

# Instructions to authors for *Environmental Science & Technology*

Updated October 2015

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*Environmental Science & Technology (ES&T)* is an authoritative source of information for professionals in a wide range of environmental disciplines. The journal combines magazine and research sections and is published both online and in print. The electronic version of *ES&T* includes all of the material found in the print version plus Supporting Information.

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## **Ethics**

Scientific ethics are taken very seriously by *ES&T* and ACS. All authors should read and adhere to ACS's Ethical Guidelines to Publication of Chemical Research, which are available on the web at <http://pubs.acs.org/page/policy/ethics/index.html>.

For all manuscripts, the contact author is required to read, sign, and submit an *ES&T*-specific Ethics form on behalf of all authors. The signed Ethics form can be scanned and emailed or faxed to the relevant editorial office.

## **Retractions**

Articles may be retracted for scientific or ethical reasons. Articles that contain seriously flawed or erroneous data such that their findings and conclusions cannot be relied upon may be retracted in order to correct the scientific record. Retractions may be requested by the article author(s) or by the journal Editor(s), but are ultimately published at the discretion of the Editor. When an article is retracted, a notice of Retraction will be published containing information about the original article title, author list, and the reason for the Retraction. Retracted articles will be accompanied by the related Retraction notice and will be marked as "Retracted". The originally published article will remain on the web except in extraordinary circumstances (e.g. where deemed legally necessary, or if the availability of the published content poses public health risks). The American Chemical Society follows guidance from the Committee on Publication Ethics (COPE) when considering retractions; for more information see: <http://publicationethics.org/>."

## **Conflict of Interest Disclosure**

A statement describing any financial conflicts of interest or lack thereof is published with each manuscript. During the submission process, the corresponding author must provide this statement on behalf of all authors of the manuscript. The statement should describe all potential sources of bias, including affiliations, funding sources, and financial or management relationships, that may constitute conflicts of interest (please see the ACS Ethical Guidelines). The statement will be published in the final article. If no conflict of interest is declared, the following statement will be published in the article: "The authors declare no competing financial interest."

## **Funding Sources**

When submitting a manuscript to the Journal via ACS Paragon Plus, the submitting author is asked to identify the funding sources for the work presented in the manuscript.

Identifying funding sources is optional during submission of an original manuscript. Funding source information is required when a revised manuscript is submitted.

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Authors and reviewers can add their ORCID iD to, or register for an ORCID iD from, their account in ACS Paragon Plus. Submitting authors have the option to provide existing ORCID iDs for coauthors during submission, but they cannot create new ORCID iDs for coauthors.

## **Author List**

During manuscript submission, the submitting author must provide contact information (full name, email address (institutional email address preferred), institutional affiliation and mailing address) for all of the co-authors. Because all of the author names are automatically imported into the electronic Journal Publishing Agreement, the names must be entered into ACS Paragon Plus in the same sequence as they appear on the first page of the manuscript. The author who submits the manuscript for publication accepts the responsibility of notifying all co-authors that the manuscript is being submitted. Deletion of an author after the manuscript has been submitted requires a confirming email to the Editor-in-Chief from the author whose name is being deleted. For more information on ethical responsibilities of authors, see the Ethical Guidelines to Publication of Chemical Research.

## **Prior publication**

Contributions submitted to *ES&T* must be original works of the author(s) that have not been previously published or concurrently submitted to another publication. Prior publication or parallel submission of the same paper to another journal eliminates the paper from consideration by *ES&T*. You must attest in your cover letter that the manuscript has not been previously published, in whole or in part, and that it is not under consideration by any other journal. Additionally, you must affirm that all authors are aware of, and accept responsibility for, the manuscript.

Duplication of already published data eliminates the paper from consideration unless the paper contains significant further analysis and interpretation. If you have any questions or concerns, please contact the Editor-in-Chief's office ([est@uiowa.edu](mailto:est@uiowa.edu)). If a directly related paper is in press or has been submitted to another journal, upload a copy upon submission to Paragon Plus (designated "Supporting Information for Review Only"). Indicate the status of the related paper in the cover letter.

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**Websites.** *ES&T* will consider for publication a paper or presentation that has been posted on a website available to the general public, provided that the site is the personal site of the author and is not connected to a commercial site. Authors must notify us at the time of submission if the material has been available on the web or equivalent electronic media and must remove the material from the site at the time of submission. When the paper is published, authors may provide an electronic link from that site to the *ES&T* homepage. If the website is a commercial site not owned by ACS, the authors are advised that consideration of the paper may be endangered. If a government or funding organization requires posting of a related report please contact the Editor-in-Chief's office and provide specific details.

### **Contact Information**

For queries and information prior to submission, please contact the editorial office:

Phone: (510) 643-0256; fax (510) 642-7483; e-mail [eic@est.acs.org](mailto:eic@est.acs.org).

### **Summary of Manuscript Types and General Formatting**

*ES&T* publishes several different types of manuscripts; these guidelines contain detailed information as to scope, specific formatting styles, length limits and other requirements for the various manuscript types. There is a summary and [submission checklist at the end of this document](#). For additional advice, please refer to *The ACS Style Guide* which can be found in ACS ChemWorx by registering for a free account. General instructions as to all aspects of preparing and submitting a manuscript for ACS journals may be found at <http://pubs.acs.org/page/4authors/submission/index.html>.

**Word Limits.** Unless explicitly stated otherwise (Viewpoints and Letters to the Editor), word counts INCLUDE the text count plus a separate count for the tables, figures, and schemes.

Count all text except the title page, references, and figure and table captions (captions are considered part of the figure or table). This includes the Abstract, the body of the manuscript, the Acknowledgments, and the description of Supporting Information. (Do not count the Supporting Information itself.)

To the text count add the count for figures, schemes and tables. Small figures, schemes, and tables usually count as 300 word equivalents; large figures, schemes, and tables count as 600 or more word equivalents. Abstract art (i.e., TOC art) is not included in the word count. For example, a research article with 6000 words, excluding references, and containing 4 small figures is considered a 7200 word article.

Manuscripts that exceed the word limit will be unsubmitted (returned to draft) with a request to shorten or immediately rejected. We note that manuscript text can often be shortened by 10% with no loss of context. Place tables and figures that augment the article but are otherwise unessential to the major themes in Supporting Information (which is freely accessible on the web). Authors who believe that exceeding the word limit is essential must include a compelling argument in their cover letter. Please note that this does not guarantee a decision in the author's favor – ultimately, the decision lies with the Editor.

**TOC/Abstract Art.** This art or photograph appears next to the abstract in the online version of the paper, in the electronic TOC for the given issue, and in the print issue.

