

Waste Management Detailed Reviewer Instructions

1. Purpose of a review

The primary purpose of a review of a manuscript is to assess its suitability of a manuscript for publication. The thorough review of manuscripts is crucial to the advancement of knowledge through journals. The reviewers set the standard for publishing in journals and ensure that accepted manuscripts are of a quality that provides valuable information.

In addition, the review should provide constructive advice to the author as one would to a colleague. Finally, the review should help the editor to manage the manuscript properly and to make the right decision on publication. The review must provide justification for a recommendation on publication. Reviews that do not provide justification will be discounted. In cases where a revised manuscript will be required, the review must provide enough detail for the editor to ensure that the authors address the reviewers' concerns adequately. Realise that the reviewer will generally be more knowledgeable on the particulars relevant to a manuscript than the editor.

2. What to look for in particular sections of a manuscript

The style rules for Waste Management can be found at www.elsevier.com/locate/wasman.

All manuscripts should have a title, abstract, body, and references. The body of the manuscript can vary according to need. Advice on what to look for in commonly used sections of a manuscript is included here.

2.1 Title

The title needs to focus on the aspect of the manuscript that is novel and has merit. Because many literature search methods are based on titles, a good title helps others identify a published manuscript.

2.2 Abstract

The abstract should provide a summary of the manuscript. It should include a little bit of all sections: introduction, methods, results, and conclusions.

2.3 Introduction

The introduction should provide the context and background needed by the reader to understand where the current work fits. It should be written for an international audience of waste researchers and managers. There is no need to give overly broad information that is known by the audience, or overly specific information relevant to only one country. Some manuscripts focus on an application of techniques that are not familiar to this audience, and in this case, the introduction should provide enough background (including references) to serve as an introduction to the topic

for readers and allow them to better understand the novelty of the research presented later in the manuscript. The introduction should include a brief summary of existing knowledge on the topic covered, but a detailed or exhaustive literature review is not appropriate. The introduction should lead logically to a clear and concise study objective.

2.4 Materials and Methods

This section needs to provide enough detail and references to allow others to reproduce the work. Reviewers are asked to point out inadequacies in the description of materials and methods. If experiments were conducted, the experimental design and the rationale for its use should be clear. If the results of statistical methods are used later, the methods should be discussed. For Country Reports, there is no need for this section, and some other type of documentation (eg, background on a case study) may be included.

2.5 Results/Discussion

These sections can be presented and organised in various ways. It is important that the authors focus on the aspects of the study that are central to supporting its merit, and do not overly burden the reader with aspects that are tangential or of little consequence. The manuscript should provide insight into the significance of the results and not just provide a description of the results. In particular there is no need to repeat in words the results shown in figures and tables. Any speculation should be labelled as such. Explanations should be supported with references where appropriate. The manuscript should integrate discussion of errors and uncertainties at appropriate places.

2.6 Figures and Tables

Figures and tables should be self-explanatory and the effective use of notes and legends is essential to a clear manuscript. Reviewers should comment on any deficiencies with the clarity of figures and tables. If certain figures or tables are unnecessary or document minor points that could be discussed briefly in the text, the reviewers should identify this opportunity to save journal pages.

2.7 Conclusions

The conclusions should not include a summary of the manuscript. The abstract should serve as the summary. In cases where the discussion re-examines the broad view of the subject in light of the new insight provided by the work, there might not be a need for conclusions.

3. What to look for in general when reviewing

3.1 Merit

The reviewer is asked to make a judgement on the merit of a manuscript. Each manuscript must make a contribution to knowledge. The contribution could be a new scientific principle, a novel application of a scientific principle, new data that have not been previously measured and could be applied to improve waste management. In addition, it could be a well documented case study in which data and an analysis of an actual

system are used to help others gain insight into their own systems. Finally, it could be a review paper with a comprehensive analysis of published information on a particular topic. In all cases, the manuscript must provide something novel and the manuscript must convince the reviewers that it merits publication. Reviewers need to give their assessment of merit and justify their reasoning.

3.2 Adequacy of methods and calculations

The reviewer is asked to evaluate the technical approach and analyses. The reviewer should be comfortable that equations and calculations are correct and properly documented, but is not expected to make a detailed check of all calculations. The reviewer has the greatest potential of finding technical errors. In some cases, the reviewer might question how a certain result was arrived at, and ask the authors for more details, so the reviewer or editor can verify accuracy. The reviewer is asked to assess the methods used and how the choice of methods might impact the results and the conclusions reached. The reviewer might identify that certain qualifiers are needed in the manuscript because of the assumptions and choices made.

