



The City of Ottawa Biosolids Beneficial Use Program Best Management Practices

The City of Ottawa's Biosolids Beneficial Use Program Best Management Practices (BMPs) were developed based on the review of the literature, information gathered from interviews, and experience in the field. The BMPs are a series of procedures designed to manage the program in a manner that is consistent, transparent, and verifiable, and in excess of the *Ontario Nutrient Management Act 2000 and Ontario Regulation 267/03*. The BMPs are divided into seven program elements:

1. Site Selection and Approval
2. Land Application
3. Inspection and Monitoring
4. Source Controls
5. Communication
6. Incident Response
7. Training

Each program element relates to a series of items that will have associated best management practices along with a rationale or basis for each BMP.

The premise behind the interim BMPs is that limiting public contact with biosolids may mitigate potential public health risks from exposure. They also address some of the concerns raised by members of the public. The BMPs cover all aspects of the land application program, from selecting application sites, the approval process, and spreading activities, to recordkeeping and auditing. Emergency measures and at-source controls also are addressed.

The BMPs are updated on an annual basis to reflect any changes in legislative requirements, public opinion and City of Ottawa council mandates.

Table 1. City of Ottawa Biosolids Beneficial Use Program – Best Management Practices

Program Element	Item	O. Reg 267/03	City of Ottawa Best Management Practice	Basis/Rationale	Current Practice
Site Selection Pre-screening	Overview			<p>Avoid investment by contractor to license sites in compliant with the Regulation but not the Best Management Practices.</p> <p>Documentation of informed consent by the City.</p>	
	Separation Distance	<p>Section 47 indicates setbacks for OC3 NASM:</p> <p>Dwelling:</p> <ul style="list-style-type: none"> • No application is permitted within 100m. • 100 – 450 m if incorporated within 6 hours. • 450+ m incorporated within 24 hours <p>Residential areas, commercial, community or institutional uses:</p> <ul style="list-style-type: none"> • No application is permitted within 200m. • 200 – 900 m if incorporated within 6 hours. • 900+ m away, incorporation within 24 hours. <p>Definitions as per O. Reg 267/03: "dwelling" means a structure that is used as a residence, including a mobile home or seasonal home, but not including a structure that is in a residential area</p>	<p>Sites under consideration are a minimum of 100m from any dwelling and 450m from any residential areas, commercial, community or institutional uses.</p>	<p>This is in line with the BMP that requires incorporation of biosolids within 2 hours (See: Spreading). It prevents spreading within 200m of a "commercial, community or institutional use" area, and is therefore more stringent.</p>	BMP

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		<p>"residential area" means an area in which there are four or more lots of not more than one hectare</p> <p>"commercial, community or institutional use" :</p> <ul style="list-style-type: none"> a) an office building b) a hotel, motel, hostel or similar c) an overnight camp or campgrounds d) indoor recreational or sporting activities e) indoor gatherings for civic, religious or social purposes f) indoor performing arts activities g) a railway station, airport passenger terminal or other embarkation or debarkation point for travellers h) a day care centre i) educational purposes, including a school, college, university, private career college or associated residence j) a health care facility k) a penitentiary, jail or other place of custody or detention 			