#### *Creating a Representative Graphic*

The graphic submitted for use on the table of contents is used for multiple purposes, including the document abstract and other situations where a representative graphic is required. For the greatest impact, authors should create an image that represents the work while adhering to size constraints. Keeping in mind that various devices may be involved, some of the best images are simple, relatively free of text and technical characters, and make use of color for visual impact. It is best to stay away from complex structure schemes and small-sized details.

TOC/Abstract graphic image are the same image and sized the same.

TOC/ABS Sizes	
Width	Depth
240 points	135 points
3.33 inches	1.875 inches
8.47 cm	4.76 cm

**Submission of Table of Contents (TOC) Art is required for Research Articles, Policy Analysis articles, Critical Reviews, and Features.** TOC/Abstract art should be submitted with the original paper and will go through peer review. *TOC/Abstract Art will*

*not be considered in the calculation of the word equivalents.* Do not submit TOC/Abstract Art for Viewpoints, Correspondence, Letters to the Editor, or Corrections. TOC/Abstract art should be submitted in the same manner as other graphics: within the manuscript file unambiguously identified as TOC/Abstract art, or as a clearly labeled graphic under the file designation “graphic for manuscript.” Do not submit TOC/Abstract art in your cover letter.

Good TOC/Abstract art should illustrate the article, akin to a “visual abstract.” It should capture the readers’ attention and, in conjunction with the manuscript title, give readers a visual impression of the essence of the paper without providing specific results. Imagery can range from a single in-context photograph of a field site to that of a “cartoon” schematic explaining the central method or findings of the paper.

### **Specific Advice Regarding TOC/Abstract Art**

- a. Authors must clearly designate their TOC Art figure in the original manuscript submission. Failure to do so may delay the production schedule for accepted manuscripts.
- b. **TOC/Abstract Art cannot have a caption** (legend) minimalist text may be used as labels in the imagery
- c. Figures and other material created by the author(s) may be used. A single impactful image makes for the best cover art. On occasion, simple collages containing only material created by the author(s) are suitable. Complex, “busy” graphics make poor TOC art.
- d. Only images created by the author(s) will be accepted as TOC/Abstract art (copyright for the TOC/Abstract art is transferred to ACS via the ACS Journal Publishing Agreement). Material created by U.S. Government employees may be used because that material is in the public domain. Material found on Web sites cannot be used as TOC/Abstract art even if the Web site (such as Wikipedia) states that the material is in the public domain.
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  - ii. Do not use imagery that requires third party permissions, such as images published in non-ACS journals or images from ACS journals for which credit is given to another source.
  - iii. Photographs taken by the author(s) may be used; however, if people appear in the photos, model releases must be signed by the individuals in the photos. The parents/guardians of individuals under 18 years of age must sign model releases because minors cannot legally sign their own model releases.
- e. You may not use photos or images under a Creative Commons license or purchased from a stock photo site.

## Word processing details

Manuscripts prepared with the software packages listed below will be used for production if these guidelines are followed. Documents prepared with other word-processing packages will be handled on an experimental basis with the understanding that the use of these files in production cannot be guaranteed. Failure to adhere to the following instructions may prevent the use of all or part of the material supplied. Details concerning the layout of the manuscript may be found in these Instructions under Elements of a Manuscript.

**Currently acceptable word-processing packages.** Macintosh: WordPerfect 3.5, Microsoft Word '98 and higher. IBM and compatibles: WordPerfect up to version 9.0, and Microsoft Word '97 and higher (refer to <http://pubs.acs.org/page/4authors/submission/index.html>).

**Special instructions for specific word processors.** Whenever possible, Microsoft Word Greek letters and special symbols should be created by applying Symbol font to ASCII characters typed into the file. If characters are selected from the symbol palette and pasted in, they may be lost when the file is converted. The “ALLCAPS” option in the character format box should not be used. The SEO field should not be used. For WordPerfect, use the normal SUP and SUB codes, not AdvUp and AdvDn, to create superscript and subscript characters.

To enable proper conversion of web manuscripts to PDF files, please use only fonts supported by Adobe. The 14 standard fonts (as determined by Adobe, Inc.) are Courier, Courier-Bold, Courier-Bold Oblique, Courier-Oblique, Helvetica, Helvetica-Bold, Helvetica-Bold Oblique, Helvetica-Oblique, Symbol, Times-Bold, Times-Bold-Italic, Times-Italic, Times-Roman, and ZapfDingbats.

## Preparing and Submitting Manuscripts Using TeX/LaTeX

Authors who submit manuscripts composed in TeX/LaTeX should submit a PDF file of the manuscript along with the native TeX/LaTeX manuscript package as a ZIP Archive. Use of the freely available **achemso style package** to help prepare your submission is strongly encouraged. The achemso package provides the official macros (achemso.cls) and BibTeX styles (achemso.bst and biochem.bst) for submission to ACS journals. The package and instructions are available from [CTAN, the Comprehensive TeX Archive Network](#). For complete information on submitting TeX/LaTeX files, see [Preparing and Submitting Manuscripts Using TeX/LaTeX](#).

## Manuscript preparation and submission

Authors receive an automatic email acknowledgment shortly after submission.

**Preparation.** Because *ES&T* enforces length limits, please plan your paper before you begin to write. Think about what needs to be in the manuscript and what material can be placed in Supporting Information. For all submissions, check the final copy carefully for consistent notation and correct spelling.

**Assistance for non-native English speakers/writers.** All submissions to *ES&T* must be

in English. Authors may want professional assistance with improving the English, figures or formatting in their manuscript before submission. ACS ChemWorx Authoring Services can save you time and improve the communication of research in your manuscript. You can learn more about the services offered at <http://es.acschemworx.acs.org>.

**Contact/Corresponding and Post Publication Corresponding Authors.** At submission one author must be designated as the contact/corresponding author in the Paragon Plus system. During the review process and prior to publication, all email notifications will be sent to the contact author. Only one author may be designated as the contact author; this author receives and may sign the eJPA.

After publication, the author marked on the manuscript with an asterisk (\*) is designated as the Corresponding Author, the person whom readers contact after publication of the paper. The contact and Corresponding Author may be, but are not required to be, the same person. We require complete, current contact information for this author on the title page. Please note that you may mark two designated Corresponding Authors on the manuscript.

**Submission.** All submissions must be uploaded to Paragon Plus. Revised manuscripts must also be submitted via Paragon Plus. Complete instructions and an overview of the online submission process are available through the secure ACS Paragon Plus website at <https://acs.manuscriptcentral.com/acs>. You can link to this site from the Submission and Review portion of the *ES&T* website at <http://pubs.acs.org/page/esthag/submission/index.html>.

