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Department of Environment and Conservation
Locked Bag 104
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Submission on the Waste Authority Draft Position Statement on Recycled Organics

The attached Submission has been prepared through the Municipal Waste Advisory Council (MWAC) for the Western Australian Local Government Association (the Association). The Municipal Waste Advisory Council is a standing committee of the WA Local Government Association, with delegated authority to represent the Association in all matters relating to solid waste management. This Submission therefore represents the consolidated view of Western Australia Local Government. However, individual Local Governments may have views that differ from the positions taken here.

The Municipal Waste Advisory Council has prepared a Submission on the Waste Authority Draft Position Statement on Recycled Organics. This Submission was endorsed at the Municipal Waste Advisory Council meeting on the 17 June 2009.

The Association congratulates the Waste Authority on its commitment to developing effective and efficient instruments with regard to Recycled Organics. It is considered that the Position Statement will provide direction for the Organics Industry in WA and assist in enhancing the credibility of the industry.

MWAC would welcome the opportunity to contribute further to the development of the Waste Authority Draft Position Statement on Recycled Organics Position Statement and would like to be included in any further consultation.

If you would like to discuss any aspect of the Submission, please contact me on (08) 9213 2063 or email rbrown@walga.asn.au

Yours sincerely

A handwritten signature in blue ink, appearing to read "Rebecca Brown", written over a light blue horizontal line.

Rebecca Brown
Manager, Waste & Recycling



Submission on the Waste Authority Draft Position Statement on Recycled Organics

Status of this Submission

This Submission has been prepared through the Municipal Waste Advisory Council (MWAC) for the Western Australian Local Government Association (the Association). The Municipal Waste Advisory Council is a standing committee of the WA Local Government Association, with delegated authority to represent the Association in all matters relating to solid waste management. This Submission therefore represents the consolidated view of Western Australia Local Government. However, individual Local Governments may have views that differ from the positions taken here. This Submission was endorsed by the Municipal Waste Advisory Council on Wednesday 17 June.

Introduction

This Submission is in response to the *Waste Authority of Western Australia Draft Position Statement on Recycled Organics*. In commenting on this Position Statement it should be noted the position that MWAC is commenting from, on behalf of Local Government, is policy rather than operational.

WALGA would like to commend the Authority on the development of a Draft Position Statement on Recycled Organics. Given the large percentage of organic material in the Municipal Waste Stream a Position Statement from the State Government would identify key principles essential to guide the development of standards for recycled organics applied to land and provide greater certainty of markets for materials produced at Alternative Waste Treatment (AWT) Facilities.

Section three, Benefits of Recycled Organics for Soil Improvement, of the Authority's draft Position Statement identifies the poor quality of WA soils and the benefits associated with the application of organic material to land. Local Government recognises that land applications have the potential to represent a significant end-market for organic materials diverted from landfill. Further, it is recognised that significant potential benefits can be associated with the application of quality recycled organics to land and that, as such, this end-use is clearly in accordance with the sustainability principle; defined as '*meeting the needs of current and future generations through simultaneous environmental, social and economic improvement*'¹.

Language Usage and Definitions

WALGA has identified several areas within the *Waste Authority of Western Australia Draft Position Statement on Recycled Organics* that would benefit from greater clarity. Key terms need to be defined and terminology used consistent with the language and terminology used in the Organics Industry.

Table 1 identifies examples of language and terminology no longer used in the Organics Industry. The terminology now used reflects the consideration of waste as a resource. The discontinuation of terms such as refuse by industry has been instrumental in helping change the overall marketability for organic materials.

¹ WA Department of Premier and Cabinet (2004) *Hope for the Future: The Western Australian State Sustainability Strategy*.

| Terminology used in Position Statement | Organics Industry Terminology |
|---|-------------------------------|
| Urban refuse | Municipal Solid Waste (MSW) |
| Contaminants found in urban refuse with regard to usage on sensitive land | Contamination (generic) |
| Lower quality compost | Different quality compost |
| Soil improvers | Soil Conditioner |

Table 1: Terminology

The Recycled Organics Unit² Dictionary provides an extensive list of industry standard terminology.

