manages waste as an object of potential concern, beginning with the municipal government representatives.

To situate the case study, in 2005, Kingstonians generated 47,384 tonnes of solid waste – a per household generation rate of 962 kg per year – 27,260 tonnes of which was landfilled. By 2031, conservative estimates expect the annual tonnage of waste to increase to 61,636. In 2012, the City paid Waste Management of Canada, a private corporation, CAD$1.9m to ‘handle and dispose of’ residual municipal solid waste (City of Kingston, 2012a: 23). This was up from CAD$1.39m in 2008 (City of Kingston, 2009). The City spends approximately CAD$6m on WM, factoring in additional services such as CAD$1.7m in recycling services and CAD$1m on green bin (organic waste) services (Schliesmann, 2012). In 2002, the Kingston City Council saw its then 38 percent diversion rate to be problematic and sought to improve this and its WM services in general in order to ‘protect the health, safety and natural environment of our citizens through fiscally responsible … practices that encourage waste reduction and recycling, and that promote economic prosperity’ (City of Kingston, 2002: 4). The City Council established several measures to identify the effectiveness of its strategy: increased diversion rate, reduced waste generation, and positive perceptions among citizens of City spending on WM services (City of Kingston, 2002). Consistent with Latour’s Politics-5, in which government and industry forefront a discourse of ‘efficiency’, these effectiveness measures were qualified in terms of several ‘efficiency measures’—namely, low operating
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costs for the collection and disposal of waste and diverted materials. Despite the City’s stated concern for the ‘natural environment’, none of these indicators involves direct observation of environmental impact.

The primary means by which the City anticipated improving on its ‘effectiveness measures’ (City of Kingston, 2002: 4) was to ‘rely heavily on our ability to educate our residents and encourage them to change their usage patterns and behaviours’ (p. 6). From the outset, then, the City’s approach to WM operated within a governmentality framework whereby responsibility for waste is assumed by individual citizens, achieved – adopting a deficit model (Roth and Desautels, 2004) – through increasing and ‘better’ education. Over several years, the City introduced gray (paper), blue (glass and plastic), and green (composting) bin diversion, and most recently adopted a one-free-garbage-bag policy (MacAlpine, 2012). Nevertheless, in January 2011, the city’s landfill closed to the public. As a result, 90 percent of the city’s non-diverted waste is currently exported to other regions, including the United States. Private WM firms that transport the City’s municipal solid waste and landfill it are retained on 5-year contracts (Kingston City Council, 2013a).

Following exactly the type of formulaic process this article has examined (Latour’s Politics-5), in 2006, Kingston City Councilors commissioned WM consulting firm Jacques Whitford (later replaced by another consulting firm, HDR) to produce an Integrated Waste Management (IWM) study, at which point the City announced its goal of becoming ‘Canada’s most sustainable city’ (City of Kingston, 2012b). The IWM study would consist of a 25-year WM plan and recommendation of a suitable waste processing facility for the City that would reduce its reliance on landfilling (Jacques Whitford, 2008a, 2008b).

Concerns about the cost of deploying new WM technologies and the uncertainty of maintaining Kingston’s current waste exports link non-diverted waste as an object to issues (increasing taxes and fees, and environmental concerns about transporting waste to other regions) and potentially a politics. Many City Councilors favored a local waste processing facility, as they deemed transporting waste to out-of-town landfills contrary to their sustainability goals (Kingston City Council, 2012). Some Councilors have argued that just because finding a waste processing technology is the ‘next logical step does not infer [sic] that it is a pressing priority … and that maintaining the status quo is an option’ (Kingston City Council, 2012: 7, emphasis added). This suggests, in line with Latour’s fifth sense of politics, that the transport and landfilling of waste has become so routine – entrenched in City budgets and infrastructure and with no immediately apparent environmental consequences for the City – that it has yet to be seen as an issue for certain members of City Council. For detractors on City Council, however, the proposal of a new waste processing facility has shifted WM from an object to a recognized issue. In addition to concerns about new and untested technologies or technologies that require a steady stream of waste to operate efficiently, Councilors are concerned about investing heavily in a business that may eventually fail (Kingston City Council, 2012). Despite these concerns, proponents argue that a local waste processing facility could allow the city to ‘turn garbage into a resource’ (p. 8), which as one Councilor argued, is a prerequisite for all ‘sustainable’ cities. Turning garbage into a resource is seen as more environmentally and financially sustainable in the long term, despite the initial outlay of capital
when compared to maintaining the status quo of transporting and landfilling, in which there is no possibility of recovering WM costs.