An author must register on Paragon Plus before submitting a manuscript. This one-time registration will suffice for future web manuscript submissions to all ACS journals – provided you use the same email address. Assistance can be acquired from the ACS Publications Support Center through <http://pubshelp.acs.org/ics/support/default.asp?deptID=9131>, via email at [support@services.acs.org](mailto:support@services.acs.org), or by phone at 800-227-9919 (U.S. & Canada) or +1-202-872-4357 (outside U.S. & Canada).

**Journal Publishing Agreement.** A properly completed and signed Journal Publishing Agreement must be submitted for each manuscript. ACS Paragon Plus provides an electronic version of the Agreement that will be available on the **My Authoring Activity** tab of the contact author's home page once the manuscript has been assigned to an Editor. A PDF version of the Agreement is also available, but **authors are strongly encouraged to use the electronic Journal Publishing Agreement**. If the PDF version is used, **all pages of the signed PDF Agreement must be submitted**. If the contact author cannot or should not complete either the electronic or PDF version for any reason, another author should complete and sign the PDF version of the form. Forms and complete instructions are available at <http://pubs.acs.org/page/copyright/journals/index.html>.

**Cover letter.** A cover letter must accompany every submission and include a **rationale** for consideration by *ES&T* (see below). The cover letter should list the authors and their affiliations, give the manuscript title, and provide contact information for all authors:



please provide a mailing address, email address, and phone and fax numbers where available.

**Rationale.** *We require that you include a rationale for ES&T publication in the cover letter.* Please read the “[Manuscript format and expectations](#)” section of these instructions (below) and address the issues discussed therein. You must tell us why you think your manuscript is appropriate for publication in *ES&T*, particularly with respect to its originality, scientific merit, and environmental importance. *Features that are unsolicited should be preceded by a query email to the editorial office: [eic@est.acs.org](mailto:eic@est.acs.org).*

**TOC Graphic.** In your cover letter provide the **exact** source of all photos and images in the TOC Art.

**Reviewer list.** Authors are required to provide names and contact information (affiliation and email address) of at least four experts in the field as possible reviewers for the manuscript (lesser known experts are the most helpful suggestions). You may also include the names of people you do not want to review the paper. Do not suggest as potential reviewers anyone who may have a conflict of interest in reviewing your manuscript, such as former advisers, students, recent collaborators, or persons based at your institution.

**Editor Preference.** Although it is not required, you may specify one or more preferred editors during the Paragon Plus submission process. Do not suggest as potential editors anyone who may have a conflict of interest in handling your manuscript, such as former advisers, students, current or recent collaborators, an editor based at your institution, or at the institution of any of your coauthors. There is no guarantee that your manuscript will be assigned to your preferred editor.

If there is an ES&T editor who should not handle your manuscript please explain in your cover letter. Generally, you should specify a non-preferred editor when: 1. the editor was the graduate or postdoctoral supervisor of one of the authors (or vice versa); 2. The editor is currently collaborating, or has collaborated within the last 5 years, with any of the authors; 3. the editor is a current colleague of one of the authors; 4. the editor’s own research is in direct competition with the research presented in the manuscript. After a manuscript has been assigned to an Associate Editor, all correspondence should go to that Editor. The editor’s contact information will be provided on the assignment email.

**Review process and editorial decision.** Manuscripts that are sent for outside review will be sent to two to four experts in the field for review. However, a significant fraction of manuscripts are declined after editorial review and are not sent for outside review. Common reasons include: insufficient novelty and/or originality; lack of sufficient environmental relevance; failure to place the rationale for the study or the results in the context of existing literature; data that describe a case study or offer only an incremental advance in the scientific topic; insufficient quality of the data; and problems with manuscript presentation (e.g., adherence to length limits, inadequate English, figure quality, etc.).

**Resubmission of rejected manuscript.** If your manuscript is declined (rejected), read the reviews carefully. Manuscripts are often declined because the subject matter is not appropriate for *ES&T*. In such cases you should consider another journal. **If you wish to submit a revised manuscript to *ES&T*, we require that you contact the editor who handled your submission and request his or her permission to resubmit.** If that editor is unavailable, please contact the office of the Editor-in-Chief. After you receive permission to resubmit, indicate in your cover letter that it is a revision of a previous manuscript and provide the old manuscript number. State how the manuscript has been changed compared with the original. If the manuscript was reviewed, submit a detailed list of your responses to each of the comments of the reviewers or provide convincing reasons for declining to do so. If you believe strongly that the paper was not judged fairly, make your case in your cover letter. The manuscript should be submitted on Paragon Plus, where it will receive a new manuscript number. During the submission process, mark “Yes” when asked if the manuscript has been previously submitted “in whole or in part.” Manuscripts that editors judge to be essentially resubmissions of previously submitted manuscripts that do not comply with these rules will not be considered for publication.

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## Post-acceptance process

**Patent Activities and Intellectual Property Issues.** Authors are responsible for ensuring that all patent activities and intellectual property issues are satisfactorily resolved prior to first publication (*Just Accepted*, ASAP, or in issue). Acceptance and publication will not be delayed for pending or unresolved issues of this nature.

**Contact post-acceptance.** After a manuscript has been accepted for publication, all correspondence should go to: American Chemical Society, Journal Publications, 2540 Olentangy River Rd., Box 3330, Columbus, OH 43210; phone 614-447-3665; fax 614-447-3745; [support@services.acs.org](mailto:support@services.acs.org).

**Proofs.** The contact/corresponding author of an accepted manuscript will receive e-mail notification and complete instructions when page proofs are available for review via a secure Web site. Authors will access the secure site through ACS ChemWorx and will need an ACS ID. To obtain an ACS ID or to reset your password, go to [www.acschemworx.org](http://www.acschemworx.org). The PDF proof made available for review is of publication quality so that authors may see a true representation of both the text and the graphics prior to publication. Feature, Viewpoint, and Letter to the Editor proofs may be handled through the Managing Editor.

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## Manuscript Format and Expectations

*ES&T* divides its manuscripts between two sections of the journal: research and front matter. The research section includes Research Articles, Policy Analysis, Critical Reviews, Correspondence/Rebuttal, and Additions and Corrections. Manuscripts are initially reviewed by the assigned editor and, if appropriate, by other scientists who assess the significance, originality, and validity of the work. The Editor-in-Chief and Associate Editors, listed in the masthead, are responsible for all research material published in *ES&T*.