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	Land Use Restrictions	Section 52.8(2), Table Pre-harvest Waiting Period, Column 3: <ul style="list-style-type: none"> • Commercial sod: 12 months • Hay and haulage: 3 weeks • Tree fruits and grapes: 3 months • Small fruits: 15 months • Vegetables: 12 months • Tobacco: 12 months 	Vegetable crops are grown for direct (unprocessed) human consumption. Vegetable crops do not include field crops such as: field corn, cereal crops, perennial legumes (e.g. alfalfa) or soybeans. The landowner or farm operator is willing to agree to pre-harvest waiting periods following biosolids application for: <ul style="list-style-type: none"> • Vegetable crops (non-root): 1 year • Vegetable crops (root): 5 years 	The waiting period is extended for root crops which may carry soil, based on the survival time of parasites (Feachern <i>in</i> Albin 1999, Larkin et al <i>in</i> Cliver 1980, Little 1980, and Bitton 1984).	Ottawa's biosolids are typically used to fertilize crops that are used for fuel or undergo further processing prior to animal consumption, such as: <ul style="list-style-type: none"> • Field corn • Cereal crops (e.g. wheat) • Legumes (e.g. alfalfa and soybeans)
		Section 52.9(2) Table Pre-grazing Waiting Period, Column 3: <ul style="list-style-type: none"> • Horses, beef or dairy cattle: 2 months • Swine, sheep or goats: 6 months 	Land will not be used as pastureland for a minimum period of 5 years following land application.	Biosolids provide a potential pathway for persistent organics into the food chain via ingestion of soil by grazing animals. Cameron et al (1997) indicate a dairy cow may ingest about 900 g soil per day. There is insufficient research to establish the significance of this pathway and the appropriate waiting period. This BMP is proposed on a trial basis subject to amendment following further research.	Ottawa's biosolids are spread on pastureland occasionally.
	Soil Type	There is no specific section in the Regulation addressing determination of soil type for application of solid NASM. The hydrologic soil group will influence the application rate based on the risk of ground water contamination; Section 49.	Soil maps are reviewed to determine whether there is likely to be adequate and suitable (i.e. mineral) soil. Visual inspection of the soil type may be used instead of soil maps.	Soil maps are available for Ottawa and surrounding areas that can be used for a broad screening of site suitability.	Methodology not standardized.

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Site Assessment and NASM Plan Approval Preparation	Overview			<p>Designed to ensure that compliance with provision of the Regulation can be documented.</p> <p>Provides for informed consent from the landowner and in the case of leased or rented land, acknowledgement that the farm operator has been informed of the conditions for application.</p>	
	Soil Depth	<p>Section 49(1), (2) addresses minimum soil depth to ground water for CM2 and CP2 NASM:</p> <ul style="list-style-type: none"> • Minimum 30 cm of unsaturated soil at the surface of the land at the time of application. • Minimum 30 cm of unsaturated soil, but not more than 90 cm, consult Table in this section. • Section 50 addresses application rate standards for depth to bedrock. • Column 5 of the table in this section states that solid NASM that is CM2 or CP2 may not be applied if there is less than 50 cm soil depth to bedrock. <p>See Table in this section for details.</p>	<p>Soil depth is a minimum of 1.5m as measured by one test hole drilled per ten hectares evenly distributed over the property (minimum one location per site).</p> <p>Locations of test holes are indicated on the site plan.</p> <p>Where rock outcrops are visible, the location at which the soil depth reaches 1.5 m is indicated on the site plan. Biosolids are not spread where the soil depth is less than 1.5m.</p>	<p>Soil maps are available for Ottawa and surrounding areas that can be used for a broad screening of site suitability.</p>	<p>Methodology not standardized.</p>
	Field Measurement	<p>Means and accuracy of field measurement are not addressed in the Regulation.</p>	<p>The field and buffer areas are measured using differential GPS and software capable of calculating the area. They are verified by visual inspection and measurement in the field after flags have been placed.</p> <p>Once buffer areas have been identified, their area</p>	<p>This ensures that any features not on the map are identified and properly buffered.</p>	<p>BMP</p>

