Journal of the American Water Resources Association (JAWRA)

Instructions for Authors

JAWRA's style and policies are updated periodically and all authors are advised to read these instructions **BEFORE** submitting a manuscript, even if they have previously published in JAWRA.
All submissions and reviews are processed through ScholarOne™ Manuscripts (https://mc.manuscriptcentral.com/jawra).

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WHAT'S NEW?

- This version adds clarification to some policies and procedures and updates outdated information.
- **The publication charges have been updated; notably we have switched from a page count basis to an article processing charge.**

Part I – Policies and Procedures

Publication Charges

JAWRA recognizes an obligation to the water community and to its authors to distribute the knowledge contained within its pages as widely as possible. To accomplish this in an economically sustainable manner, an article processing charge (APC) partially covering the costs of producing JAWRA is assessed at the time a paper is accepted for publication. Papers are not published until the APC is paid in full. _Rates are subject to change and charges will be incurred at the prevailing rates at the time of acceptance._ Current rates are:

Article Type	AWRA Members*	Non-members
Technical Paper	$1,425	$1,900
Technical Note/WCR**	$750	$1,000
Discussions	$225	$300
Errata	$90	$120
Open Access	$3,000 **additional** [see below for details]	

*To receive the 25% AWRA member discount, at least one author must be a professional, premier, or designated representative of a partner member when the paper is originally submitted and maintain membership through publication. The member discount does not apply if join date is not within 30 days of original submission.
**WCR = Water Commentary and Review

OnlineOpen (Open Access)

OnlineOpen (our publisher Wiley-Blackwell's term for open access) is available to authors who wish to pay an additional fee to make their article freely available to non-subscribers upon publication. OnlineOpen articles are treated the same as any other article. They go through the journal's standard peer-review process and will be accepted or rejected based on their own merit. OnlineOpen is offered only to those authors whose articles have been accepted for publication, and only at the point when the article is accepted, to ensure the OnlineOpen option has no influence on the peer review and acceptance process. The accepted articles are prepared for publication in the usual manner and are posted online on Wiley Online Library. Further details may be found at http://authorservices.wiley.com/bauthor/onlineopen.asp .

All standard publication charges will still apply; a member discount is not available for this option. The OnlineOpen fee is charged after acceptance of the article and should be paid within 30 days. Payment must be received in full for the article to be published OnlineOpen. Please see the publication charges section above for current rates.

Authors wishing to publish their papers OnlineOpen: after the publisher receives your paper you will receive an e-mail from Author Services with a link to your 'My Publication' page. From here you can choose for your article to be published OnlineOpen by clicking on 'Make my article OnlineOpen'. Alternatively, you can go direct and complete the payment of the open access publication fee via the OnlineOpen Form found on the page in the link above.

Access to JAWRA is available free online within institutions in the developing world through the AGORA initiative with the FAO. For information, visit: http://www.fao.org/agora/en/ .

Authorship

All persons listed as an author of a paper are expected to have contributed substantially to its production and to be knowledgeable about the entire paper, including drafting or revising it for important intellectual content and reviewing and approving the final version to be published. Minor contributors should be mentioned in the acknowledgments section.

Copyright

The submitting author is required to complete a Copyright Transfer Agreement (CTA) assigning copyright to AWRA after the manuscript has been accepted and sent to the publisher for publication. The submitting author will sign on behalf of all co-authors and is required to obtain their written permission to do so. The forms are collected online via the publisher's system; you will receive instructions at the appropriate time.

The CTA allows, under certain conditions, for sharing the paper with colleagues and placing versions of the paper on a private website – **but NOT on a public website**. Please read the CTA carefully, as we expect authors to adhere to its stipulations. Please note the provisions for U.S. Government employees.

As our publisher, Wiley-Blackwell goes to considerable trouble to make sure JAWRA papers are properly indexed by search engines. Placing unauthorized copies online interferes with this effort by confusing search engines and may actually hurt the chances of your paper being cited.