The front matter consists of Features, Viewpoints, and Letters to the Editor, along with staff-written Comments, annual informational content, and occasional Perspectives for special issues. The Managing Editor handles all front matter.

This section of the Instructions addresses the content expected of each manuscript type. Detailed instructions as to format and style then follow, ending with a summary and checklist by manuscript type. Authors are reminded to heed the word limits noted above.

**Research Articles.** These manuscripts, with a 7000 word-equivalent limit, are articles concerning the scientific understanding of natural environments and engineered environmental systems and technologies. *ES&T* focuses particularly on the chemistry of processes in the environment, including those affected by human activities. This includes biological and physical phenomena as well as mathematical and computational methods that are directly relevant to the understanding and management of the environment. *ES&T* also publishes articles that describe significant scientific advances or novel technologies for remediation, control, and pollution prevention. Research articles are assigned to one of the following sections: characterization of natural and affected environments, environmental processes, environmental modeling, environmental measurements methods, remediation and control technologies, sustainability engineering and green chemistry, energy and the environment, and ecotoxicology and human environmental health.

*ES&T* strives to publish only original work of broad scientific significance and environmental importance. Originality is defined as new experimental data, new interpretations of existing data, or new theoretical analyses of environmental phenomena. Significance will be judged with respect to the breadth of impact of the reported findings. *Manuscripts that report data of a routine nature will not be accepted.* For example, manuscripts that report only values of molecular parameters without employing them in or demonstrating their relevance to a model will be declined. The scope of the reported data in ambient monitoring studies must yield conclusions applicable to more than the particular site or time when the data were taken. Studies that only describe the outcomes of standard laboratory or field tests are not appropriate for publication in *ES&T*.

Articles published in *ES&T* must be relevant to the study of natural systems and/or engineered environmental systems and technologies. You must make this connection apparent – manuscripts that fail to demonstrate their environmental relevance will be rejected, usually without external review. For example, it is not sufficient that the paper describe work on a compound that may occur in the environment if the study does not provide information that is clearly related to that compound's fate, transport,

transformation or effects in the environment. Manuscripts that emphasize chemical engineering, new catalysts synthesis or analytical chemistry must provide a concise argument that the research represents an advance that is of primary importance to the environmental field. Manuscripts that do not include results with real or simulated environmental samples will be declined. Authors should show that a new analytical method has been thoroughly developed and its quality ensured.

Research articles that describe advances in environmental technologies may include works on remediation and control processes and on new processes for sustainability. These manuscripts should include evaluations performed under environmentally-realistic conditions. Articles that describe laboratory-scale studies should make meaningful and unbiased comparisons to existing approaches but should not make claims about the economics or relative advantages of the technology without pilot- or full-scale validation studies or properly validated models. Articles describing advances in treatment technologies for remediation of contaminated environments or control of emissions should go beyond kinetics and treatability studies by exploring the mechanisms of the technology, or develop process models to describe the technique.

Articles in the area of ecotoxicology and human environmental health should provide novel information on effects of chemicals or lead to new insights into the mechanisms and processes behind effects of chemicals and other stressors. Specific attention should be given to exposure characterization in effect studies: effect concentrations should be based on measured exposure concentrations whenever possible. The primary emphasis and relevance of the study must be environmental. Articles with little direct environmental relevance should be submitted elsewhere. Most studies of human toxicology, medicine, epidemiology, and studies of human or animal physiology and biochemistry will be declined without external review.

**Policy Analysis.** These manuscripts present original research in environmental management and policy, especially where science and engineering interface with public policy. Topics include risk assessment, evaluation and design of environmental regulations, pollution prevention and life-cycle analysis, and international environmental trends. These contributions are peer-reviewed. The format of these manuscripts follows the general style of research articles, with an abstract, introduction, body, discussion, and references. However, unique section headings may be used as needed. Please limit to 7000 word-equivalents.

**Criteria for ES&T Policy Analysis** Policy Analysis articles can be characterized by the three elements below. An ideal Policy Analysis paper will include all three of these elements, integrated in a rigorous and innovative way to provide valuable policy insight for understanding and managing human-environmental systems. However, if done well, two out of three are acceptable.

1. **Explicit Policy Relevance:** providing decision support or related valuable information for near- or medium-term decisions, faced by regulatory agencies, intergovernmental programs, industry, consumers, and/or research funders
2. **Fundamental Science and/or Engineering Content:** the extent to which scientific and engineering methods are applied and extended to derive new knowledge

3. Fundamental Social Science Content: the extent to which social science methods from law, political science, economics, psychology, and related human behavioral studies are applied and extended to derive new knowledge

**Critical Reviews.** Critical Reviews are thoroughly documented assessments of selected areas of the environmental science and technology research literature. These are limited to 10,000 word-equivalents. Critical Reviews generally include more than 100 references. Critical Reviews should increase readers' knowledge through discriminating comparisons and insightful organization of the material. Criteria for acceptability include current importance of the field under review, thoroughness of the literature coverage, clarity, and clear identification of research needs.

**Correspondence.** Readers are encouraged to provide scholarly comment on articles appearing in the research section. Both comments and responses are termed "Correspondence"; both are limited to 1000 word equivalents. Supporting Information is not allowed. Comments must raise scientific or technical questions about an article; correspondence that is mainly opinion will not be accepted. Correspondence should be submitted within 6 months of the date of publication of the original article. The author(s) of the original article will be allowed to respond. Correspondence on previously published correspondence will not be considered. Personal invective will not be tolerated. Correspondence is peer-reviewed at the option of the Editor. Financial interests and funding sources that might detract from an author's objectivity should be disclosed in the cover letter. The editors will determine whether the material disclosed to them should be published as part of the correspondence.

**Additions and Corrections (Errata).** Additions and Corrections may be used to address important issues or correct errors and omissions of consequence that arise after publication of an article. Additions and Corrections may be requested by the author(s) or initiated by the Editor after discussions with the corresponding author. Readers who detect errors of consequence in the work of others should contact the corresponding author of that work. All Additions and Corrections are subject to approval by the Editor, and minor corrections and additions will not be published. Additions and Corrections from authors should be submitted via the ACS Paragon Plus environment by the corresponding author for publication in the "Addition/Correction" section of the Journal. The corresponding author should obtain approval from all of the article coauthors prior to submitting an Addition and Correction, or provide evidence that such approval has been solicited. The Addition and Correction should include the original article title and author list, citation including DOI, and details of the correction. For proper formatting, see examples in a current issue of the Journal."