Consensus has not been reached among City Councilors (and the public, though they remain largely ‘asleep’) about precisely how the issue is to be dealt with. In a manifestation of Latour’s Politics-5, there is a general concern within City Council to prevent a politics from assembling around the issue of WM. An apolitical appearance of WM is maintained in large part by engaging the public as participants in solutions through avenues that circumscribe the terms of public engagement. This is achieved by creating particular identities of what a ‘good citizen’ is through inducements to recycle and compost (City of Kingston, 2013) and minimizing the overall impact on individual lifestyles and consumption rates (with the one-free-bag policy being a brief exception). The Kingston municipal government emphasizes individual responsibility through programs such as the ‘Remarkable Recyclers’ campaign (John, 2012: 1), which recognizes households recycling at least 75 percent of their waste with a special badge on their curbside bins (City Hall Public Notice, 2013).

The City is largely emphasizing individual citizens’ responsibility for waste to reduce the cost of maintaining the current WM system while deliberations about a local waste processing facility continue between City Council, staff, and HDR. Employing a typical deficit model approach the City uses educational campaigns to encourage recycling behavior and thus decrease the volume of costly residual waste disposal. The City has an annual budget for waste-related education that increased from CAD$32,000 to CAD$44,000 in 2013 in order to support ‘continued promotion … necessary to reinforce good practices and to encourage residents to improve on their practices’ (City of Kingston, 2013: 3). The City offers initiatives like ‘Train the Trainer’ that provides educational training to student representatives to ‘help them provide accurate information to tenants when incorrect materials are seen being placed at the curb’ (Kingston City Council, 2013c: 37). The City has also introduced various educational programs and events, such as the ‘Do What You Can’ program (a province-wide hazardous waste or special waste diversion program) and ‘Pitch-In Kingston’ (a community cleanup program). The emphasis on habitual (re)education and the surveillance of others serves to remind citizens about their responsibility for WM practices: ‘pleading ignorance is no longer a defense for anyone’ because ‘by now, residents know what is a recyclable and what is garbage’ (The Kingston Whig-Standard, 2009: 1). Interestingly, and not atypically, these waste reductions realized through increased diversion suggest that individual Kingstonians largely conform their behavior to the goals of this form of governmentality. But this has produced new problems. The quantity of recyclables has exceeded the expected quantity established by the standardized size of the blue recycling box, resulting in ‘overfilling’ of the boxes (Kingston City Council, 2013b). As a result of this overfilling, wind and sanitation workers strewn the contents of the blue boxes, increasing the amount of litter experienced by residents; to deal with the litter issue, the City has (again) adopted a downstream approach, providing a second blue box to residents who request them.

It is worth noting that City Council’s deliberation and decisions about Kingston’s waste future take place in the shadow of the city’s Belle Park landfill, an old unengineered dump closed since 1974 and subsequently redeveloped into a recreational facility.
In 1997, a local resident took a sample of water seeping from the former landfill onto the frozen Cataraqui River, suspecting it was killing rainbow trout in the river adjacent to the landfill (The Kingston Whig-Standard, 1997). As a result, the City of Kingston, responsible for the landfill’s maintenance, was convicted of violating the Ontario Fisheries Act (The Globe and Mail, 1998), but subsequently successfully appealed the conviction on the grounds that landfill leachate was not an environmental threat (Tripp, 2000). The Ministry of the Environment reversed the appeal in 2002, requiring the City to construct an impervious clay cap to contain the seepage (Environment Canada, 2005). In the case of the Belle Park landfill contamination, the local residents and a community activist group assembled a matter of concern according to Latour’s first and second forms of politics. The leachate, frozen river, and the dead and dying fish redefined the Cataraqui River (as contaminated), exceeded the City of Kingston’s institutional response (denial), and generated an unsettled public. Here, politics operated according to Latour’s third form, wherein the municipal government attempted to turn the issue into a clearly demarcated general will, and failed.

