

*S***outhern Research Station Authors Guide**

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Science Delivery Group
Southern Research Station
U.S. Forest Service
200 W.T. Weaver Boulevard
Asheville, NC 28804



SRS Authors Guide

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This guide for authors, and others preparing manuscripts for publication by SRS, is supplied by:

Science Delivery Group (SDG)
Southern Research Station (SRS)
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Asheville, NC

The Authors Guide is available at the SRS internet site: <http://www.srs.fs.usda.gov/working/author/>. All updates will be posted at this site. The current Manuscript Approval Sheet also is available at the above site. Be sure to use the most recent version.

New in this edition:

A section on "Policy" has been added. Revisions have been made to the "Manuscript Preparation" section, the "Tables, Tabulations, and Lists" section, and the "Graphics" section. The "Parts of the Manuscript" and "Writing Aids" sections have been updated and condensed.

Disclaimer

The procedures and guidelines included in the Southern Research Station Authors Guide are based on rules and regulations prescribed by the U.S. Forest Service, U.S. Department of Agriculture, Government Printing Office, and Congress. We welcome suggestions for clarification, additions, or other improvements.

Contents

POLICY	4	GRAPHICS	20
Manuscript Submission to Project Leader	4	General Guidelines	20
Authorship	4	Style Guidelines	20
Reviews	4	Cover Art	20
Project Leader Approval of Manuscript	5	Figures	21
Publication Preparation Policy	5	Photography	21
Station Publication Distribution	6	Color Printing	22
Final Reporting and Closeout of Non-Station Papers	6	WRITING AIDS	23
Timeline	6	Acronyms and Abbreviations	23
Publication Categories and Outlets	7	Apostrophes	23
Permissions, Disclaimers, and Credits	9	Bias-Free Language	23
MANUSCRIPT PREPARATION	10	Capitalization	24
Checklist for Assembling the Manuscript	10	Latin	25
Manuscript Format Instructions	11	Mathematical Equations	25
PARTS OF THE MANUSCRIPT	13	Mathematical Symbols	25
Cover	13	Numbers	26
Pesticide Statement (inside front cover)	13	Quotations	27
Product Disclaimer (inside front cover)	13	Scientific Nomenclature	28
Title Page	13	Units of Measure	28
Abstract and Keywords	14	Verb Tense	28
Summary	14	Wordiness	28
Preface	14	Word Problems	29
Cooperation	14	LITERATURE CITATIONS	31
Acknowledgments	14	Sample Citations for Most Publication Types ..	31
Contents	15	Text References	34
Text Citations	15	Alphabetizing	34
Literature Citations	16	APPENDIX	51
Appendix	16		
Glossary	16		
TABLES, TABULATIONS, AND LISTS	17		
General Guidelines	17		
Style Guidelines	17		
Parts of the Table	18		
Tabulations	19		
Lists	19		

Policy

Manuscript Submission to Project Leader

- Manuscripts must be complete before being submitted, and they must be accompanied by a completed Manuscript Approval Sheet (available at <http://www.srs.fs.usda.gov/working/author/>).
- If the manuscript is for Station publication, one copy of the manuscript and the comment reconciliation letter is sent to the SRS Project Leader (PL) who will forward it to the Southern Research Station (SRS) Science Delivery Group (SDG).
- If the manuscript is for an outside outlet, editing may be bypassed at the discretion of the PL. However, we strongly recommend that you send SDG a signed manuscript approval form before the manuscript is sent to the outlet. This step helps the Station track your publication record in a timely manner (e.g., through the attainment record) and give it the recognition it deserves (e.g., through a current issue of *Compass*).
- If authors represent different SRS programs, the manuscript goes to the senior author's PL.
- See "Checklist for Assembling the Manuscript" for materials to submit. Note: materials should include permission letters and a brief color justification as needed.