### **Front Matter**

**Features.** These 5000 word equivalent maximum manuscripts provide a balanced examination of significant developments and issues affecting the environmental community. **Features cannot have Supporting Information.** Probing timely topics from multiple perspectives—scientific, regulatory, technical—provides readers with an authoritative and up-to-date understanding of the subject. Features are written in a magazine or journalistic style rather than as a scientific article. **Authors can assume that the average news and features reader has had 1 year of university-level chemistry, physics, and environmental science/engineering. Authors must include a 3-5**

**sentence synopsis titled “Abstract,” written at a level comprehensible to the scientifically literate general public.**

Structure your Feature like a good lecture: begin with first principles then develop the main theme. The introductory paragraph should speak to the content of the article, but not in the manner of a research abstract. We suggest you read previous Features to get a feel for this manuscript type: <http://pubs.acs.org/toc/esthag/current>. Note that review of Features differs somewhat from the review of research manuscripts. Note also that the magazine style of a Feature permits more liberal citation to stable websites, though authors must ensure that the content accuracy of their Feature is also supported by relevant citable literature. **If upon drafting a Feature, authors find it difficult to exclude research data, please consider submitting a Research Article or Policy Analysis instead. If the topic cannot be easily confined to 5000 words and/or there is an extensive list of references, a Critical Review would be a better option. Short manuscripts with a commentary style should be revised into a Viewpoint.**

**Viewpoints.** These short “op-ed” style manuscripts provide authors with a venue to comment on an issue of pressing importance to the *ES&T* readership community. **Viewpoints are not peer-reviewed but are subject to editorial approval. ES&T welcomes viewpoints of a scientific nature, no viewpoints of an exclusively political nature will be considered for publication.** Successful Viewpoints clearly articulate a point of view to the reader and avoid summarizing a particular research area or study. A limit of 1000 words + author affiliations + 5 references + 1 single frame figure with 50 word caption OR a 350 word Table will be strictly enforced – submissions exceeding this maximum will not be considered.

**Letters to the Editor.** Readers are encouraged to comment on articles published in the front matter: Features, Viewpoints, Comments, and Perspectives. Contributions are limited to 500 words + 250 words of references + author affiliations. They should be uploaded within 2 months of the print publication date of the original material. The author(s) of the original material will be allowed to reply to letters, provided they do so rapidly. If you wish to comment on research content, please submit a Correspondence.

## **Elements of a manuscript**

The remarks that follow are most relevant to research articles, but should be read by all authors. The [submission checklists by manuscript type that follow](#) should be followed by all authors to ensure that their manuscript meets the expectations in form.

**Line Numbers.** Submit all manuscripts with line numbers. The manuscript abstract and text must appear in a single, double-spaced column; lines in the abstract and text must be numbered consecutively from the beginning to the end of the manuscript in a separate column at the left.

**Title.** Use specific and informative titles. Titles should briefly convey the subject of the paper: a 20-word title is too long. If trade names are used, give generic names in parentheses. Key words in titles assist in effective literature retrieval.

**Authorship.** List the first name, middle initial(s), and last name of each author. Omit professional and official titles. An author’s affiliation should be based on where they

were when the work was performed. When the present address of an author is different, include the new information in a footnote. In a paper with more than one author, the name of the corresponding author, to whom post-publication inquiries should be addressed, carries an asterisk (\*). Provide an email address for the corresponding author; include telephone and fax numbers, if possible.

**Abstract.** A 150-200-word abstract must accompany Research Article, Policy Analysis, or Critical Review manuscripts. Describe the purpose, methods or procedures, significant new results, and conclusions. Do not break the abstract into sections. Define any abbreviations used in the abstract. Write for literature searchers as well as journal readers. Include major quantitative data if they can be stated briefly, but do not include background material. Do not include reference numbers in the abstract. For Features, include a 3-5 sentence synopsis titled “Abstract”, written at a level comprehensible to the scientifically literate general public.

**TOC/Abstract Art.** [As noted above](#), TOC/Abstract art appears next to the abstract and is mandatory for Articles, Policy Analyses, Critical Reviews, and Features. TOC/Abstract Art presents a “visual abstract” of the research and must accompany the manuscript at submission. The graphic can be illustrative or photographic.

**Text.** Consult a current issue for general style. Assume your readers to be professionals who are not necessarily expert in your particular field; spell out all acronyms on first use, even if this was done in the abstract. *ES&T* does not allow footnotes, with the exception of an author information footnote on the title page.

When you prepare a manuscript, use the document mode or its equivalent in the word-processing program; that is, do not save files in “Text Only” (ASCII) mode. Do not include any page-layout instructions such as placement information for graphics in the file. Use hard returns only to end headings and paragraphs, not to break lines of text. Do not insert spaces before punctuation. References must conform to the format printed in the journal and must include titles. Ensure that all characters are correctly represented throughout the manuscript: for example, 1 (one) and l (ell), 0 (zero) and O (oh), x (ex) and × (multiplication sign). Please ensure that “Track Changes” or other editing content is disabled upon submission.

*Write concisely.* Heed the word limits; a request to exceed them will result in very critical editorial review. Do not repeat information, graphics, or tables that have appeared elsewhere. Use illustrative data rather than complete data where appropriate. Shorten manuscript text by designating appropriate material as Supporting Information (see below).

Divide the article into sections, three are often sufficient: Introduction, Experimental, and Results and Discussion (see below). Do not use footnotes; include the information in the text. Number all pages and lines of the manuscript.

**Introduction.** Clearly state the purpose and significance of the research and put it into the context of earlier work in the area. Do not attempt a complete survey of the literature. If a recent article has summarized work on the subject, cite that article only, and not the sources it cites.



**Experimental (Materials and Methods).** In this section, describe pertinent and critical factors involved in the experimental work but avoid excessive description. In many cases, details not essential for understanding the paper can be placed in Supporting Information. Do not submit drawings of standard apparatus that can be succinctly described in the text. List and describe preparation of special reagents only. Omit details of procedures that are common knowledge to those in the field or that you have published previously. A brief mention of published procedures may be included; leave details to the literature cited.

**Results and discussion.** Here you can discuss your findings, postulate explanations for data, elucidate models, and compare your results with those of others. Be complete but concise. Avoid irrelevant comparisons or contrasts, speculations unsupported by the new information presented in the paper, and verbose discussion. Results and discussion may be combined or separated.

**Do not include a Conclusions or Summary section in research Articles.** Include major conclusions in the body of the Results and Discussion sections.