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			is accurately measured and deducted from the total field area.		
	Separation Distance	See Pre-screening.	See: Pre-screening.		
	Landowner Consent	<p>Section 26.2 (1e) addresses the preparation and contents of NASM Plans.</p> <p>The NASM Plan must be signed by:</p> <ul style="list-style-type: none"> i) the owner of the operation or the owner's authorized agent, ii) the owner of the land where the NASM plan area is located or the owner's authorized agent, iii) and the person who prepared the NASM plan. 	<p>Signed consent is obtained from the landowner indicating an understanding of:</p> <ul style="list-style-type: none"> • Waiting periods • Crop restrictions • Specific area where biosolids will be spread (shown on site plan) • Amount of nutrients being provided by biosolids • Where the landowner is different from the farm operator, the farm operator will also sign to indicate understanding of the above items. 	Improved documentation of informed consent. Verification that the farm operator has been informed of the conditions of application.	BMP
	Flood Plain Location	Section 52.4(1), (2) (a) refers to prohibition of application on vulnerable land, including land that is subject to flooding once or more every five years according to flood plain mapping provided by the municipality or conservation authority having jurisdiction over the land.	Areas will not be selected that are subject to frequent flooding (annual or biannual) based on visual observations or flood plain mapping. Where a portion of the site is subject to flooding as defined above, it will be delineated on the site plan and excluded from the spreadable area.	Reduced likelihood of unintentional movement of biosolids into surface waters in the spring.	BMP

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	Site Plan	<p>Section 26.2 (1) (d) addresses the preparation and contents of the NASM Plan must identify the farm unit, the NASM plan area, the NASM application area and any associated NASM storage facility. It must also identify any area of land within the farm unit where NASM is to be stored within the NASM application area.</p> <p>Nutrient Management Protocol states: A sketch for each field in the NASM application area is required. The sketch must be prepared based on an on-site assessment. The sketch must include the date the on-site assessment was done and the name of the person conducting the assessment. The sketch must address the following field components:</p> <ul style="list-style-type: none"> • Field identifier (from Farm Unit Declaration) • Sections within the field, if the field has more than one section, including individual field locations and boundaries • Whether the field has tile drains and, if so, the location of the tile inlets and tile outlets <p>The following features must also be included on the sketch (or where the features do not exist, a</p>	<p>An accurate site plan is produced, to scale, clearly delineating:</p> <ul style="list-style-type: none"> • Site boundaries • Landowner property line • Buffer areas including distances • Topographical features • Location of population centres • Water wells • Surface water • Test hole locations • Staging area • Field entrance • Proposed stockpile location if applicable 	<p>Allows all measurements to be taken from the same location and reduces confusion during inspection.</p> <p>Irregular distances are more accurately measured in the field if they are clearly identified on the map. The distance of the setback is noted inside the setback.</p>	BMP

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		<p>statement indicating this must be included):</p> <ul style="list-style-type: none"> • Areas where the soil depth is less than 30 cm and rock outcrops • Areas subject to ponding • The location of non-agricultural land uses,(dwellings, residential areas and commercial, community or institutional use) • The location of any municipal wells within 100 metres of the field boundary • The location of all other known wells within 90 metres of the field boundary, • The location of all surface water within 150 metres of the NASM application area, • The maximum sustained slopes within 150 metres of the top of bank of all surface water, and • The separation distances for surface water required to meet the regulatory requirements. 			

Program Element	Item	O. Reg 267/03	City of Ottawa Best Management Practice	Basis/Rationale	Current Practice
	Separation Distance to Wells	<p>Section 46 (1) No application of nutrients within 100m of a municipal well.</p> <p>Section 46 (2) No application of prescribed materials to land closer than 15m to a drilled well with a depth of at least 15m.</p> <p>Section 46 (4) addresses setbacks from wells for CM2 and CP2 NASM. No application within 90m of a well.</p>	100m separation distance for all wells, regardless of depth and type. If the location of the well is unknown, the distance is measured from the property line.	O. Reg 267/03 updated from 90m to 100m separation from municipal wells.	BMP
Pre-spreading	Overview			Verification that NASM Plan conditions and BMP's are implemented to limit public exposure.	
	Soil pH	<p>Section 94(1) states that for Category 3 NASM to be land applied the receiving soil must have at least one soil sample analyzed for pH in the last 5 years.</p> <p>Soil sampling methods are described in the Sampling and Analysis Protocol (2012):</p> <ul style="list-style-type: none"> • Must be a composite sample with a consistent depth (15cm) • Maximum area per one sample in 10 ha for nutrients and pH, up to 20 ha if there is uniform nutrient content and pH • Minimum of 20 cores per sample per field up to 5 ha, additional 2 cores/ha for fields from 5 to 10 ha 	The soil pH is measured according to the Sampling and Analysis Protocol; one sample per 10 ha no more than 18 months prior to spreading.	Maintaining a soil pH greater than 6 is required for compliance and is based on restricting mobilization of metals.	BMP