Authorship

- SRS follows the guidelines for ethical authorship as set forth in the FS Research & Development Code of Scientific Ethics, articles 7 and 8. Ethical authorship requires substantial involvement of the scientist in the research process. Authorship of manuscripts implies that the author has made major intellectual contributions to some or all parts of the study, including its conception, design, data collection, data analysis, or conclusions, and made significant contributions to its preparation. An author must take public responsibility for the content of the paper, which includes discussing why and how the research was done and how the conclusions were reached, and be able to defend criticisms.
- Administrators, supervisors, and those contributing technical assistance can be included as authors if they meet the criteria for being authors.
- Authorship should not be claimed if the scientist provides only instructions, laboratory space or supplies, or financial support. Seniority, grade, and similar distinctions are not criteria for determining authorship.
- Authorship should be decided on as early in the process as possible.
- When more than one author is involved, all should clearly understand what each is responsible for, what parts of the final report each is to write, and where the names will fall in the order of authorship. Multiple authorship needs to be considered carefully so the above criteria are fully met by all.
- Financial support and technical assistance are credited in the acknowledgments.

Reviews

Both Station-published manuscripts and journal submissions by SRS authors or cooperators are subject to a number of review and approval procedures.

Technical Review

Station Publications—All manuscripts, regardless of author's affiliation, to be published as SRS Station publications are subject to the following review and approval process.

- All Station manuscripts must receive technical review prior to approval by a PL.
- Written review comments must be obtained from at least two peers competent in the subject matter who are outside the author's immediate team, with at least one outside the Station. In some cases, the PL or executive team members may require blind peer review.
- Authors are responsible for keeping comments from reviewers and the **author's reconciliation letter** on file. Files must be passed on to the appropriate team leader when an author leaves the Station.
- The reviewers are determined by the author with concurrence by the supervisor unless blind peer review is needed; in that case, the supervisor provides concurrence on the process for obtaining blind peer review.

- Assessment of comments from reviewers and an author reconciliation letter are required by the PL prior to approval. A copy of the reconciliation letter will be submitted with the manuscript and manuscript approval form to SDG. They will be kept in a permanent file.
- Record the reviewers' names and addresses (or indicate blind review) on the manuscript approval form.

Non-Station Publications—The technical review process may be waived by SRS for non-Station publications when the PL determines that adequate review will be provided through the publishing outlet. A PL may require assessment of comments of the outlet-provided reviewers and the author reconciliation letter prior to resubmission to an external outlet.

Statistical Review

- A statistical review must be done for any manuscript reporting on results of quantitative research, unless waived by the PL. Record the statistician's name and address on the manuscript approval form.
- Reconciliation of statistical review comments is to be retained on file and included in the reconciliation letter required by program managers for manuscript approval.

Policy Review

The manuscript is reviewed for adherence to Station and Agency policy prior to submission to SDG or an external outlet. Policy review includes examining text for appropriate reference to management activities. By asserting one type of management action over another, an author begins to engage in the decision process itself. Consequences of this include the questioning of scientific credibility of the Station and Forest Service Research. The policy reviewer must use judgment in determining if the reference to management is appropriate or not. Certainly, scientific information may have important management implications, and these should be described. Publications can provide decision tools to help managers make decisions based on scientific information. Management considerations and potential outcomes of various decisions based on scientific knowledge also are very appropriate.

Project Leader Approval of Manuscript

- The PL approves the adequacy of technical content, technical review, statistical review, and consistency with Station and Agency policy prior to submission to SDG or an external outlet.
- When a PL or nonprogram Station employee (such as someone in the Director's office) is an author, a member of the executive team will provide the above review and approval to submit for publishing.
- If the manuscript is approved, the SRS Project Leader forwards it to SDG.