Leachate was likely migrating from Belle Park to the river long before it was detected, due to inadequate (or nonexistent) monitoring. Objects are made visible when they are linked to other objects. Put another way, waste’s entanglement with aquatic ecosystems, clean water, the health of future generations, recreational facilities, liberties, leachate, government, industry, and landfills renders waste an issue. Nonhuman entities such as bacteria, soil, ground water, and so on are themselves vital components of these assemblages, evincing their own proclivities to move, metabolize, and transform. Nonhuman entities, in other words, play a role in transforming themselves into issues.

Because the City emphasizes downstream techno-scientific interventions, the City is reliant upon consulting firms that specialize in the increasingly technologically sophisticated process of siting, building, and maintaining such downstream solutions. These consultants retain their own public relations staff, engineers, and scientists that they can use to assist their brokering of particular technologies to the City. In early 2007, Jacques Whitford was commissioned by the City of Kingston to begin the data collection and compilation for Phase A of the IWM study. Phase A began to define the long-term WM system objectives for the City of Kingston, looking at a needs/gap analysis of the City’s waste diversion scenarios from 2008 to 2012. Several goals were identified in Phase A, including minimizing the production of residential and industrial, commercial, and institutional waste; maximizing the environmental sustainability of the overall waste stream; and developing a system of sustainable programs and facilities ‘in recognition of the capability of the system to be maintained over time without exhausting the resources it needs’ (Jacques Whitford, 2008a: 20) that also ‘minimizes costs to the taxpayer through the evaluation of overall capital investment and operations costs’ (p. 21). From the outset, while industry collaborated with municipal government in identifying the minimization of waste production as a goal, it also explicitly advanced technological responses and cost minimization as priorities.

In December 2007, a draft of the Phase A report outlining these goals was released for public review, comment, and feedback. The report was made available on the City of Kingston web site and a public consultation session was held on 30 January 2008 (Jacques Whitford, 2008a). At the session, City staff (the Environment, Infrastructure & Transportation Policies Committee) and the Whitford consultant team answered
questions from the public. The City received 71 comments about the Phase A draft report that were collected via e-mail on the City web site. The comments were compiled in the Phase A report, released in July 2008, with responses from the consultants that addressed the feasibility of the suggestions, made clarifications about points of concern, and answered the public’s general questions about the report. The responses to these comments emphasized affordability, public participation, the depth of study being conducted, and – interestingly – producers’ responsibility for waste; Jacques Whitford (2008a) reiterated several times in their responses that ‘it is the intent of the City to consider the full range of WM approaches, systems, and technologies over the course of the study’ (p. 27). Yet, the ‘upstream’ concerns raised by the public such as producers’ use of excess packaging were deemed outside the remit of the local government. The response from Jacques Whitford on behalf of the City stated that ‘individuals/consumers likely have more influence over the use of packaging than municipalities’ and such a shift would require significant changes at ‘provincial, federal, or international level which dictates the need for the City’s system to be flexible’ (p. 24). In this way, the responsibility to advocate for less packaging was placed on the individual consumer.

Based on the goals and objectives established in Phase A, and following the initial public consultation, Jacques Whitford continued with the second phase of the IWM study in October 2008. After a background summary of Kingston’s existing waste profile, the Phase B report identified a wide variety of WM approaches it claimed would improve diversion rates, including bag limit reductions, public education, reusable items diversion, waste prevention, and user pay systems (Jacques Whitford, 2008b). The approaches listed emphasize the responsibilization of individuals to govern their waste in particular ways. The WM system goals and objectives for Kingston were sorted into environmental and socioeconomic goals that would ‘limit costs to the taxpayer in accordance with the environmental and socio-economic goals’ (p. 19). The systems with the highest ranking were a residual waste processing/recovery technology in addition to the City’s current approach (2 Stream Blue Box, source separated organic (SSO), and landfilling) and a single-stream recycling program instead of the current two-stream system. The report went on to identify 11 different system enhancement options – such as public education, additional materials recovery, and household hazardous waste diversion – that would require more research and public consultation. The most preferred options were as follows: (1) bag limit reduction (to a one-free-bag policy), (2) reusable item diversion, (3) public education and system promotion, and (4) clear garbage bags.