Review and Publication Process

All papers are reviewed by at least 2 (usually 3) reviewers selected from names suggested by authors, a list of reviewers maintained by AWRA, and other experts identified by the associate editors. Names of the selected reviewers are not disclosed to authors. The editor-in-chief and associate editor(s) evaluate reviewer comments. A list of questions reviewers are asked is available for viewing at http://www.awra.org/jawra/reviewquestions.html. The review process is outlined as follows:

1. Author submits paper via ScholarOne Manuscripts. Managing editor reviews submission for completeness.
2. Editor-in-chief reads the paper and assigns it to an associate editor or returns unsuitable papers without review. (Papers not on a suitable subject or have little chance of receiving a favorable recommendation from reviewers will not be reviewed.)
3. Associate editor secures at least 2 (usually 3) reviewers or returns unsuitable papers.
4. Reviewers evaluate the manuscript using the online JAWRA score sheet. (See Reviewer Guidance at http://www.awra.org/jawra/reviewquestions.html for more detail.)
5. Associate editor evaluates all reviews and the manuscript and makes a recommendation to the editor-in-chief.

> **Tip!** One of the best things you can do to improve your manuscript's chances of acceptance is to have your draft copyedited BEFORE you submit it to us! This is particularly important if English is not your first language or your writing skills are weak. Manuscripts with non-standard grammar tend to score poorly with reviewers.

6. Editor-in-chief evaluates the reviews and the recommendation and makes a decision:
   o Reject - the paper is rejected for publication in JAWRA.
   o Major Revision - return to author for major revisions which will require further review (step 4, usually with the same reviewers if available).

- o Tentative accept - return to the author for minor revisions to be reviewed by one or both editors. Papers returning from a decision of TA should have all files publication ready.
- o Accept - the paper is accepted for publication in JAWRA.

7. Author revises paper as required and it is reviewed accordingly. This process repeats until the editor-in-chief either rejects or accepts the paper for publication; usually no more than two rounds of revisions are allowed.

8. Papers accepted for publication are reviewed by the managing editor for completeness and conformation to JAWRA style and publication details are provided to the author. The AWRA director of operations will issue an invoice for the article processing charge within 7-10 business days.

9. The author is notified once the manuscript has been sent to the publisher for copyediting. At this point, authors may track production through Wiley-Blackwell's author services (http://authorservices.wiley.com/bauthor/). Electronic proofs are sent to the author about two to three weeks after the article is sent to production. Copyright transfer agreements [CTA] are completed online at this time.

10. Once layout is complete, the CTA received, and publication charges are paid in full, the paper is published online in Early View prior to issue publication.

For papers submitted during 2014 and 2015, 41% were accepted. The average time-to-first-decision was 66 days and the average time-to-final-decision was 151 days. Prospective authors should realize these are past statistics and obtaining meaningful reviews for an informed decision will always take precedence over schedule.

Published papers include the date of first submission and the date of final acceptance.

Publication

Approximately 17 papers are published in each bimonthly issue, generally in the order in which they are accepted. Papers which are part of a *featured collection* (see below) are published as a group in an agreed-upon issue. The editor-in-chief may advance the order of publication for a paper on a topic of current public interest.

JAWRA is published online, with the option to purchase a hard copy. See Wiley Online Library (http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1752-1688) for subscription and distribution information. AWRA members should eMail info@awra.org to purchase a hard copy.

With a few exceptions, papers are placed in Early View [online publication in advance of issue publication] as soon as they complete typesetting and all charges are paid. This can take place several months before they are available in an issue. Once online in Early View, a paper is considered published in final form and may not be revised; any corrections will require an erratum and may incur a publication charge per the rate schedule.

AWRA is happy to cooperate with authors' organizations in issuing news releases about forthcoming JAWRA articles. Please contact the editorial staff at jawra@awra.org.

Discussion and Reply

All published technical papers and notes are open for discussion for a period of 6 months from issue publication, unless the editor-in-chief extends this period. Discussions are limited to dealing directly and specifically with issues raised in the published JAWRA paper. Discussions should not introduce new

information heretofore not published in a peer-reviewed forum (*e.g.*, JAWRA or a similar journal). Discussions should be as brief and concise as possible.