Publication Preparation Policy

- If the manuscript is for an outside outlet, editing may be bypassed at the discretion of the PL.
- For Station publication, a manuscript submission to SDG must include a signed manuscript approval form, to SDG.
- For outside publication, submitting a manuscript approval form is not required but is strongly encouraged for the author's benefit and for SRS recordkeeping of its scientists accomplishments.
- All manuscripts to be Station publications are prepared for final publication by SDG.
- Manuscripts must be complete and in final form when they are received by SDG. Incomplete manuscripts will be returned to the authors.
- Manuscripts move through SDG in the order in which they are received, except with approval of the SDG Assistant Director.
- The SDG will cancel a manuscript file if an author holds any materials during review for more than 6 months.
- Authors review the paper twice after submitting it through the PL to SDG:
 1. After the edit, the editor returns the paper to the author for corrections and submission of corrected hardcopy and electronic version.
 2. When the layout is complete, the author sees a .pdf of the page proof. A note is included with instructions.

- Printer's proofs are reviewed in SDG and not by the author unless an exception is requested in writing and only if there is some compelling reason.

Station Publication Distribution

- All Station publications are placed on the Internet when final proofs are received from the printer.
- Sufficient hard copies are produced for 2 years of distribution (10 years for inventory publications). This differs with each publication, and is determined by the Production Editor, and, as appropriate, in conjunction with the author or Project Leader.
- Some publications are now made available online only.

Errata

Author or Project Leader should bring errors in published material to the attention of the Production Editor as soon as possible, ideally within a short time after publication. The Production Editor will determine the appropriate action, based on egregiousness of the error and other factors.

Final Reporting and Closeout of Non-Station Papers

For a manuscript published in a non-Station outlet, send a pdf of the article to the Station's Internet Services Team in SDG. Also, please send two copies of the actual publication (not a draft) to the Station's Information Specialist in SDG. This should be done as soon as possible after publication.

In either case, these materials will be used for the *Attainment Report* that goes to Congress and Compass, which serve as the primary notification of the publication to clients and partners. Also include where the item can be obtained if not the laboratory.

Timeline

Various factors affect the length of time it takes to publish a manuscript:

- Length of the paper.
- How closely the paper follows the format of the outlet (SRS or outside publisher).
- How many papers are in the editing and layout queues.
- How long the author keeps the paper for each review.
- Printing time, which normally takes 4 to 6 weeks.

Publication Categories and Outlets

Station Series

- Select a series for your manuscript. Call an editor if you're unsure which one to use.
- The Station does not have authority to create new series.

Category	Audience	Cover	Class of Material
Research Paper (RP)	Scientists and resource managers	Separate, if more than 32 pages	Results, analyses, conclusions of formal studies or experiments
General Technical Report (GTR)	Researchers, resource managers, general forestry public	Separate, if more than 32 pages	Information of a technical nature, but not an original report; proceedings, computer programs, annotated bibliographies, and so forth
Resource Bulletin (RB)	Scientists and resource managers	Separate, if more than 32 pages	Economic information of permanent value on timber and other forest resources or their utilization
Research Note (RN)	Scientists and resource managers	Self	Observational information on new techniques or instruments, especially of how-to-do-it type or incidental discovery
Science Update (SU)	General public, members of Congress, cooperators, and supporters	Self or separate	Annual reports, State update sheets, interpretive brochures, program/project descriptions
Unnumbered publication	Any FS audience, depending on subject matter	Separate, if more than 32 pages	Nontechnical information that does not become part of forestry literature, such as publications lists, facilities brochures, and forest guides.