In order to finance these options, the City added an additional CAD$26,000 to its 2011 Solid Waste operating budget (Kingston City Council, 2011). The one-free-bag policy was implemented by the Council in August 2012, though it met with opposition from both within City Council (the policy passed at Council by a 7-6 vote) and the local university’s student society (detailed below). The legislation was amended to provide exemptions for certain holidays and for people with certain medical conditions (provided they present proper documentation), but not for households with larger numbers of residents. In 2011, the City of Kingston hired HDR to complete Phase C of the IWM study, which was to identify the residual waste processing technology that would be best suited for one of two systems identified in Phase B. HDR identified four residual waste processing technologies for public consideration. These four technologies
included mechanical separation (the shredding of residual municipal waste to recover additional recyclable material and reduce landfilled mass), anaerobic digestion (the use of bacteria to convert organic matter in municipal waste into a combustible gas), various thermal treatments (e.g. plasma gasification, mass incineration, waste to energy), and refuse-derived fuel (converting municipal waste into combustible pellets and fluff to use in power generators). HDR organized a public consultation exercise, presenting attendees (approximately 20 people, approximately 14 of whom were not City Councilors, WM personnel, or members of our research team) with posters that included pictures and diagrams illustrating the technological processes. The public consultation, although a ‘key element’ in HDR’s phase of the study (HDR Incorporated Canada, 2011), did not motivate public support in favor of any single technology presented.

After the poorly attended public consultation, HDR recommended that the City adopt either the thermal treatment option or the refuse-derived fuel option. The recommendation was based primarily on a cost analysis of the different technologies. In its report to the City of Kingston, HDR stated that ‘the relatively modest quantities of residual waste available in Kingston … make the applicability of the larger scale established technologies (mass burn, refused derived fuel combustion and fluidized bed combustion) not economically viable’ (HDR Incorporated Canada, 2011: 15). HDR went on to say that the capital and operating costs associated with the other technologies, such as biological and mechanical treatment, were similarly not economically feasible due to the fact that Kingstonians were not producing enough residual solid waste. Now that HDR has given its recommendation to the City, the City can continue to Phase D, which will require continued public consultation, to develop an implementation strategy for either thermal technologies or refuse-derived fuel.

As it stands, public consultation exercises hosted by the City, Jacques Whitford, and HDR have thus far garnered little public interest in Kingston, and it is not clear to what extent the adoption of a new WM technology will incite public interest that might transform diverted or non-diverted waste into an issue of concern. The next time that the public may be ‘roused from sleep’ will be in Phase D of the IWM study, when the City decides on a particular technology and identifies where the technology will be located (Jacques Whitford, 2008a). However, seemingly routine deliberations among City Councilors and their consultants about one technology or another may not render the issue sufficiently visible to galvanize public concern. The delayed response to the one-free-bag policy suggests that a public may not assemble around the issue of a new WM technology until it comes time to select a location, at which point the potential impact to residents may become more clear (Marres, 2007).

These speculations are born out in our analysis of the media’s coverage of WM in the Kingston area, including opinion pieces written by a variety of Kingston residents. Of a total of 81 newspaper reports we sampled between the years 2008 and 2013, from the two main newspapers serving the Kingston region, 22 (27%) were devoted to objects outside of Kingston (such as landfill leachate emanating from the Richmond Hill landfill) that have become issues and developed into political matters, mainly concerning government and industry culpability in creating these matters of concern, and responsibility for resolving the issues.
A much larger number (59, or nearly 73%) of the newspapers’ reports and opinion pieces (where members of the public write to the newspaper to express concerns) focus on waste as a matter of individual responsibility. Occasionally, the newspaper articles take a more in-depth approach, where downstream approaches may be linked to more upstream issues. The primary example of this is an article written in the Kingston Whig-Standard. Ostensibly about the origins of recycling in Ontario, the report goes on to explicitly identify recycling as a profit-making business, and ‘reinforces the notion that citizens, as consumers and recyclers, are crucial to the manufacturing chain’ (Schliesmann, 2011b: 4). In a fascinating follow-up article, the same columnist published an article that details experts’ concerns with recycling (outlined earlier in this article). The article draws particular attention to how industry tied recycling to commodity markets from the outset, establishing monetary incentives for municipalities to prioritize recycling rather than waste reduction into the system (Schliesmann, 2012: 4). Not only is recycling profitable for industry and government, Kingston received CAD$827,224 in 2010 alone from Stewardship Ontario, an organization funded by the recycling industry, for meeting its waste diversion targets. As Thomas Naylor bluntly puts it, ‘the recycling game is a con’ insofar as it sustains the consumer-based economy and does not legislate manufacturers to either reduce/eliminate packaging, or take back goods when the consumer no longer wants them (Schliesmann, 2011a).