3.3 Adequacy of support for conclusions

The reviewer is asked to assess whether or not the conclusions can be supported by the data/analysis provided or whether qualifiers are needed. If the authors have made some implicit assumptions, the reviewer should identify these and suggest that they be made explicit or analysed. If the authors overstretch and exaggerate the significance of their conclusions, reviewers need to explain why they believe this to be the case. It can be helpful for reviewers to suggest certain qualifying statements that are needed in the manuscript to make the conclusions more supportable.

3.4 Manuscript length

Journal space is a precious resource. The reviewer is asked to assess where additional detail is needed or where the manuscript could be shortened without affecting its clarity or merit. In some cases, information from previous work can be incorporated by reference to avoid detailed discussion of previous work. If certain parts of the manuscript do not make an important contribution, the reviewer should suggest the sections that should be deleted. Even if the reviewer is recommending rejection of the manuscript, it is helpful for an editor to know from that reviewer which sections of a manuscript are of greater or lesser merit in case the decision (based on other reviewers) is not to reject or request a revised manuscript.

3.5 Proper use of references

The manuscript should present a complete body of work that is fully supported and can be reproduced or verified by others. References serve to shorten the manuscript by providing details (in the form of methods, results, or reasoning) that have already been provided by others. There is no need for references to work that is not germane or supports background knowledge. On the other hand, authors will sometimes omit references where there is a need for justification of a particular statement. Reviewers are not expected to add or delete references, but they should

make an assessment of whether or not excessive references are provided or the places where additional references are needed. Specific suggestions for additional references can be helpful; however, reviewers are cautioned against suggestions for references that are not widely accessible.

3.6 Potential improvements in style

While the reviewer is not expected to rewrite the manuscript, the reviewer is expected to comment on how easy it is to understand a manuscript, and provide examples that illustrate problems found. It is valuable for the reviewer to comment on how the style could be improved to allow for greater understanding of the subject by readers. Reviewers are not required to provide detailed comments on style, but rather should comment in a more general sense on organisation, use of equations and figures/tables, and grammar. Although reviewers are not expected to edit the manuscript, editorial changes can be helpful to the authors and the editors. If the use of English is deficient to the point where the reviewer cannot understand clearly the intent of the authors, this should be stated in the review.

4. The reviewer's recommendation and what it means

Reviewers will need to provide an overall recommendation along with the review of the manuscript. Reviewers should carefully consider their personal standard of merit. The collective judgement of the reviewers defines the quality of the journal, and the peer review process relies on the honest assessment of the reviewers. *Waste Management* uses four types of recommendations. It is important that reviewers know what each one of these types mean before making a decision.

4.1 Accept

This recommendation means that the manuscript is publishable in its current form. If the only issues a reviewer has with a manuscript are very minor style issues or issues that need to be decided by the editorial office in any case (eg, minor grammatical corrections), then 'accept' is the correct recommendation.

4.2 Minor revisions

This recommendation means that the reviewer believes that the manuscript has merit in being published, but that minor issues need to be resolved first. 'Minor revisions' is a more appropriate recommendation than significant revisions when the manuscript has deficiencies that can be readily corrected and improved without significant new effort or re-organisation. Revisions focused on style, figures, tables, materials and methods, and references usually fall into this category. This recommendation suggests that a revised manuscript with a clear and thorough explanation of revisions can be managed with a re-review at the Associate Editor level only.

4.3 Significant revisions

This recommendation should be selected when the reviewer believes the issues highlighted in the review relate to the conclusions of the research

and significant inadequacies of the methods or the analysis of results. This recommendation is chosen instead of 'reject' when the manuscript is of 'merit' (see 3.2 above), but requires significant additional support. This recommendation suggests that a revised manuscript may need re-review.

4.4 Reject

This recommendation should be selected when, in the reviewer's assessment, the manuscript (even after significant revisions) does not merit publication. In a sense, any manuscript can be modified enough to merit publication; a recommendation of 'reject' indicates that it would take major modifications to allow for a publishable manuscript on the topic, and that (even after these modifications) the manuscript would be so altered that a new review would be necessary.

5. The types of papers published and how that can affect reviews

All manuscripts are classified into one of three types given below. The focus of the review can vary depending on the type of manuscript. In addition, some reviewers might believe that a manuscript would be better re-oriented to fit a different type than its original classification. In order to consider these possibilities, it is important for the reviewer to understand the three categories.