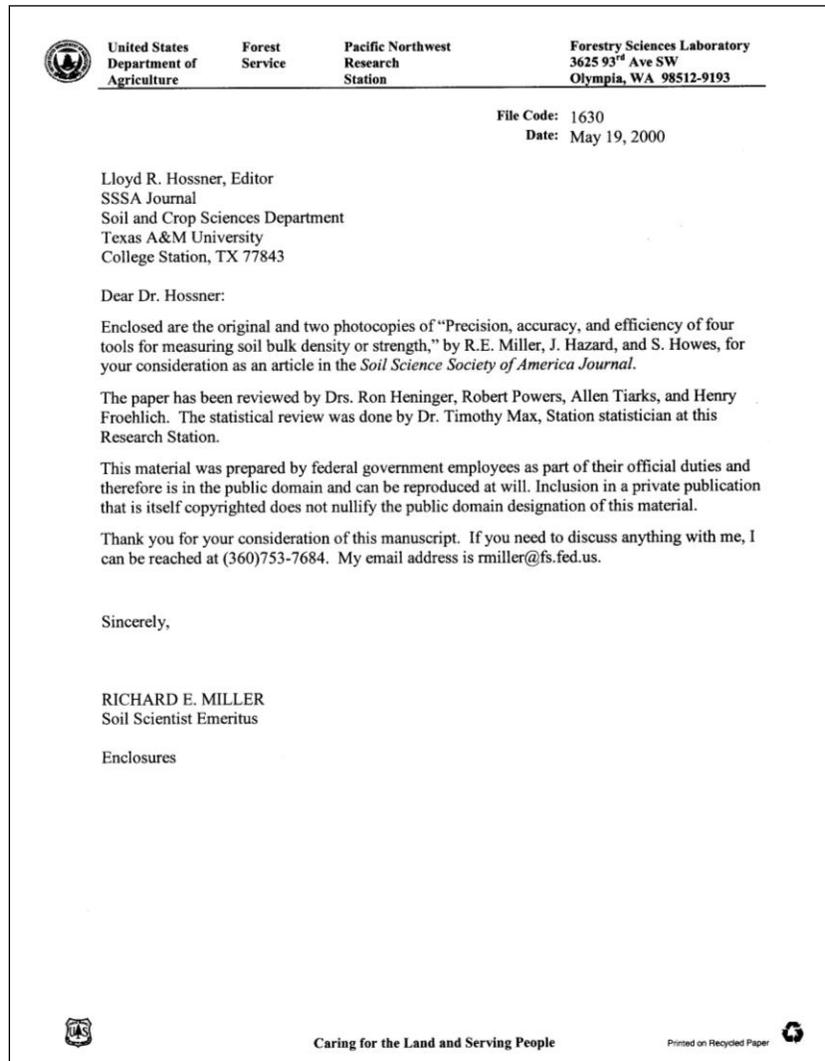
Outside Publication

- All correspondence with journal editors and others associated with non-Station publication is the responsibility of the author(s). See "Cover Letter" below.
- Scientists should contact the Information Specialist to arrange for copyright forms, page charges, and reprint/pdf orders. The Information Specialist places the order and interacts with publisher to receive reprints and to pay page charges.
- Author(s) should follow the formats and other editorial considerations prescribed by the journal.

Cover Letter

- Prepare cover letters to outside publishers on formal Station letterhead.
- Check the publisher's instructions for what they want included in the cover letter. Most want reviewers named. Some want names of potential additional reviewers. Almost all want a statement that the paper has not been submitted elsewhere and, certainly, not published elsewhere.
- If part of the manuscript has been published previously, be up-front about it and explain the circumstances. Include a copy of the item with your submittal.
- Include the copyright statement in your letter (shown in example, next page). See also "Copyright."

Example of cover letter:



Rejected Manuscript

- A new manuscript approval form must be signed by the PL before a rejected manuscript is sent to SDG for publication in a Station series. Put a note on the form to indicate that it is a resubmittal replacing a previous journal submittal. This will close the old case file.
- If the manuscript did not previously have technical review, it will need review before being resubmitted as a Station paper (see "Reviews").

Permissions, Disclaimers, and Credits

Color Printing

Permission to print in more than one color (including color photocopying) must be requested from the WO by the production editor with strong justification—such as to identify organisms or depict damage—supplied by the author. Prepare your paragraph of justification and send it with your manuscript.

Brand Names

Avoid using commercial names of equipment, pesticides, and so on. If you must mention a product or company, include the following disclaimer statement, which goes in the inside front cover: The use of trade or firm names in this publication is for reader information and does not imply endorsement by the U.S. Department of Agriculture of any product or service.