Discussion/Reply manuscripts follow a similar review process as for original papers, but reviewers will be assigned only if needed to adjudicate a technical matter. A copy of the draft discussion will be provided to the authors of the paper under discussion to prepare a reply. Timely replies will be printed in the same issue as the discussion. However, discussions and replies will be placed in Early View as soon as each individually completes production.

Authors submitting a Discussion should reference the published paper in their cover letter [provide paper number and issue published; if on Early View state this instead] and should cite the paper within the Discussion manuscript.

We realize the exchange of Discussion and Reply can be stressful and contentious for those concerned. While we make every effort to allow viewpoints to be aired, we also hold authors to strict standards of professionalism and civility. See the relevant section below.

Publication charges apply to discussions; no publication charges are assessed for the reply.

Featured Collections and Series

A *featured collection* [formerly known as a *special issue*] is a group of three or more related papers on a specific topic organized by guest associate editors and published together in a single issue.

A *featured series* is a group of three or more related papers on a specific topic coordinated by guest associate editors and published either individually or in groups over several issues.

Collection/series papers are submitted during a scheduled time period as determined by the editorial office in consultation with the organizing editors. Authors participating in a collection or series should include the name of the collection/series in their cover letter and submit during the time period stipulated by the guest associate editors. Papers in a featured collection/series are held to the same high standards as regular JAWRA submissions and go through the full JAWRA review process. Invitation to submit a paper for possible inclusion does not guarantee acceptance. All standard publication charges apply.

While featured collections/series often arise out of sessions at AWRA conferences, they do not need to be tied to an AWRA conference. The guest associate editors carefully choose papers to cover the subject in breadth and depth. The guest associate editors recruit authors and reviewers, and help keep all involved on schedule. If you would like to propose a featured collection or series, please contact the JAWRA editor-in-chief (JAWRA-editor@awra.org).

Reviewer Suggestions

ScholarOne Manuscripts allows authors to name "recommended" (or "opposed") reviewers. We encourage authors to use the Reviewers area to list three potential proficient reviewers in their field, as finding available, expert reviewers often is difficult. The term "recommended" is assigned by the system and does not suggest bias; JAWRA views these names as suggestions only. The editorial team may or may not accept any of the recommendations, the only criteria being fairness, objectivity, and knowledge.

Professionalism and Civility

All papers must comply with the following principles of professionalism and civility.

- Conclusions or claims must be based upon observable or documented facts. Speculation or personal opinion, if present at all, must be clearly identified.
- It is permissible to criticize ideas, writings, and actions, but not to make personal attacks upon individuals or organizations.
- Except for relevant, factual content (*e.g.*, attributable quotes, pictures showing some condition), language and figures must not offend a person of ordinary sensibilities.
- Authors must disclose any interests or affiliations that could be perceived as creating a conflict of interest.
- Commercial products or activities may be mentioned for informational purposes only and without giving the appearance of endorsing or promoting them.

Please read Wiley's Guidelines on Publishing Ethics before submitting your paper.

Reviewing Papers

Professionalism involves not only writing papers, but helping to review the work of others as well. ScholarOne Manuscripts will, by default, register authors as reviewers. However, reviewers are always free to decline an invitation to review a paper. For more details on being a JAWRA reviewer, visit http://www.awra.org/jawra/becomereviewer.html .

Digital Photo Manipulation

It is critical for digital photos within papers to accurately represent what they claim to portray. Photos may be cropped and adjusted for normal photographic controls such as exposure, contrast, and color balance, but may not be "cloned" or similarly manipulated to falsify the content. Exceptions to this rule must be mentioned in the figure caption; in such cases, we suggest including the original photo as an electronic attachment.

Contested Place Names

The names of geographic locations and even countries are not always universally accepted. In these cases, **JAWRA policy is to use the name preferred by the author.** Where necessary to avoid confusion, the editor-in-chief will add a neutral clarifying note.