5.1 Research Article

Most manuscripts are research articles. These are likely very similar in form to research articles in other research journals. A typical length of a research article in *Waste Management* would be not more than 20 pages of double-spaced text. For a research article to have merit it must describe a new principle, describe a novel application of an existing principle, or present and analyse new data. In some cases, a manuscript can have merit for publication as a research article only after editing out sections of the manuscript, resulting in one much shorter than nine printed pages.

5.2 Country Report

A Country Report is a case study analysis of a waste management situation or problem in a particular area. A Country Report merits publishing when it provides accurate data and analysis of a specific waste problem and when it provides insight that could be useful to others. A publishable Country Report will need to be of long-term value to waste practitioners. If a reviewer is unclear about what might be considered of long-term value to waste practitioners, he or she should consult the Waste Management website and look at the abstracts of recently published Country Reports. Country Reports that are more suited to publication in a magazine or that are not of value to an international audience will not be published. Reviewers who receive 'Country Reports' to review should have these guidelines in mind when writing their review and make recommendations that improve the manuscript as a Country Report. If reviewers believe that a Research Article would be better suited as a Country Report or vice versa, the explanation should be justified and provided along with other comments.

5.3 Review Article

A review article is a thorough review and critical analysis of the literature on a specific topic. The quality of the references and their assessment is critical for this type of publication. New tables and figures that present published data in new ways are expected. A review article demonstrates merit through new insights developed from the analysis of the literature.

6. What to put in the review to the author

The review submitted to the author can be either in the form of one document, or a summary document and an attachment with comments directly on the manuscript. In either case, the review should be seen as supporting the reviewer's recommendation and as a means to help the author improve the manuscript. All reviews to the author are anonymous and the authors will not know the names of the reviewers. It should also be clear and indicate the major and minor issues in the review.

7. What to put in the confidential comments to the editor

The reviewer may feel uncomfortable mentioning certain issues to the authors, and the reviewer could instead place these comments in the space provided for confidential comments to the editor. Examples of items that a reviewer might put in either the review to the author or the comments to the editor are: (1) advice on the type of publication (e.g., should the manuscript be changed from a research article into a Country Report, should the manuscript be divided into two separate articles), (2) suggestions of other journals that the authors should try if the reviewer recommends rejection, (3) willingness to re-review the manuscript after changes, if the reviewer has recommended significant revisions.

The reviewer should comment here when the reviewer knows of potential ethical or legal issues associated with the manuscript (e.g., the manuscript has already been published elsewhere, the manuscript does not mention that a patent is pending on the same topic)

8. When to decline to review

A reviewer should decline to review a manuscript when the reviewer does not have the time. A good review takes time; however, the journal does not expect reviewers to produce more than a two page report when reviewing a manuscript. If a potential reviewer is not able to provide this professional service in a timely manner, the potential reviewer should quickly decline to review the manuscript.

A reviewer should decline to review a manuscript when the reviewer does not feel competent to review it. Reviewers contacted should not be too quick to choose this reason to decline to review. A reviewer is not expected to know as much as the authors on the topic. It is important that the reviewer have enough familiarity with the current research related to the topic to be able to assess the adequacy of the methods and of the support for the conclusions. A reviewer may have to defend his/her opinions to the editor and should feel comfortable in doing so.

9. Ethical obligations of reviewers

A reviewer should be sensitive to the appearance of a conflict of interest when the manuscript under review is closely related to the reviewer's work in progress or published. If in doubt, the reviewer should seek the advice of the journal's Editorial office. On occasion, it is appropriate to return the manuscript promptly without review while advising the editor of the potential for the appearance of bias or conflict of interest.

A reviewer should not review a manuscript authored or co-authored by a person with whom the reviewer has a close personal (e.g., a family relative) or professional (e.g., working together currently on a different topic) connection. The reviewer should notify the editorial office in case of doubt over if the connection to the author is too close or not.

A reviewer should treat a manuscript sent for review as a confidential document. It should neither be shown to nor discussed with others except, in special cases, to persons from whom specific advice is sought; in that case, the identities of those consulted should be disclosed to the editor.

A reviewer should call to the editor's attention any substantial similarity between the manuscript and any published paper, report, or any manuscript submitted concurrently to another journal.

References

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- Seagren, J., 2003, Authors, peer review, and the pursuit of quality, *J. Env. Eng.*, v. 129, p. 1073-5.
- ACS Ethical Guidelines, 2000, *Environ. Sci. and Tech.*, v. 34, p. 51A-53A.