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	Groundwater Depth	Section 49(1), (2) addresses minimum soil depth to ground water for CM2 and CP2 NASM: <ul style="list-style-type: none"> • Minimum 30 cm of unsaturated soil at the surface of the land at the time of application. • Minimum 30 cm of unsaturated soil, but not more than 90 cm, consult Table, column 4 for details. 	Test holes are drilled to a depth of 1 m at a minimum frequency of one sample per 10 ha, no more than 4 weeks prior to spreading. Where there is less than 90 cm of unsaturated soil, the area is delineated and biosolids are not spread. Test holes are filled and tamped at 30 cm intervals.	Filling and tamping of test holes reduces the risk of preferential flow pathways from the surface to the subsurface water. The BMP provides direction on how and when the depth of unsaturated soil should be measured.	BMP
	Resident Notification	Not required.	The Ministry of Environment and Climate Change, the Ward Councillor, and residents within 450m of the spreading site are notified no less than 2 weeks prior to spreading using a standardized letter template provided by the City. Notification includes: <ul style="list-style-type: none"> • Site map including Township, Lot and Concession • Estimated start and duration of operation. • Contact name and number for the City of Ottawa Biosolids Program Coordinator and the contractor. • A brief explanation of the Biosolids Program and spreading requirements. • An opportunity for residents to request well water testing. 	The City of Ottawa is committed to an open and transparent program.	BMP

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	Well Testing	Not required.	<p>The City of Ottawa has established the Well Sampling Program for wells located on adjacent lots to land application sites. Wells are tested per request for indicator bacteria, nutrients and metals within 4 weeks of land application of biosolids. Wells are re-tested between 8 and 10 weeks after land application.</p> <p>Residents receive well sample results as outlined in the City's Notification Procedure for Well Sampling Results. The procedure provides details on how to interpret results, further action to be taken and who to contact for support.</p>	<p>According to a groundwater quality survey carried out in Ontario in the early 1990s, approximately 50 percent of rural wells are contaminated. (Goss, personal communication) Englebrecht (1978), Cameron et al, (1997), Gerba (in Smith 1996) indicate that a buffer of 90 meters from biosolids spreading is sufficiently protective of wells where the ground water is in soil (not fractured bedrock).</p> <p>The Well Sampling Program delineates the source of contamination and safeguards public health.</p> <p>The period of 8-10 weeks was selected based on feedback from Ottawa rural residents, and allows some travel time for water to potentially move from the spreading site to the well.</p>	BMP
	Signs	Not required.	<p>Signs are posted by the time spreading commences, indicating that biosolids have been spread on the field. The signs provide a contact telephone number for the contractor and/or City staff dedicated to the management of inquiries/complaints.</p> <p>Signs are posted at the entrance to the field from the road and at regular intervals where the field is bordered by a public roadway. The signs are maintained by the landowner or farm operator for up to one year following application.</p>	<p>Signs provide:</p> <ul style="list-style-type: none"> • Advertising for the program • Contacts for inquiries/complaints • Restrict potential for public exposure to pathogens. • One year is precautionary based upon pathogen survival on soil (Smith 1996, Little, Albin 1999) and consistent with National Manual of Good Practice for Biosolids 	BMP