Prior Publication in Proceedings

Publishing a paper or abstract in a conference proceedings does not necessarily disqualify it from publication in JAWRA. Several factors considered are: (1) quality and completeness; (2) copyright; (3) disclosure; and (4) level of prior exposure. Authors who wish us to consider work based upon proceedings are encouraged to discuss the matter with the JAWRA editor-in-chief (JAWRA-editor@awra.org) prior to submittal.

Water Commentaries and Reviews

This section of the journal consists of **invited** commentaries or reviews which provide new insights or concepts relevant to a broad range of multidisciplinary water researchers and practitioners. Articles will synthesize and build upon existing water-related research and will offer the opportunity for authors to present cutting edge ideas in a format not bound by the restraints of traditional technical papers. Manuscripts should be written in a style understandable to a broad multidisciplinary audience. The text is limited to 3,250 words, not including the title page (title, author list, author information, abstract, key terms), Supporting Information description (if present), Acknowledgements, or Literature Cited; tables and figures should be limited to a combined total of 5. The standard limits apply to the Title and

Abstract; see relevant sections below. All manuscripts will be peer-reviewed according to normal JAWRA practices and subject to standard publication fees. Invitations to submit articles to this section are made by the editor-in-chief or the associate editor for Water Commentaries and Reviews (AE-WCR). Invitation does not guarantee acceptance for publication. Authors interested in seeking an invitation to submit an article to this section may submit a one- page proposal for the article to the AE-WCR

Part II – Preparing a Manuscript

Article Types

JAWRA articles may be one of four types as outlined below. All articles, regardless of type, are subject to full peer review.

Technical Paper – This type of article presents the results of recent research, including case studies or literature reviews, or offers facts-based analysis of a timely and important topic. Most articles in JAWRA are Technical Papers.

Technical Note – This is a short, narrowly-focused communication on a topic of interest. Examples of appropriate topics for a Technical Note would be to correct a common misperception about a sampling technique, or to add a recollection of an historical event. Technical Notes are subject to the same word count and graphic limits as Water Commentaries and Reviews; see the WCR section above for details.

Discussion – A Discussion is a commentary on a Technical Paper or Technical Note recently published in JAWRA. It is limited to the material covered in the article in question and cannot add new research results not previously published.

Reply – A Reply is prepared by authors of a Technical Paper or Technical Note in response to a Discussion about their article. A timely Reply will be published in the same issue as the corresponding Discussion.

If you have a question regarding whether a manuscript should be a technical paper or a technical note, please contact the editor-in-chief.

Abstract

The abstract should briefly summarize, in **one paragraph limited to 1,500 characters including spaces and the label "Abstract:"**, the general problem and objectives, the results obtained, and the implications. Mention place names and program names if they are important to the study. Do not include citations. Do not include details of methods, sampling, *etc.*, unless they are the main point of your paper. Use and define acronyms only if they appear more than once in the Abstract itself.

When submitting your manuscript for consideration in ScholarOne Manuscripts, be sure to copy and paste the Abstract into the field provided as this is not automatically completed. If changes are made in revisions, the amended Abstract should be uploaded.

> **Tip!** Many JAWRA articles are discovered online via their abstracts. On the Web, you have only a few seconds to grab the attention of a reader. Do not waste the first sentences of your abstract with introductory material. Get right to the point of telling what **you did** and what **you found**!

Acknowledgments

Acknowledgements are included in a separately titled section, directly before the Literature Cited. This is the appropriate place for disclosing any affiliations that could be perceived as influencing the objectivity of the work (See Professionalism and Civility) and for adding any disclaimers required by your employer.

Appendices

All appendices must have a title. Appendices are placed before the Acknowledgments and Literature Cited sections and are part of the article.

If there will be supplemental material that will be available online but not within the article itself, include a Supporting Information section; see the relevant instructions below.

Author List and Information

Author List

Although author information is listed in ScholarOne Manuscripts, the names may not be in the format you prefer and are not automatically transferred to the manuscript [or *vice versa*]. Therefore, in the manuscript, under the title, list the author names in the **exact form and order** you want them to appear. The format should be an in-line list and should not include any titles or degrees [*e.g.* Dr. or PhD]. All authors of the manuscript should be entered into ScholarOne during the submittal process; failure to do so will result in the paper being returned to the submitting author for correction.