Additionally, clarification/definitions for the following terms should be included in Position Statement:

- Microbiological purity;
- Sensitive land;
- Minimum criteria;
- Fit for purpose;
- Source-separation;
- Appropriately treated organics; and
- AS 4454 (2003) standards

Recommendation: That a list of definitions is included and that industry standard terminology is used throughout the Position Statement.

What are Recycled Organics?

Reference has been made in this section to a variety of materials that can be considered recycled organics. However, there has been no reference to non-recyclable paper and cardboard. These products may be disposed of in landfill when they could effectively be used in blended organic material to help combat the spread of harmful plant pathogens.³

With the current economic downturn there maybe a surplus of paper and cardboard that could be blended with other organics to produce a suitable 'fit for purpose' product.

Recommendation: That non-recyclable paper and cardboard be included in the list of materials considered recycled organics.

Land use and characteristics of the recycled organic matter

The Draft Position Statement refers to

"three characteristics that should be considered when deciding what form of recycled organics should be used for which type of land use:

- i. If the land is used for the production of materials where microbiological purity is important, then appropriately treated organics should be used;*
- ii. Where land use may be sensitive to contamination from materials that exist in urban refuse, then organics that have been separated at source are preferred; and*
- iii. Organics should not be applied if the likely contamination in the organics could cause the land to be contaminated."*

There appears to be some overlap between the three statements, the key theme is that the constraints of the land the material is to be applied to should be considered.

² Recycled Organics Unit Dictionary www.recycledorganics.com/dictionary/downloads/dictionary_edn3.pdf

³ Biology New Net

www.biologynews.net/archives/2006/09/26/recycled_paper_and_compost_could_both_be_key_tools_to_control_plant_disease.html

The Waste Authority paper indicates that not all composts are suitable for all applications, and that the quality and minimum standards of organic material should be dealt with by Commercial Compost Manufacturers under the guidance of the Australian Standards AS 4454 (2003) for Compost, Soil Conditioners and Mulches. As well as the Australian Standards, reference needs to be made to minimum health standard, mandatory standards for organics, mandatory minimum standards for unrestricted use and mandatory minimum standards for restricted use⁴

In December 2007, WALGA endorsed a Policy Statement and Background Paper on Standards for Recycled Organics Applied to Land. The Policy Statement identified a need for Mandatory Minimum Standards and outlines

"Mandatory minimum standards are required to minimise the potential risks to human health and the environment associated with the application of recycled organics to land. To ensure all risks are controlled, mandatory standards are required for –

- *Biological parameters;*
- *Chemical parameters; and*
- *Physical parameters."*

Minimum health standards for all Recycled Organics should be mandatory to minimise potential risks to human health and the associated environment where applied. Any mandatory organics standards should apply equitably to all recycled organic (including biosolids).

Recommendation: That minimum health standard, mandatory organics standards and mandatory usage standards be included in the Waste Authority Position Paper on Recycled Organics.

Recycled Organics where there is a need for high level contamination control

The organic component accounts for approximately 70 percent of municipal solid waste (MSW) collected through kerbside services in Western Australia⁵. This equates to approximately 490,000 tonnes of waste annually; an amount which is increasing exponentially with the State's population growth⁶.

Another significant source of organic waste collected by Local Governments is the source separated green-waste derived from verge-side collections and drop-off points at Local Government facilities

The main types of source separation are verge pickup and drop-off points at Local Government facilities; flexibility of organics collections is needed to allow for improvements in knowledge and understanding of organic processing and the final product produced after processing.

As a large proportion of organic collection is through the kerbside system, public education is needed to ensure contamination of kerbside material is kept to a minimum, support needs to be provided to Local Governments to ensure contaminants such as batteries, E-waste, and hazardous wastes are removed from the kerbside system. The Household Hazardous Waste Program is one example of the necessary support to ensure that the kerbside waste stream is not contaminated.

Recommendation: That the Waste Authority continues to provide support for Local Government to reduce contamination of the kerbside waste stream.

⁴ Derived from *Biosolids Management – Guidelines for Sewerage Systems, National Water Quality Management Strategy* (November, 2007).