Program Element	Item	O. Reg 267/03	City of Ottawa Best Management Practice	Basis/Rationale	Current Practice
	Pre-spreading Checklist	Not required.	<p>Pre-spreading checklist is completed by the contractor for each site indicating:</p> <ul style="list-style-type: none"> • Anticipated start date • Total tonnage • Spreadable area • Application rate • Buffers have been flagged • Signs have been posted • Date of resident notification • Unsaturated soil depth has been verified • Soil pH has been verified • Wells have been tested, unless declined by the resident <p>The checklist is submitted to the City prior to spreading.</p>	Improved documentation of suitability of site conditions prior to spreading.	BMP
Spreading	Stockpiling	<p>Section 81.2 (1), (2) and (3) cover temporary storage of NASM on agricultural application sites:</p> <p>(1) OC3 NASM shall be applied by midnight on the day it is received at an agricultural operation.</p> <p>(2) No person shall store OC3 NASM at an agricultural operation beyond the application deadline set out in subsection</p> <p>(3) No person shall store OC3 NASM at an agricultural operation unless the storage facility is located a minimum 450m away from residential area or commercial, community or institutional use, or minimum 200m from a dwelling.</p>	Stockpiling and storage of biosolids is not permitted in the field or on the farm.	<p>Stockpiles are a source of odours. The City wants to limit public exposure to stockpile odour as a “good neighbour” policy.</p> <p>Allows the City control over its product and reduces the risk of contamination.</p>	BMP

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	Weather During Spreading	Not addressed.	<p>Spreading does not proceed when the wind speed is sufficient to disrupt the spreading pattern.</p> <p>Spreading does not proceed in rain conditions heavy enough to cause runoff or soil saturation.</p>	<p>Uneven distribution of the biosolids can affect crop nutrient availability and uptake.</p> <p>Strong winds can carry odours and generate complaints. The City has adopted this measure as a “good neighbour” policy.</p> <p>Runoff conditions from the field increase the possibility of surface water contamination. Spreading on saturated soil can cause soil compaction.</p>	BMP
	Hauling	Not addressed.	<p>Biosolids loads are tarped during transport.</p> <p>The truck is inspected prior to entering public roadways to ensure biosolids are not present on the outside of the truck.</p> <p>Any biosolids inadvertently tracked onto public roadways are removed immediately.</p>	<p>Tarping minimises odour and prevents material loss during hauling.</p> <p>Biosolids that fall from the truck onto public roadways represent a potential public exposure pathway.</p>	BMP
	Incorporation	<p>Section 47 indicates setbacks and other requirements for land application of OC3 NASM:</p> <p>Dwelling:</p> <ul style="list-style-type: none"> • No application is permitted within 100m. • 100 - 450 m if incorporated within 6 hours. • 450+ m incorporated within 24 hours. <p>Residential areas, commercial, community or institutional uses:</p> <ul style="list-style-type: none"> • No application is permitted within 200m. • 200-900 m if incorporated within 6 	<p>Incorporation should occur within 2 hours of spreading.</p> <p>No more than 5% of the biosolids remain on the surface after incorporation.</p>	<p>Incorporation minimises odours, prevents runoff, and reduces generation of biosolids dust which may become airborne, improves contact between soil and biosolids to reduce contaminant mobility, and improves nutrient availability.</p> <p>There is currently no definition of “incorporation”. The visual measure of no more than 5% remaining on the surface is recommended on a trial basis.</p>	BMP