We have discussed with Wiley-Blackwell the possibility of showing author names in native characters. However, at this time we cannot guarantee such characters would be printed accurately, therefore we do not presently offer this service.

Author Information

Author information should be entered below the author list. The JAWRA style is to include a position title and affiliation for each author (*e.g.*, "Associate Professor (AUTHLASTNAME), Department of Basketball, Enormous State University, Bigten, Ohio 12345"), and the full mailing and eMail addresses for the *one* designated corresponding author. Do not include phone numbers. Only one affiliation per author should be listed. The example below presents a common situation, but you should examine a recent issue of JAWRA for other examples.

Associate Professor (Smith), Department of Basketball, Enormous State University, 123 Court Street, Bigten, Ohio 45678; Graduate Student (Hernandez, Liu), Department of Sportsmanship, Smalltime University, Littletown, Ohio 91234; and Senior Scientist (Zhang), Recruitment Support, Acme Consultants, Moneyville, Ohio 56789. (E-Mail/Smith: smith@bigten.edu).

Sometimes authors change their affiliation after preparing a paper. In this case, you may give past, present, or both affiliations as you prefer: "Formerly, Associate Professor, Enormous State University, currently Senior Scientist (Zhang), Recruitment Support, Acme Consultants…" A better approach, though, is to list your current affiliation, and give credit to your former employer in the Acknowledgements.

Citations within Text

Proper citations are critical not only as a matter of professional courtesy, but make it easier and faster for reviewers to check a paper's references. All sources of data and information not original to the paper

should be described, either as *published literature* or as an *informal reference*. It is important to recognize how these classes are defined and treated.

- **Published Literature**, or formal citations, includes published materials available to future researchers. All entries have an author/compiler/editor/manager (person or organization), a date of publication, and title and publishing information to uniquely identify the materials. Contractor reports to a public agency fall in this category if they can be clearly and uniquely identified.
- **Informal References** include everything else: personal communications (letters, notes, and conversations), unpublished reports, legal citations, and databases.

Published Literature

Refer to published literature within the text by author(s) and date; for example, Black (1984) or (Black, 1984) or (Black, 1984; Green *et al.*, 2005). Do not use a numbering system. Use letters to differentiate citations in the same year, as Black (1984b). Though using the author's surname normally is sufficient, an initial or given name should be included when referencing multiple authors with the same surname: Black, P. (1984) and Black. A. (1984).

Every published literature reference within the text must have a corresponding entry in the Literature Cited section. **If you delete or insert a text reference during revision, be sure to update the Literature Cited section as well.** Please check this, as it is one of the most common errors found in copyediting.

Informal References

Letters, memos, similar non-published materials, and references to databases are **not** included within Literature Cited. They should be referenced as fully as possible in parentheses within the text, *e.g.*: (Memo from AWRA Executive Vice President K.D. Reid to JAWRA Editor K.J. Lanfear, September 15, 2005, Subject: Wasn't that great water?)

Data sources should be specified with enough detail to lead a qualified researcher to an appropriate starting point in the database. Dates of access may be given approximately or as a range to help resolve any future updates in the source. Some examples of common databases are given below. You may designate a "default" source for groups of data, as in the second example:

(U.S. Geological Survey, National Water Information System. Accessed December 8, 2012, http://waterdata.usgs.gov/nwis.)

(U.S. Geological Survey, National Water Information System. Accessed June, 2011 - December, 2012, http://waterdata.usgs.gov/nwis. Unless otherwise noted all streamflow data in this paper are from this source.)

(U.S. Environmental Protection Agency, 2012. STORET. Accessed December, 2012, http://www.epa.gov/storet/.)

Unpublished data citations should follow this example:
(Moe Smoe, USEPA, 1999, unpublished data)

Unpublished report citations should follow this example:
(Acme Consulting, "Design Solutions for the Main Street Water Works", unpublished report for MegaWater, Inc., 2010.)