With these infrequent exceptions, the major discourse found in media reports and citizen editorials fits squarely within a governmentality framework around individual responsibility, with an emphasis on self-surveillance and the surveillance of others as ‘good citizens’. For instance, one Kingston resident writes that ‘having a little enviro-guilt can be a good thing’ (Switzer, 2008: 1), and another writes of a need to ‘curb her appetite for plastic’ (Browne, 2008: 1). Several opinion editorials are devoted to Kingston residents surveilling each other: neighbors and fellow residents become ‘bad citizens’, and authors offer advice as to how citizens can transform themselves from ‘bad’ to ‘good’. For instance, one resident advises residents to take coffee cups from cafes home and recycle them, as she does (Toomey, 2008: 1); a resident of a neighboring township defines people who do not want to use clear bags for recycling as ‘anti-recycling’ who want to ‘hide (stuff)’ and are ‘not true recyclers’ (Jefferson in Edmiston, 2010: 1). Concomitant with this internalization of responsibility for waste and surveillance of others is a familiar tax fairness discourse. For instance, one opinion editorial author writes that ‘producers [and] consumers already pay a fair share’ for waste disposal (Sonnenberg, 2011: 1). City Councillors are of very aware of this concern. As Councillor Bryan Paterson expressed after the one-free-bag limit was introduced, ‘I think it’s great, but this is reducing a service without a corresponding decrease in property tax. I think the optics of it are terrible’ (in Norris, 2011: 2).

Neoliberal governmentality helps make sense of the fact that the closure of Kingston’s landfill to the public in 2011 did not garner much public interest. Instead, residents’ attention was focused on the approval of the one-free-bag policy because this involves individual responsibility as a key mechanism of governmentality, and simultaneously the high value that neoliberal governance places on what it calls freedom of choice (i.e. the freedom to consume what and how much they like). Having remained ‘asleep’ during the initial public consultation exercises, members of the public – particularly the university’s
Alma Mater Society and the Kingston Rental Property Owner’s Group – ‘woke up’ only after the policy was implemented. These groups made speeches to City Council, stating that the policy would be inequitable for larger families, would not provide a meaningful contribution to diversion methods, and was unrealistic for university students who live off-campus in multiple dwelling homes (AMS, 2012; VandenBrink, 2012). Troy Sherman, the municipal affairs commissioner for the university’s Alma Mater Society, based his appeal request on the argument that it would ‘force students to pay out-of-pocket for additional garbage bags’, leading to student ‘cynicism’ and that it was ‘unrealistic’ for students to coordinate the efforts of students living in a single dwelling: ‘This policy demands collective action from a household, which can be next to impossible in a student environment’, Sherman stated (in VandenBrink, 2012). This rather remarkable statement would surely be contested by the thousands of university students worldwide who coordinate to protest various forms of injustice.

As Marres (2007) points out, diversion rates, bag limits, and property taxes became public issues worthy of civic involvement only when these things were perceived as a significant change to individuals’ lifestyles and/or livelihoods. Here, governmentality is expressed as a combination of neoliberal assertions of individual freedom (to dispose of as much garbage as desired) and the responsibility of the government (to dispose of waste but not increase taxes). This said, the one-free-bag issue quickly went back to sleep as media coverage took on an increasingly positive tone, and emphasis was placed on individuals governing themselves through WM surveillance practices (MacAlpine, 2012).