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		<p>hours.</p> <ul style="list-style-type: none"> • 900+ m away if incorporated within 24 hours. 			
Post-spreading	Site Condition	Not addressed.	Field entrance, staging area and public roadways are returned to their previous state. There are no biosolids on the road.	<p>Tracked biosolids are a direct pathway of public exposure.</p> <p>Field damage will affect program credibility</p>	BMP
	Well Testing	Not addressed.	See: Pre-spreading.		
	Post Spreading Checklist	Not addressed.	<p>Checklist is completed by the contractor for each site within 24 hours indicating:</p> <ul style="list-style-type: none"> • Date started and completed • Area applied • Quantity of biosolids applied • A visual confirmation that all biosolids have been incorporated <p>The checklist is submitted to the City within one week of spreading.</p>	<p>Documentation of post spreading information is kept on file, to keep a log of contractors' activities.</p> <p>Submission time was amended from 24 hours to one week to allow for an accurate summation of weigh bills.</p>	BMP
Inspection and monitoring	Overview			<p>Documented inspections to demonstrate compliance with regulatory requirements and Best Management Practices.</p> <p>Monitoring to assess environmental impact of practices.</p>	
	Pre-spreading Checklist	Not addressed	See: Pre-spreading.		
	Post-spreading Checklist	Not addressed	See: Post-spreading.		
	Well Monitoring	Not addressed	See: Pre-spreading.		
	Site Inspection	Not addressed	<p>All sites spread during one season are inspected, either before, after, or during spreading, by trained City staff for conformance with the Certificate of Approval/Environmental Compliance Approval requirements and the City's of Ottawa's BMPs.</p> <p>Verification records are maintained by the City.</p>	The contractors activities must be inspected to demonstrate conformance with C of A/ECA requirements and BMPs.	BMP

Program Element	Item	O. Reg 267/03	City of Ottawa Best Management Practice	Basis/Rationale	Current Practice
	Biosolids Quality Monitoring	<p>See: Application Rate</p> <p>Category 3 NASM must be analyzed for total solids, TKN, ammonium and ammonia-N, nitrate and nitrite-N, total P and 11 regulated metals.</p> <p>Schedule 4 Tables 2 and 3, Column 2 shows NASM that must be analyzed for Na and/or FOG.</p> <p>Sewage biosolids and other NASM containing human body waste must be analyzed for E. Coli.</p> <p>Section 98.0.2 outlines biosolid cake sampling from large wastewater treatment facilities:</p> <ul style="list-style-type: none"> • Four samples shall be taken during the two-month period prior to the transfer date. At least two of them shall be taken during the one-month period before the transfer date. 	<p>A grab sample of biosolids is submitted to a Standards Council of Canada accredited laboratory and analysed for the regulated parameters no less frequently than once every 2 weeks.</p> <p>Results are reviewed by the City on a bi-weekly basis.</p>	<p>The hydraulic retention time of the digesters is approximately 20 days. Based on the behaviour of a completely mixed system, a sampling frequency of no less than once every 15 days would result in three consecutive elevated samples as the result of a single “spike load” to the sewer.</p> <p>Monitoring provides data on both long term trends and short term events.</p> <p>This data can be used to estimate metals loadings to fields.</p>	BMP
Source Controls	Overview			<p>Biosolids quality is a reflection of what is discharged to the sewage system. In many cases, it is more appropriate to prevent discharge of a contaminant in to the sewage system through source controls rather than attempting to remove the contaminant through sewage treatment.</p>	

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	Take it Back Program	Not addressed.	The City maintains a Take it Back Program for used medication.	Some pharmaceuticals entering the sewage treatment plant partition with the biosolids. The implications of pharmaceuticals in sewage are currently being investigated by the scientific community. Proper disposal of used drugs reduces this pathway into the environment.	BMP
	Industrial Source Controls	Not addressed.	The Sewer Use Program is supported by the City of Ottawa's Sewer-Use Bylaw. The program restricts what materials are permitted into the wastewater treatment plant and ensures that only treatable, non-hazardous substances enter the system and subsequently the biosolids.	At source reduction of metals and other targeted pollutants is the most effective means of controlling their entry into the environment.	BMP
Communications	Overview			Effective communication with the public will support program credibility. Transparency is an important component of the City of Ottawa's program.	
	Resident Notification	Not addressed.	See: Pre-spreading.		
	Communication Response	Not addressed.	All communications are handled by both the contractor and City staff as outlined in the City's Communications Strategy.	Communications are handled in a consistent and efficient manner will support program credibility. Response times can vary depending on the source of the communication, who received it (councillor, City staff, and contractor) and the nature of the communication. Increased response rate to emails allows additional time to provide an appropriate response during field season or if the communication requires input from various parties.	BMP