⁵ Figures taken from Resource Recovery Rebate Scheme figures (Period 15, 2005) for the City of Stirling and the Southern Metropolitan Regional Council.

⁶ Figures taken from the *Compost Market Development Project* (Southern Metropolitan Regional Council, 2006).

Avoiding Contamination in Recycled Organics

The Draft Position Statement articulates support for source separation as the most effective method for minimising cross-contamination in organic collection systems. It should be noted that source separation does not guarantee that contamination will not occur. Comprehensive processing of and outcome based standards for organic materials are likely to be more effective in ensuring a quality product is produced. The Waste Authority Position Statement does not take into account chemicals (pesticides) applied without restriction to organic matter that is then spread freely amongst food producing crops.

The WALGA Policy Statement on Standards for Recycled Organics Applied to Land recognises that a key principle for minimising the risks associated with the application of recycled organics to land must be the introduction of mandatory, equitable standards for all recycled organics.

If a recycled organic product meets the standards, the source of that product is immaterial and it must be considered acceptable for land application. It is also acknowledged that if a product does not meet the standard, regardless of its source, it should not be applied to land due to the risks associated with that application. There is no suggestion that all products will be suitable for all uses.

It should also be noted that the Waste Authority Position Statement stipulates that "*appropriate single waste sources has a greater chance of meeting the requirements of relevant standards than compost created from mixed waste such as municipal solid waste*" implying that this method is preferred, however, not exhaustive.

The Department of Environment and Conservation (DEC), in consultation with WALGA, developed a draft Kerbside Collection Decision Making Tool for discussion. The Association's response to the Decision Making Tool highlighted three areas:

- Identification of Local Government decision making processes;
- Outcomes for kerbside systems (environmental, social and economic); and
- Various kerbside collection service model options.

The Paper is designed to assist decision makers in understanding what is being achieved at the best practice level in kerbside systems using environmental, social and economic outcomes.

Local Government, in response to this paper, indicated clear support for outcomes based standards for kerbside collection system performance; the outcomes were based on a triple bottom line approach (considering environmental, social and economic factors).

WALGA considers that the focus of regulatory standards should be on ensuring that the final product applied to land does not exceed prescribed concentration limits, rather than on the processes undertaken to produce that product. Setting specific processes is limiting given that a wide range of procedures are used worldwide to produce quality recycled organics products. Further, process-based standards could act to inhibit new and improved technologies being employed in the future.

Australian Standards AS 4454 (2003) for Compost, Soil Conditioners and Mulches identifies that organics processors must undertake appropriate quality assurance processes to ensure the consistent production of quality organics to the given standard. To ensure this, the processor must undertake:

- Identification of relevant Regulations – to provide guidance for organics that are diverted toward appropriate end use;
- Research – ongoing research to ensure minimum standards are maintained;
- Product testing – equitable testing regime appropriate to all recycled organic products;
- Mandatory fit for purpose standards – full disclosure needed to ensure product meets required standards and purchaser is fully informed (market tool); and
- Chain of records – full documentation of all process stages for auditing purposes as required, help to maintain product integrity.

Recommendation: That the preference given to source separation as the best way to avoid contamination of end product is removed and an outcome based position adopted.

Existing Documentation with potential relevance to the Position Statement on Recycled Organics

Reference to the Australian Standards AS 4454 (2003) for Compost, Soil Conditioners and Mulches has been made throughout the draft Position Statement, however, it should be noted that Section 2 General Requirements, 2.1 Containment of (Human, Animal and Plant) Disease, 2.1.1 Compliance with national health standards states;

"All products shall fully comply with the chemical, organic and pathogen containment provisions of the current Federal or State Government guidelines, whichever is the most restrictive, for use and disposal on soils of products derived from organic wastes, compostable organic materials and biosolids."

The *West Australian Guidelines for Direct Application of Biosolids and Biosolids Products* classify compost and restrict the possible application of the product. This document guides the end use of compost; however, it is overdue for review. The Guidelines are in draft form, with the intention stated that "once the guideline has been in operation for a period of time (probably one year), the Biosolids Working Group, comprising members from the Department of Environmental Protection, the Department of Health and the Waters and Rivers Commission, will seek comments from suppliers and users of biosolids, as well as from other interested parties, for possible revision of the guideline". The Guideline was produced in February 2002, and this review process is yet to be undertaken.