**Making WM public**

Our research suggests Kingston’s experience with WM is by no means unique in Canada. Municipalities across the country are grappling with what to do with non-diverted waste, and indeed, with increasing amounts of diverted waste. The case studies in the literature, and our own case study of Kingston, Ontario, suggest several reasons why interest in waste nevertheless tends to be relatively short-lived, and therefore why waste as an object only occasionally transforms into an issue that generates political action.

The ubiquity of landfilling in Canada offers numerous examples of objects associated with waste being made into issues, assembling publics, becoming political, and then largely falling back to sleep. We might contrast the politics in Kingston with those in Simcoe County somewhat earlier. In 1986, Simcoe County concluded a search to locate a new landfill, choosing a 21-hectare parcel of land in Tiny Township called Site 41. Site 41 is situated atop the Alliston aquifer, said to have water of exceptional purity (Shotyk et al., 2005; Shotyk and Krachler, 2009). Despite over a decade of ongoing public opposition to the landfill, the Ministry of the Environment granted a Certificate of Approval in 1998 to construct a landfill pending approval of a feasibility report. This feasibility report constituted a primary technique used to render the landfill a nonissue and therefore not assemble a political response; it limited the parameters of debate to the design and operation of the prospective landfill, rather the long-term environmental and health impacts of the landfill and the myriad upstream issues produced by the association of economic growth with waste production (Schnaiberg, 1980).
Needing to demonstrate its accountability to the public, the Ministry permitted the formation of a Community Monitoring Committee (CMC) comprising residents from the surrounding area ‘charged with the responsibility of providing community review of the development, operation, on-going monitoring, closure and post-closure care’ (Ontario Ministry of the Environment, 1998: 11). By assembling around objects including aquifers, leachate, and hydrological models, the public slowed down the County’s attempts at a swift, formulaic process described by Latour’s (2007) third sense of politics. Turning objects (for instance, leachate in soil) into issues (environmental contamination of an underlying aquifer), members of the public constructed a politics around knowledge controversies by commissioning their own peer reviews of the siting and design documents, engaging an independent landfill engineer (Kerry Rowe), and retrieving their own scientific evidence. This enabled them to question the County consultant’s emphasis on the certainty of short-term risks. For example, Rowe (2004: 1–2) noted that 2 years of data were omitted from the consultant’s hydrological models, and long-term outlooks on the effect of climate change and water use were not considered (Millar, 2008: 7).

This public transformed waste into an issue by using existing institutional procedures and by entangling physical–technical processes (leachate, hydrology, water purity) with social processes of risk definition and democracy (risk thresholds of permissible human contamination, and community group activism) (Marres, 2007: 770; Whatmore and Landström, 2011: 582). Outside the County Hall meeting at which plans for Site 41 development were finally voted against, a brief moment of celebration was swiftly followed by the public’s disassemblage and dispersal (Friesen, 2009; Latour, 2007). At a cost of over CAD$11m and nearly 25 years of protest and negotiations, County residents will inevitably face waste as an issue again, as increasing waste export costs lead the County to consider other WM options, including new landfill siting. This suggests that while Simcoe County’s public has, for the time being, fallen back to sleep, there may be further occasions for claims-making processes and politics to occur.

**Assembling politics**

Latour’s (2007) fifth sense of politics takes up Foucault’s governmentality theory, wherein certain objects are encountered in such highly naturalized and ritualized fashion as not to garner the attention required for their transformation into issues. As Foucault’s governmentality theory argues, these are the practices through which individuals govern themselves, internalizing waste diversion and disposal as ‘good citizenship’. Governmentality structures waste’s continued conceptualization as an object through which individuals govern themselves, and thus largely obviates waste’s transformation into a matter of political concern demanding critical attention. In other words, Latour’s fifth sense of politics points to ways in which waste is a mundane object unworthy of sustained public action. This is a situation easily entered into but difficult to exit (see also Downs, 1972). As we have seen, recent decision-making about waste in Kingston has largely been a bureaucratized process consisting of formulaic consultation with WM industry, a City staff report for Councilors to consider, and a small number of town hall meetings to provide a structured means of citizen participation. The staff report is based upon the WM industry consultation, which recommends particular WM technologies
based on current and projected amounts of waste the city creates, and the cost of various WM technologies. On the few occasions when members of the public expressed ‘upstream’ concerns such as having opportunities to be more involved in decision-making regarding the future adoption of another WM technology, these expressions were deemed to be outside the municipal government’s and industry’s remit and overshadowed by individual responsibilization and neoliberal concerns.