**Tables.** Tables should be furnished with appropriate titles of one phrase or sentence; details or definitions should be placed at the bottom. Tables should be numbered consecutively with Arabic numbers (i.e., 1, 2, . . .). Double-space them with wide margins, and prepare tables in a consistent format. Tables may be created using a word processor's text mode or table format feature. The latter is preferred. Ensure that each data entry is in its own table cell. If the text mode is used, separate columns with a single tab and use a hard return at the end of each row.

**Graphics and web-enhanced objects.** To facilitate the publication process, please submit manuscript graphics using the following guidelines:

1. The preferred submission procedure is to embed graphic files in a Word document. It may help to print the manuscript on a laser printer to ensure all artwork is clear and legible.
2. Additional acceptable file formats are: TIFF, PDF, EPS (vector artwork) or CDX (ChemDraw file). If submitting individual graphic files in addition to them being embedded in a Word document, ensure the files are named based on graphic function (i.e. Scheme 1, Figure 2, Chart 3), not the scientific name. Labeling of all figure parts should be present and the parts should be assembled into a single graphic.

- EPS files: Ensure that all fonts are converted to outlines or embedded in the graphic file. The document settings should be in RGB mode. NOTE: While EPS files are accepted, the vector-based graphics will be rasterized for production. Please see below for TIFF file production resolutions.

3. TIFF files (either embedded in a Word doc or submitted as individual files) should have the following resolution requirements:

- Black & White line art: 1200 dpi
- Grayscale art (a monochromatic image containing shades of gray): 600 dpi
- Color art (RGB color mode): 300 dpi

-The RGB and resolution requirements are essential for producing high-quality graphics within the published manuscript. Graphics submitted in

CMYK or at lower resolutions may be used, however, the colors may not be consistent and graphics of poor quality may not be able to be improved.

-Most graphic programs provide an option for changing the resolution when you are saving the image. Best practice is to save the graphic file at the final resolution and size using the program used to create the graphic.

4. Graphics should be sized at the final production size when possible. Single column graphics are preferred and can be sized up to 240 points wide (3.33 in.). Double column graphics must be sized between 300 and 504 points (4.167 in. and 7 in.). All graphics have a maximum depth of 660 points (9.167 in.) including the caption (please allow 12 pts for each line of caption text).

•Consistently sizing letters and labels in graphics throughout your manuscript will help ensure consistent graphic presentation for publication.

5. A graphic should be submitted for use as in the Table of Contents and Abstract. This graphic should give the reader a quick visual representation of the essence of the paper without providing specific details. The best images for these uses are simple, relatively free of text and technical characters, and make use of color for visual impact.

6. For more information, please visit

<http://pubs.acs.org/page/4authors/submission/index.html>.

Our online environment provides for the inclusion of “Web Enhanced Objects” such as video and 3D images. Information regarding these multimedia may be found at <http://pubs.acs.org/page/4authors/submission/weo.html>.

**Nomenclature.** Nomenclature should conform to current American usage. When possible, authors should use systematic names similar to those used by Chemical Abstracts Service (CAS) or IUPAC. Chemical Abstracts (CA) nomenclature rules are contained in Appendix IV of the current Chemical Abstracts Index Guide. The ACS website has links to nomenclature recommendations at [www.acs.org](http://www.acs.org). IUPAC recommended nomenclature is available at [www.chemgmw.ac.uk/iupac.html](http://www.chemgmw.ac.uk/iupac.html). For CA nomenclature advice, contact [answers@cas.org](mailto:answers@cas.org). Use SI units as much as possible – if you must use Imperial or U.S. units, place the SI equivalent in parentheses after the first use. For specialized nomenclature, include a nomenclature section at the end of the paper, giving definitions and dimensions for all terms. We suggest that you provide the CAS numbers of less familiar compounds. If subscripts and superscripts are necessary, place them accurately. Avoid trivial names. Trade names should be defined at the point of first use (registered trade names should begin with a capital letter).

**Formulas and equations.** Chemical formulas should correspond to the *ACS Style Guide*. Chemical equations should be balanced and numbered consecutively along with mathematical equations. Mathematical arguments should be as brief as possible.

**Safety.** Please call special attention, both in your manuscript and in your correspondence with the Editors, to safety considerations such as explosive tendencies, precautionary handling procedures, and toxicity.

**Acknowledgments.** Include essential credits in an Acknowledgment section at the end of the text. Meeting presentation data or other information regarding the work reported are included here. Sources of financial support must be acknowledged. We remind you that

all authors must read and adhere to ACS's Ethical Guidelines to Publication of Chemical Research.

**References.** Literature references must be numbered with Arabic numerals in the order of their first citation in the text, and the corresponding numbers must be inserted at the appropriate locations in the text. The corresponding text numbers must be presented as superscript, closed up to the last character, and outside any punctuation marks. Provide for review copies of any references that are in obscure publications or are unpublished. Avoid references to works that have not been peer-reviewed. Give complete information, using abbreviations for titles of periodicals as in the CAS Source Index (CASSI) or *The ACS Style Guide*, 3rd ed., 2006. Periodical references should contain authors' surnames followed by initials, title, journal abbreviation, year, volume number, and page range.

**Reference styles.** All article types in *ES&T* use the same reference style. Authors are encouraged to use peer-reviewed works and books. This list is meant as a style guideline/template, but for clarification, please refer to *The ACS Style Guide*, 3rd ed., 2006.

*Journal article*

Travis, E. R.; Hannink, N. K.; van der Gast, C. J.; Thompson, I. P.; Rosser, S. J.; Bruce, N. C. Impact of transgenic tobacco on trinitrotoluene (TNT) contaminated soil community. *Environ. Sci. Technol.* **2007**, *41* (16), 5854–5861; DOI 10.1021/es070507a.

*Book with author*

Criss, R. E. *Principles of Stable Isotope Distribution*; Oxford University Press: Oxford, U.K., 1999.

*Book with editors*

Coghill, A. M., Garson, L. R., Eds. *The ACS Style Guide*, 3rd, ed.; Oxford University Press: New York, 2006.

*Chapter in edited book*

Snape, I.; et al. Contamination, regulation, and remediation: an introduction to bioremediation of petroleum hydrocarbons in cold regions. In *Bioremediation of Petroleum Hydrocarbons in Cold Regions*; Filler, D. M., Snape, I., Barnes, D. L., Eds.; Cambridge University Press: New York 2008; pp 1–37.

*Thesis*

Masson, J.-F. Surface plasmon resonance sensors for biochemical and chemical monitoring. Ph.D. Dissertation, Arizona State University, Tempe, AZ, 2005.