Legal citations should include sufficient information for the reader to identify the appropriate statute or case: (33 U.S.C. §403)

Computer Code

Except for short fragments, computer code should not be included within the text of a manuscript. Computer code may be submitted as separate files to accompany the online version of the paper, so users can download the code as a text file (see Supplemental Material below).

Cover Letter

A cover letter briefly summarizing the new contributions the manuscript makes to water resources literature is required and should be submitted in the space provided in ScholarOne Manuscripts. Also use the cover letter to advise us if you are submitting a multi-part paper, a manuscript for consideration of inclusion in a featured collection, *etc.*, or if there are any other special conditions we should consider. It is not necessary for the cover letter to repeat information already provided in ScholarOne Manuscripts.

Data Sets

All data sets obtained from outside sources must be identified within the text. We strongly recommend all original data sets used in the paper be placed into an archive available to the public. The concern with data availability is any qualified researcher should be able to obtain your data to reproduce or check your results. JAWRA allows authors to include data sets with the online version of their paper. See Supplemental Material below for details.

See the examples under Citations within Text/Informal References for how to reference a data set.

Dates and Times

The preferred date format is either, Month Day, Year (*e.g.* August 6, 2012), or the ISO Standard 8601 form, YYYY-MM-DD (*e.g.*, 2012-08-06). Alternative forms, such as 6 August 2012, 6Aug12, may be used in figures if graphics programs or space requirements do not allow the preferred form. Use of non-ISO numerical forms, such as 6/8/12 or 8/6/12, is discouraged because of confusion between American and European notations.

The preferred time format is 24-hour notation, or 20:15, not 8:15 PM. All times are assumed to be local, unless indicated as UTC (Coordinated Universal Time) or a specific time zone. We recommend a complete date and time follow the ISO Standard 8601 form.

Equations

Equations should be numbered consecutively with a numeral in parentheses to the right of the equation [aligned to the right margin]. Prepare equations in the simplest form possible and define all variables, including their units. Do not embed equations as images, use the 'insert equation' function in Word; embedded equations will be rekeyed by production and this introduces the possibility of error. If the length of an equation is likely to exceed one column width (3 ½ inches), provide the equation on multiple lines, breaking it where the break will cause the least ambiguity.

$$E = mc^2 \tag{1}$$

where E is energy, m is mass, and c is the speed of light.

Figures

Figures are required to be submitted as separate files before final acceptance of the manuscript (multipanel figures {ex: 1a, 1b, *etc.*} should be submitted as one file {ex: fig. 1}). Authors may embed figures in the manuscript text during the review process. When submitting separate figure files for initial review, it is best to include the figure numbers and captions within the file to aid the reviewers.

Figures should be numbered consecutively and include a brief title followed by an optional description so a reader can understand the figure without referring to the manuscript text. To assist those who may not be able to clearly see the figure, the title/description should explain the main point of the figure. Examples: "FIGURE 1. Photograph showing bank erosion with severe undercutting on Mud Creek." or "FIGURE 2. Graph of costs showing how cost increases exponentially with size."

A figure will appear in the text as soon as possible after it is first mentioned, unless a specific place is indicated by note, "[INSERT FIGURE 1 HERE]."

Figures should clarify a point or document some condition, and should add to the text, not duplicate it. The concepts of Edward Tufte's "The Visual Display of Quantitative Information" (ISBN 0961392142, http://www.edwardtufte.com/tufte/books_vdqi) are highly recommended, particularly those of minimizing ink and avoiding "chartjunk."

The University of Oregon, Data Graphics Research Program has developed attractive color schemes (http://geography.uoregon.edu/datagraphics/) which show well in black-and-white printing and will be easily viewable by readers with impaired color vision. The common red-yellow-green "stoplight" pattern, for example, is almost incomprehensible when rendered in black-and-white.