Our study suggests a close association between Latour’s fifth and third political forms. When waste becomes de-naturalized and non-routinized and begins to transform into an issue, Latour’s third sense of politics frequently emerges. The perennial concern with increasing volumes of waste is, as we have shown, met with a combination of individual-level surveillance purported to decrease waste volume and with techno-scientific fixes such as landfills, incinerators, and waste-to-energy technologies. These responses are presented to the public in such a way as to suggest the issue has already been resolved and simply requires public accession (Spector and Kitsuse, 1972). For instance, by the time Simcoe County began public consultations, the need for a landfill had been established, the site had been selected, risks had been identified and assessed to be within acceptable values determined, and a developer had been chosen. The increasing hegemony of multinational WM corporations – corporations adept at managing public involvement – means that industry increasingly defines the parameters of assessment and ipso facto what may be examined, discussed, deliberated, and agreed upon. The industry-produced WM feasibility studies that increasingly inform government deliberations and decisions are focused on economic sustainability and are supported by in-house science and engineering reports that emphasize techno-scientific responses with known short-term risks. Multinational corporations have become vital allies through which municipalities attempt to turn an emerging issue into a technical problem governed by a clearly demarcated general will and common good.

Members of the public participate in these political deliberations at a considerable disadvantage: on their own time and with modest or no funding. Recently assembled and assembling groups must galvanize evidence and arguments against for-profit institutions that have scientists, engineers, contractors, policy specialists, and experts in old and new media communication on payroll (Hannigan, 1995). This said, Latour’s third sense of politics pivots on the failure of governments to foreclose public dissent. As our analysis suggests, apparently already-resolved issues may be complicated by a skeptical public focused on long-term risk and scientific indeterminacy, who may raise more ‘upstream’ issues such as zero waste goals. As we have seen, members of the public are wary of scientifically described risks – which are, by definition, known risks typically involving numerical thresholds of already defined acceptable environmental compromise – and focus instead on unpredicted effects, which scientists cannot address (Wynne, 2006: 216).

Site 41 and Kingston’s Belle Park demonstrate the type of dissent that can lead to the failure of government to present WM as an already-resolved issue: power is neither unidirectional nor located in only one entity, such as industry. These politics have, thus far, largely oscillated between Latour’s fifth and third forms, and further comparative analysis with other municipalities may provide insights into how other forms of politics take shape. This is all the more interesting because relentless circuits of production and
consumption coupled with an almost exclusive focus on techno-scientific amelioration ensure increasing waste remains an unstable object primed to be transformed into an issue. In Kingston, the routinization and banality of public engagement with WM serve to mitigate the likelihood of this issue assembling a politics that would require a resolution by City Council (potentially at the expense of votes come election time), preventing controversies such as those over selecting a site for a new waste processing facility, or those that might occur if a WM company fails to properly deploy their selected technology.  

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Notes
1. For a discussion of indeterminacy and waste, see Hird (2012, 2013).
2. The phrase ‘build the beast; feed the beast’ was used by an industry representative in an interview conducted with one of the authors (M.J.H.). The representative was referring to the fact that some waste-to-energy technologies require a constant and sufficient amount of waste to remain functional. Therefore, municipalities that adopt these technologies may face the reality of encouraging its citizens to divert less waste, cooperating with another municipality to share the technology, or buying waste (interview conducted on 27 March 2012).
3. Waste collection fees are funded largely through property taxes, which are independent of the number of residents in a property.
4. A Consolidated Hearings Board initially turned down the proposal, but the Cabinet over-turned that and sent it back to the Board (Ontario Executive Council, 1996).
5. To wit, Scott Environmental Group, who the City of Kingston contracted through its subsidiary, Norterra Organics, to compost municipal solid compostable waste pleaded guilty to two counts of failing to reject waste product containing unacceptable levels of heavy metals, one count of storing, loading and processing waste product outside, and one count of taking more than the maximum 100 tonnes amount of waste it is allowed to accept in a day. (Ferguson, 2011: 1)

The company was fined CAD$125,000.

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