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	Information Management	Not addressed.	Data from pre and post inspection checklists (See: Pre-Land Application of Biosolids Checklist and Post-Land Application of Biosolids Checklist) is logged into a central database created and managed by both the contractor and City staff including: <ul style="list-style-type: none"> • Dates of well testing • Resident notification • Lot and concession of site • Date of start and end of spreading • Area spread • Total volume spread • Rate of spreading • Nutrient and metals loading The City verifies this information using the Biosolids Site Information Tracker.	Approved City staff have access to the contractors information management system. The City's Biosolids Site Information Tracker is used as a verification tool to ensure that the contractor's documentation and reporting requirements have been met, both for the City and regulations.	BMP
	Availability of Information	Not addressed	All of the information with the exception of protected personal information is easily available for public inspection. A communications log between the public and the City is maintained and updated on a bi-weekly basis.	program transparency	BMP
Incident Response	Overview			Incidents are tracked and responded to in a consistent manner.	
	Well Contamination	Not addressed.	See: Pre-spreading.	Protection of public health in the event of contaminated well water and confirmation of results. Information is logged to allow verification of incident chronology.	
	Public Health Incident	Not addressed.	When an individual or group of individuals reports adverse health effects from exposure to biosolids: <ul style="list-style-type: none"> • Ottawa Public Health Public Health Information Line (Public Health Inspector at Duty Desk) is notified and contacts the individuals concerned. • The Biosolids Program manager is notified. • The health-related complaint is investigated by Ottawa Public Health to determine the diagnosis and cause of illness (if possible) • An incident report is prepared including the 	The City has an obligation to thoroughly investigate any health-related complaint. Tracking and investigating health-related complaints can be used to demonstrate program safety.	Procedures not standardized specifically for biosolids. Only for well sampling.

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			<p>incident chronology, biosolids spreading conditions, and outcome.</p> <ul style="list-style-type: none"> • Other action is taken as deemed appropriate by Ottawa Public Health. 		
	Spill	Not addressed.	<p>A spill is defined as a discharge of a pollutant into the natural environment that is abnormal in quantity or quality. Spills must be reported if they cause or are likely to cause any of the following:</p> <ul style="list-style-type: none"> • Impairment to the quality of the natural environment; air, water, or land • Injury or damage to property or animal life • Adverse health effects • Safety risk • Making property, plant, or animal life unfit for use • Loss of enjoyment of normal use of property • Interference with the normal conduct of business <p>In the event of a spill off site, the contractor will implement its Emergency Response Plan which was approved by City staff during tendering.</p> <p>If the spill occurs within ROPEC boundaries the contractor will implement the BSU Situation Response Plan.</p> <p>Where there has been movement of biosolids into the natural environment, samples will be collected to assess the extent of contamination.</p> <p>An Accident Injury and Workplace Illness Report Form are submitted to the City.</p>	<p>Effective, consistent and efficient approach to spills will provide program credibility.</p> <p>Demonstrates due diligence to regulator.</p>	BMP

Program Element	Item	O. Reg 267/03	City of Ottawa Best Management Practice	Basis/Rationale	Current Practice
	Over Application/ Application in Restricted Zones	Not addressed.	See: Spill		
	Training	Not addressed.	All City staff involved in the program, especially those who may have contact with the public are provided training on relevant legislation and the City's policies, procedures and Best Management Practices.	Staff who are involved in the program are knowledgeable and are able to answer public inquiries or know where to send the inquiry.	BMP
		Not addressed	Contracted staff are provided training on relevant legislation and the City's policies, procedures and Best Management Practices.	All contracted staff are aware of the Regulation and BMP requirements and relevant legislation.	BMP