There are three preferred formats for digital artwork submission: Encapsulated PostScript (EPS), Portable Document Format (PDF), and Tagged Image File Format (TIFF). We suggest line art be saved as EPS files. Alternately, these may be saved as PDF files at 600 dots per inch (dpi) or better at final size. Tone art, or photographic images, should be saved as TIFF files with a resolution of 300 dpi at final size. For combination figures, or artwork containing both photographs and labeling, we recommend saving figures as EPS files, or as PDF files with a resolution of 600 dpi or better at final size. More detailed information on the submission of electronic artwork can be found at
http://authorservices.wiley.com/bauthor/illustration.asp .

JPG and PNG files will not be accepted for publication.

IMPORTANT: To verify the image you are providing is of adequate resolution, perform a visual inspection by zooming-in to 300%, if the image becomes blurry or pixilated, adjust the resolution. When adjusting the resolution in Photoshop, Illustrator, *etc.*, the "resample image" box MUST be un-checked in the dialog box (figure editing programs automatically have the "resample image" box checked - it needs to be un-checked in order for the resolution to actually increase).

Footnotes

Footnotes are not used; include all explanations within the text.

Format

Manuscripts should be formatted as follows:
File Type = MS Word   Columns = single
Paper size = 8.5x11 (letter)   Font = Times New Roman

Font size = 12 point   Margins = 1 inch
Line spacing = double

Section headings [LEVEL I] are in all caps and are centered. Sub-headings [LEVEL II] are left justified and italicized. Sub-sub-headings [LEVEL III] are indented, bold, and punctuated by a period. Sub-sub-sub-headings [LEVEL IV] are indented, underlined, and punctuated by a period. Sections are not numbered.

Key Terms

At least four (4) key terms should be provided as an aid to information retrieval and selecting reviewers. Three or more of these terms must be selected from the JAWRA list of key terms (http://www.awra.org/jawra/keyterms.html). This list is available online during the submittal process in ScholarOne Manuscripts. In addition to selecting key terms in the online system, the Key Terms should be listed on the manuscript directly following the Abstract. The preferred limit for key terms is 210 characters including spaces.

Literature Cited (Formal References)

Proper citations are critical as a matter of professional courtesy and because search engines such as Google Scholar recognize them and infer linkages. Cite references to published literature by author(s) and date, as in the examples provided below. Do not use a numbering system. **Each entry in Literature Cited must have at least one corresponding reference in the text. If you delete or insert a text reference during revision, be sure to update the Literature Cited section as well.**

> **Tip!** Correcting citations is, by far, the biggest source of questions in copyediting. The most common errors are: (1) Different dates or name spellings between the text and the Literature Cited section; and (2) Citations missing volume, number, pages, *etc*.

References to an unpublished work should not be listed under Literature Cited unless it has been fully approved for publication. Please see the "Citations within Text" section for a description of what qualifies for Literature Cited.

The basic form for names is: First author: Surname, followed by initials. Each subsequent author: Initials followed by surname.

Publications by the same author(s) shall be ordered oldest to newest.

Book Give the ISBN if known. You can often find this on amazon.com.	Fritts, H.C., 1976. Tree Rings and Climate. Academic Press, London, United Kingdom, ISBN-13: 978-1930665392
Book chapter, or paper in a Proceedings	Rickert, D.A., W.G. Hines, and S.W. McKenzie, 1975. Implications of Dissolved Oxygen in the Williamette River, Oregon. In: *Urbanization and Water Quality Control*, William Whipple, Jr. (Editor). American Water Resources Association, Middleburg, Virginia, pp. 70-84.
Journal article Pay particular attention to how a journal prefers to abbreviate its name, and how it identifies a particular article. Include the digital object identifier (DOI) whenever possible.	Robbins, Jesse Lance and Lynne Y. Lewis, 2008. Demolish It and They will Come: Estimating the Economic Impacts of Restoring a Recreational Fishery. *Journal of the American Water Resources Association* (JAWRA) 44(6):1488-1499. DOI: 10.1111/j/1752-1688.2008.00253.x