*Institutional report (e.g. U.S. or international government; private institution)*

*Biofuels: DOE lacks a strategic approach to coordinate increasing production with infrastructure development and special needs*; Highlights of GAO-07-713; United States Government Accountability Office: Washington, DC, 2007; [www.gao.gov/new.items/d07713.pdf](http://www.gao.gov/new.items/d07713.pdf).

*Law*

Energy independence and security act of 2007. Public Law 110-140, 2007; <http://www.gpo.gov/fdsys/pkg/PLAW-110publ140/html/PLAW-110publ140.htm>.

*Legal decision*

*State of New Jersey v. EPA*, No. 05-1097 (D.C. Cir. Feb 8, 2008).

*Website-homepage*

*Environmental Science & Technology Website*;  
<http://pubs.acs.org/journals/esthag/index.html>.

*Webpage within a large site*

Tracking the millennium goals-map; [www.mdgmonitor.org/map.cfm?goal-6&indicator--0&cd-](http://www.mdgmonitor.org/map.cfm?goal-6&indicator--0&cd-).

For references to journal articles, an issue number after volume number is helpful but not mandatory. DOI numbers are also helpful but not mandatory unless that is the only identifying information for an article in press or published online (e.g., ASAP).

**Citing by DOI**

For work published online (ASAP) and work submitted for publication (e.g., submitted; in press), the DOI should be furnished in addition to the standard bibliographic information. Authors are given instruction for citing work by DOI in an email communication when manuscript proofs are made available. A DOI is assigned to each manuscript and should be in the form <http://dx.doi.org/10.1021/om000000a>. DOI is an accepted form of citation before and after the article appears in an issue.

***The accuracy of the references is the responsibility of the author(s).*** Reference accuracy is critical because readers have the ability to link to the original literature. References to personal correspondence or to unarchived material obtained from the web are discouraged. “Anonymous” is not acceptable as an author; if the author is unknown, list the reference by company, agency, or journal source. Do not list references as “in press” unless they have been formally accepted for publication – in that case determine if a DOI has been assigned and include it with the reference. The Associate Editor should be informed whether a paper on a related topic is in press from the same group as the paper submitted to *ES&T*. In citing *submitted* manuscripts, it is inappropriate to specify the name of the publication considering the manuscript.

**Supporting Information.** Authors are encouraged to shorten the text of research manuscripts by using the Supporting Information (SI) to present ancillary information and material of interest mainly to specialists. In particular, the Experimental Section should provide the detail needed for the reader to determine whether the interpretations are supported by the data, but experimental details, including schematics of apparatus and maps of study sites, should be reported in SI. Detailed calculations, derivations, databases, and ancillary spectra should appear in SI. Authors are strongly encouraged to provide detailed data (as graphics and/or tables) in SI to support data presented in summary form or parameters extracted from the data that appear in the main text. However, please do not indiscriminately place large amounts of extraneous data and other materials in Supporting Information.

**Supporting Information is not permitted for Features, Viewpoints, Letters to the Editor, Correspondence, or Errata.**

SI should be formatted with a cover sheet listing authors, manuscript title, and the number of pages, figures, and tables. SI pages must be numbered consecutively, starting

with page S1. Tables and figures should be numbered Table S1–*S<sub>n</sub>*, Figure S1–*S<sub>n</sub>*. A Brief statement in nonsentence format listing the contents of the material supplied as Supporting Information should be supplied.

This material will appear in the electronic version of the paper on the *ES&T* website, and its availability will be noted in the printed version of the journal. SI is available to everyone who accesses the *ES&T* website, and it will be archived. It is also indexed and abstracted by CAS.

A list of acceptable electronic file types for SI is given on the web submission site with a list of viewers available at <http://pubs.acs.org/page/4authors/tools/viewers.html>. All SI files of the same type should be submitted as a single file (rather than as a series of files containing individual images or structures). For example, all SI available as PDF files should be contained in one PDF file, if possible, and all CIFs should be submitted as a single file. Where appropriate, SI should be consolidated into a single word-processing file with graphics copied and pasted (embedded).

### **Directions for Data Deposition, Computer Codes and other material**

A primary research report should contain sufficient detail and reference to public sources of information to permit the author's peers to repeat the work. When requested, the authors should make a reasonable effort to provide samples of unusual materials unavailable elsewhere, including, but not limited to, clones, microorganism strains, antibodies, computer codes, etc., to other researchers, with appropriate material transfer agreements to restrict the field of use of the materials so as to protect the legitimate interests of the authors.

**Sequence data.** DNA sequence data must be submitted to GenBank (<http://www.ncbi.nlm.nih.gov/genbank/>), EMBL Nucleotide Sequence Database (<http://www.ebi.ac.uk/embl/>) or the DNA Data Bank of Japan (<http://www.ddbj.nig.ac.jp/>).

Protein sequence data should be deposited with the Protein Identification Recourse at Georgetown University Medical Center, Washington (<http://pir.georgetown.edu/>), the European Bioinformatics Institute (EBI) (<http://www.ebi.ac.uk/>) or the Swiss Institute of Bioinformatics (<http://www.isb-sib.ch>).

**Microarray Data.** Manuscripts that present microarray data should follow the MIAME (Minimum Information About a Microarray Experiment) guidelines (<http://www.mged.org/miame>). Data must be submitted to the GEO (Gene Expression Omnibus) (<http://www.ncbi.nlm.nih.gov/geo>) or ArrayExpress Archive (<http://www.ebi.ac.uk/arrayexpress>) databases.

For sequence data and microarray data the relevant accession numbers should be available at the time that the revision is submitted and should be listed at the end of the Experimental section in the revised version of the manuscript.

**Data from proteomics experiments.** Proteomic experiments must meet the standards established by the Journal of Proteome Research. More information is available in the Publication Guidelines for the Analysis and Documentation of Peptide and Protein Identifications ([http://pubs.acs.org/paragonplus/submission/jprobs/jprobs\\_proteomics\\_guidelines.pdf](http://pubs.acs.org/paragonplus/submission/jprobs/jprobs_proteomics_guidelines.pdf)).

Protein sequences should be handled in the same way as described above and accession number and database source should be included.

**Computer codes.** When computer codes are developed or used and are an essential part of a manuscript, sufficient detail must be given, either within the paper or in the Supporting Information. Types of languages that are used in the computer codes, compiler/interpreter, and operating system with a specific version must be provided or properly cited. Upon request, after appropriate material transfer agreements to restrict the use of the materials so as to protect the legitimate interests of the authors, codes, and input data must be made available for others to validate the calculations. Regardless the fact that the source code is open or closed source, it must be properly cited in the References and Footnotes.