Copyrighted Material

To reproduce copyrighted tables or illustrations, you need written permission of the copyright owner, usually the publisher. You also need written permission for using personal correspondence or unpublished communications as support for your data. Send a photocopy of the page on which you mention a personal communication to the person you quote or paraphrase. Send copies of the written permissions to SDG when you submit your manuscript.

Legal Documents

Legal documents are cited parenthetically in the text.

Example: (National Forest Management Act of 1976, Public Law 94-588).

Manuscript Preparation

This section provides a checklist for the author(s) when submitting a manuscript for publication. It also provides specific instructions on how to prepare the manuscript for printing as an SRS publication. FSH 1609.11 has instructions for preparing manuscripts to be published by the WO or the Department. Journal articles and proceedings papers should be prepared to conform to the style and format of the specific outlet.

Checklist for Assembling the Manuscript

When preparing a manuscript for SRS Technical Publications, please refer to the Authors Checklist (see appendix) to ensure you submit a complete package. Incomplete packages will be returned to the author. Briefly, your package should include:

1. Completed Manuscript Approval Sheet (current version located at www.srs.fs.usda.gov/working/author)
2. Paragraph on why color is needed in the final publication (if applicable)
3. Letters of permission (for use of any copyrighted material, unpublished sources, and personal communications)
4. Reconciliation letter
5. Manuscript text (hard and electronic copies) in the following order:
 - Title page (authors, pesticide disclaimer or product disclaimer, or both, if needed, author statement)
 - Formal title page (if needed)
 - Abstract including citation (except for Research Notes) and 5 to 7 keywords
 - Preface (if needed)
 - Summary (required for Resource Bulletins and suggested for long papers)
 - Contents (strongly suggested for papers of 30 or more pages of typewritten text)
 - Text
 - Glossary (if needed)
 - Species list (optional)
 - Acknowledgments (optional)
 - Tables
 - Figure caption list
 - Photo credits
6. Acknowledgments
7. Literature Cited (or References)
8. Appendix including appendix tables
9. List of footnotes
10. Figures (See Graphics section, page 20.)

Additional Details: “Make Sure You...”

- Check titles, affiliations, and addresses of authors to be sure they are correct.
- Do a spell-check.
- Give the scientific name for each organism (include all authorities if used).
- Revisit referenced Web sites to check accuracy of the URL and availability.
- Check the numbering of footnotes and any text references to earlier footnotes.
- Acknowledge others who contributed.
- Make sure there is a citation for every reference in the text and a text reference for every citation.
- Number tables consecutively throughout in the order they are mentioned in text.
- Number figures consecutively throughout in the order they are mentioned in text.
- Include all tables and figures in hard copy and electronic format (**do not** embed in the text).
- Include photos or materials for an illustration on the cover.
- Include logos for other agencies if they are needed for a formal title page.

Manuscript Format Instructions

If authors and others who key/format manuscripts follow these guidelines, manuscripts will move more quickly through the production process.