Thesis or Dissertation	Cosgrove, D.M., 2001. Response Functions for the Conjunctive Management of Water in the Eastern Snake River Plain, Idaho. Ph.D. Dissertation, University of Idaho, Moscow, Idaho.
USGS Report Each <u>USGS report</u> is uniquely identified by its series and number. Many USGS reports are stored online in the USGS Publications Warehouse (http://pubs.er.usgs.gov/), and should be cited with the URL found in the Publications Warehouse. Note <u>USGS databases</u> are treated as <u>informal references</u>.	Lanfear, K.J., 2005. A Near-optimum Procedure for Selecting Stations in a Streamgaging Network. U.S. Geological Survey Scientific Investigations Report 2005-5001, 14p. http://pubs.er.usgs.gov/usgspubs/sir/sir20055001 .
Online Report Please use the most persistent URL available.	CalFed Bay-Delta Program, 1999. CalFed Bay-Delta Program Ecosystem Restoration Plan, Strategic Plan for Ecosystem Restoration. http://www.calfed.water.ca.gov/ecosystem_rest.htm.
Web Page	(Other than online reports, web pages should not be included in Literature Cited because they are subject to change or updating and should be treated as an <u>Informal Reference</u>.)
Wikipedia	(We do not consider Wikipedia to be an authoritative source to be included in Literature Cited. Please treat Wikipedia as an <u>Informal Reference</u>)

References

(See <u>Literature Cited</u> or <u>Citations within Text</u>)

Section Numbers

Section numbers are not used.

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Tables may either be included at the end of the manuscript file or uploaded as separate Excel files before final acceptance of the manuscript. Authors may embed tables within the manuscript text during the review process. When submitting separate table files for initial review, it is best to include the table numbers and titles within the file to aid the reviewers.

Tables should be used to replace text, not duplicate it. They should be numbered consecutively and include a brief descriptive title; the title may be followed by up to several lines of explanation. The title and explanation should describe the table so a reader can understand it without referring to the manuscript text. Use a minimal amount of horizontal or vertical lines to separate rows and columns.

A table will appear in the text as soon as possible after it is first mentioned unless a specific place is indicated by note, "[INSERT TABLE 2 HERE]." When submitting a table in its final form for publication, it must be editable [*i.e.* either as a Word table or an Excel file]; embedded images are not acceptable.

Text

Text should be written so it will be of interest to readers in the wide variety of disciplines represented by AWRA's membership. The manuscript may be written in the first or third person. Excessive use of bulleted or numbered text is discouraged. There is no word limit for the text except for Technical Notes and Water Commentary and Reviews; see the relevant sections above. Rare is the manuscript that cannot be shortened!

Field codes should not be used as these often do not convert properly and can be corrupted.

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Title

Titles are limited to <u>130 characters including spaces</u> and should succinctly reflect the contents of the article.

Title Page

The first page of the manuscript should be the title page and include the following elements in the order listed: Title, Author List, Author Information, Abstract, and Key Terms. Format these elements to limit the length to one page; 1.5 line spacing may be used on the title page; the Title and Abstract have character limits as detailed in their descriptions.

Units

System International (SI) units are required as defined by the National Institute of Standards and Technology (http://physics.nist.gov/cuu/Units/introduction.html). Other units may be used only when they derive from source materials and the SI equivalent should be given in parentheses, as in, "The ordinance allowed the diversion of 1,000 acre-ft (1.23 Mm^3) of water." Standard SI symbols are required (*e.g.*, do not use abbreviations such as "cms" instead of "m^3/s"). In rare cases, the editor-in-chief will authorize use of non-standard units for policy subjects to make them more understandable to their main audience.

Preferred units are as follows:

Large volumes of water	m^3 prefixed as needed by million (Mm^3) or billion (Gm^3). There is no direct SI equivalent for acre-feet, such as hectare-centimeters; rather, one should use m^3.
Precipitation, evaporation, evapotranspiration, and runoff	mm
Streamflow	m^3/s or L/s

Word Conventions

The following are two words when used as a noun, and hyphenated when used as an adjective:

base flow	flow path	storm flow
bed load	flow rate	time scale
decision maker	ground watershed	water body
field work	policy maker	

The following are treated as one word:

bankfull	groundwater	stormwater
database	hillslope	streambank
dataset	instream	streamflow
floodplain	overpredict	underpredict
freshwater	snowmelt	wastewater