Compost Australia has developed, in conjunction with SAI Global, a certification process for 'fit for purpose' compost. It is anticipated that the Alternative Waste Treatment (AWT) Derived Organic Rich Fraction (DORF) research will assist in a revision of AS 4454 with the goal of an Australian Standard fit for purpose compost. Should this outcome be achieved, and a review of the *West Australian Guidelines for Direct Application of Biosolids and Biosolids Products* is undertaken, the review should be incorporated into the Waste Authorities Position Statement on Recycled Organics.

Recommendation: That the review of the Waste Authority Position Statement on Recycled Organics be based on the West Australian Guidelines for Direct Land Application of Biosolids and Biosolids Products.

Recommendation: That the Waste Authority support a review of Australian Standard AS 4454 (2003) for Composts, Soil Conditioners and Mulches.

Recommendation: That the Waste Authority incorporates the AWT DORF project results into the Waste Authority Position Statement on Recycled Organics.

Conclusion

WALGA would like to commend the Waste Authority for considering the important issues of Recycled Organics Applied to Land. Local Government recognises that land applications have the potential to represent a significant end-market for organic materials diverted from landfill. Further, it is recognised that significant potential benefits can be associated with the application of quality recycled organics to land and that, as such, this end-use is clearly in accordance with sustainability principles. Local Government endorses the application of quality recycled organics to land as an optimal end-use for waste organic materials.

It is recognised that significant potential environmental benefits can be associated with the application of quality recycled organics to land. These have been identified in a range of local, national and international studies. Most notable, given their local application, are the results of the Southern Metropolitan Regional Council's Compost Market Development Project (September, 2006). Some of the benefits identified include:

- A significant reduction in greenhouse gas emissions, in particular methane gas resulting from the breakdown of greenwaste and other organics in landfill;
- Improvements in soil quality, including improved pH, reduced soil temperature, improved soil microbial balance, and increased organic carbon content, improved water holding capacity; and

- Reduction in nutrient run-off, leading to lower artificial fertilising requirements and improved water quality.

The Organics/composting industry is well established and terminology specific to the industry has been developed and defined. The Waste Authorities Position Statement would be enhanced by using terminology consistent with that used in the industry.

Local Government recognises the pressing need for mandatory minimum standards for recycled organics to be introduced without delay; and therefore accepts the need for such standards to be necessarily based on the best available current scientific evidence. It is acknowledged and accepted that these standards are likely to be based on restrictions regarding the total allowable concentration of contaminants in soil as a result of the application of an organic product.

However, Local Government identifies that such standards fail to account for a large range of factors that should be used to establish risk-based, site specific soil limits. These factors include the bioavailability (the availability of a substance by uptake for biological systems) of a contaminant, background concentrations, toxicity, and exposure routes.

It is acknowledged that this is an extremely complex area of science. Despite this, it is considered the development of such knowledge is imperative to ensure the optimum benefits are obtained from the application of recycled organics to land in addition to minimising the risks associated with the process. The range of analytes to be tested for should be based on robust scientific evidence of both the risk of a contaminant being present and the risk of that contaminant exceeding given standards.

In addition, it is recognised that a key principle for minimising the risks associated with the application of recycled organics to land must be the introduction of mandatory, equitable standards for all recycled organics. Logically, if a recycled organic product meets the standards, the source of that product is immaterial and it must be considered acceptable for land application. It is also acknowledged that if a product does not meet the standard, regardless of its source, it should not be applied to land due to the risks associated with that application.

The successful implementation of mandatory, equitable standards will inevitably require concurrent support mechanisms to be provided.

Recommendation: The standards should be introduced with a considerable lead-in time to allow existing processors to adopt appropriate practices to meet the standards.

Recommendation: Consultation and workshops should be undertaken between industry processors, Local Government and appropriate State Government departments to assist in identifying and evaluating potential markets for recycled organics.