**Computational chemistry calculations.** When computational chemistry calculations are performed, input data must be given either within the paper or in the Supporting Information, including force field parameters, equations defining the model (or references to where such material is available in the open literature), methods and approaches, and basis sets. If the software used for calculations is generally available, it must be properly cited in the references and footnotes. References to the methods upon which the software is based must also be provided.

## Summary and Submission Checklist by Manuscript Type

Authors are encouraged to check that their manuscript includes all of the items listed below. (Any items in parentheses are optional). Text shaded in gray constitutes the indicated word equivalent limit. Details as to their formatting may be found in this document above and via the ACS Author and Reviewer Resource at <http://pubs.acs.org/page/4authors/index.html>.

<b>Feature – 5000 Word Equivalents</b> <b>– shaded areas included in word count</b>		
<b>Description:</b> Balanced examination of significant developments relevant to environmental science & technology community; written in magazine style, assuming one year of university-level physical and environmental sciences/engineering knowledge; peer-reviewed.		
Item	Notes	Check
Query Letter	<b>Contact Managing Editor</b> before submission with short outline; wait for approval.	
Title	Magazine style – approachable and inviting to generalists	
Author(s) with affiliations	Indicate corresponding author with *	
TOC/Abstract Art	<b>Mandatory with submission</b>	
Abstract	<b>3-5 sentences written for a lay audience</b>	

Text, figures, tables, boxes.	Clearly label figures and tables <b>within document, not just in file name</b>	
(Acknowledgements)		
Author(s) biographical statement	<b>Institutions and titles plus any other information not to exceed 200 words</b>	
Line numbers		
References		
	<b>Supporting information cannot be included</b>	
<b>Contact Office (questions &amp; topic approval)</b>	Managing Editor, ACS, Washington, DC	

<b>Viewpoint – 1000 Words + Five References + One Single Frame Figure and 50 word caption OR One 350 word Table + Author Affiliations</b> <b>– shaded areas included in word count</b>		
<b>Description:</b> Short commentary on issue of interest to <i>ES&amp;T</i> readership; written “op-ed” style; <i>not on matter published in ES&amp;T; not peer-reviewed, but subject to editorial approval; Viewpoints not adhering to the length restrictions will not be considered.</i>		
<b>Item</b>	<b>Notes</b>	<b>Check</b>
Title	Concise and brief	
Author(s) with affiliations.	Indicate corresponding author with *	
Text	<b>1000 Words Maximum</b>	
Figure OR Table	<b>One Figure, Single Frame</b> – 50 word caption max or <b>One 350 Word Table</b>	
Line numbers		
References	<b>Five Maximum</b>	
	<b>No TOC art or SI</b>	
<b>Contact Office (questions)</b>	Managing Editor, ACS, Washington, DC	

<b>Letter to the Editor – 500 Words + 250 Words of References + Author Affiliations</b> <b>– shaded areas included in word count</b>		
<b>Description:</b> Brief comment on Feature, Viewpoint, or Comment previously published in <i>ES&amp;T</i> within 6 months of previous piece’s publication; subject to editorial approval		
<b>Item</b>	<b>Notes</b>	<b>Check</b>

Author(s) with affiliations	Indicate corresponding author with *	
Text	Include citation/DOI of Feature, Viewpoint, Comment, or News in question. <b>500 Words Maximum.</b>	
References	<b>250 Words Maximum</b>	
	<b>No TOC art or SI</b>	
<b>Contact Office (questions)</b>	Managing Editor, ACS, Washington, DC	

<b>Research Article – 7000 Word Equivalents – shaded areas included in word count</b>		
<b>Description:</b> Completed and fully interpreted results of original and significant research relevant to environmental science and technology; peer-reviewed.		
<b>Item</b>	<b>Notes</b>	<b>Check</b>
Cover Letter	<b>Rationale for relevance to <i>ES&amp;T</i></b>	
Title	Concisely informative	
Author(s) with affiliations	Indicate corresponding author with *	
TOC/Abstract Art	<b>Mandatory with submission</b>	
Abstract	150-200 words	
Text, figures, tables.	Clearly label figures and tables <b>within document, not just in file name.</b> <b>Do not include a summary/conclusion section.</b>	
Acknowledgements		
Line numbers		
References		
(Supporting Information)		
<b>Contact Office (questions)</b>	Editor-in-Chief, <i>ES&amp;T</i> , Iowa City, IA	

<b>Policy Analysis – 7000 Word Equivalents – shaded areas included in word count</b>		
<b>Description:</b> Original research in environmental management and policy, especially where science and engineering interface with public policy; peer-reviewed.		
<b>Item</b>	<b>Notes</b>	<b>Check</b>
Cover Letter	<b>Rationale for relevance to <i>ES&amp;T</i></b>	
Title	Concisely informative	



Author(s) with affiliations	Indicate corresponding author with *	
TOC/Abstract Art	<b>Mandatory with submission</b>	
Abstract	150-200 words	
Text, figures, tables.	Clearly label figures and tables <b>within document, not just in file name.</b>	
Acknowledgements		
Line numbers		
References		
(Supporting Information)		
<b>Contact Office (questions)</b>	Editor-in-Chief, <i>ES&amp;T</i> , Iowa City, IA	

**Critical Review – 10,000 Word Equivalents  
– shaded areas included in word count**

**Description:** Thoroughly documented assessment of selected area of the environmental science research literature; typically have at least 100 references; peer-reviewed.

<b>Item</b>	<b>Notes</b>	<b>Check</b>
Cover Letter	<b>Rationale for relevance to <i>ES&amp;T</i></b>	
Title	Concisely informative	
Author(s) with affiliations	Indicate corresponding author with *	
TOC/Abstract Art	<b>Mandatory with submission</b>	
Abstract	150-200 words	
Text, figures, tables.	Clearly label figures and tables <b>within document, not just in file name.</b>	
Acknowledgements		
Line numbers		
References	<b>Typically in excess of 100.</b>	
(Supporting Information)		
<b>Contact Office (questions)</b>	Editor-in-Chief, <i>ES&amp;T</i> , Iowa City, IA	

**Correspondence – 1000 Word Equivalents**

**– shaded areas included in word count**

**Description:** Scholarly comment on articles appearing in the research section; authors of original article will be permitted to respond; peer review(ed) at Editor’s discretion.

<b>Item</b>	<b>Notes</b>	<b>Check</b>
Author(s) with affiliations	Indicate corresponding author with *	
Text, figures, tables.	Include citation/DOI of Research Article, Policy Analysis, or Critical Review in question. Clearly label figures and tables <b>within document, not just in file name.</b>	
Line numbers		
References		
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