Manuscript Text

- All punctuation followed by one space (not two).
- All pages have a header (right justified) with senior author's last name and page number.
- **Do not** imbed figures, tables, photos, etc., in the text.
- **Do not** underline URLs; remove hyperlink function from URLs.
- **Do not** use software to generate table of contents, footnotes, or index.
- **Do not** include page numbers with a table of contents page.
- Scientific names of trees, plants, and other organisms are included in parentheses and italics after first use only.
- There is a citation for every reference and a reference for every citation (text, tables, or figures).
- Include author(s) information (i.e., working title, affiliation, and address) on the cover page.
- Units of measure (English, metric, or both) should be tailored to the audience; see General Guidelines under the Tables, Tabulations, and Lists section, page 17.
- Use Microsoft equation editor or MathType[®] for mathematical equations.
- Paragraphs, headings, footnotes, and figure captions are flush left. Literature citations are flush left with a two-space hanging indent and followed by one blank line.
- Quoted material must be keyed exactly as in the original, including spelling and punctuation. Quotes of less than five lines are run into the sentence and are enclosed in double quotation marks. Quotes of more than five lines are indented three spaces from each margin with quotation marks omitted. Quotes within quotations are set off by double quotation marks. When using single or double quotation marks, place commas and periods inside the closing quotation mark; other punctuation marks go inside only if they are part of the quoted material.
- Do not capitalize the following words when referring to them in the text: table, figure, chapter, section, appendix; if figures are referenced in parentheses, abbreviate them; example: (see fig. 1) not (see figure 1).
- Avoid contractions and inanimate ownership. Correct: does not, cannot, diameter of the log; incorrect: doesn't, can't, the log's diameter. Do not use a possessive form when actual possession or ownership is not implied; examples, Users Guide, Writers Aid Shelf, 1990s.
- Spell out acronyms at first mention in manuscript. Sentences may begin with an acronym after first mention in text.
- Avoid using acronyms and abbreviations in headings.
- Font and paragraph styles (use Heading 4 only if necessary):
 - **HEADING 1** (use **Helvetica 12 pt. bold, CAPS**, and start text on next line, flush left)
 - **Heading 2** (use **Helvetica 10 pt. bold** and start text on next line, flush left)
 - **Heading 3**—Text follows. (use **Times New Roman 10 pt. bold** followed by an em dash)
 - **Heading 4**—Text follows. (use **Times New Roman 10 pt. bold, italic** followed by an em dash)
 - Text is single-spaced. (use **Times New Roman 10 pt.** for text, single-spaced, and flush left)

Tables and Tabulations

- Do not imbed tables in the text—keep them separate at the end of the manuscript.
- Submit hard copy and electronic copy (in MS Word or Excel) of all tables.
- Save each table into an individual table file (e.g., **table1.doc**, **table2.xls**, etc.).
- Keep tables to a reasonable size. Typical widths are 3-3/8, 5-3/8, and 7-1/4 inches.
- Type of 9 pt. Helvetica is recommended, but use no smaller than 8 pt.
- Tables are single-spaced.
- Avoid using spaces or empty columns to separate or line up data—**use tabs** or the MS Word table function.

Graphics

- Do not imbed graphics in the text—keep them separate at the end of the manuscript.

- Submit hard copy and electronic copy of all graphics.
- Use Helvetica type font for labels within graphics.
- Save each figure into an individual graphic file (e.g., **fig1.eps**, **fig2.ai**, etc.).
- Acceptable formats: *.eps, *.ai, and *.xls.
- Graphics should be no smaller than 300 dpi and 3-3/8-inches wide.
- Captions are included after the text, single-spaced, and on a separate page.

Literature Cited

- Do not underline URLs; remove hyperlink function from URLs.
- Cite references within text as follows: (Harris 1980, Stern and Walls 1996a) or (Jones, in press; Mills 1988)
- Do not link the within-text citations, e.g., Miller (1980), with the lit cited section.
- Follow ANSI for styling citations; see Literature Cited section, page 33, for specifications and examples: <http://www.srs.fs.usda.gov/working/author/>

Parts of the Manuscript

This section of the Authors Guide provides detailed information on preparing each part of the manuscript for submission to SRS for publication. Tables, Graphics, and Literature Citations are treated in separate sections following this one.

Cover

Department regulations govern the design of covers. The format must fit Department specifications for typeface, type size, and placement of art, title, and authors' names. Department regulations also govern what goes in the identity strip, including logos. Deviations require written justifications that provide details on the specific requirements of your audience or material.

Research Papers, General Technical Reports, and Resource Bulletins have covers; Research Notes, administrative reports, and most miscellaneous publications do not. If a publication has more than 32 text pages, a cover of heavier stock and a second ink color is allowed; for those with fewer than 32 pages, the cover must be a "self-cover," meaning it is the same paper stock and ink color as the text. Suggestions for cover designs from the authors are appreciated. Finished cover designs are sent to the author for approval.

Pesticide Statement (inside front cover)

Papers mentioning pesticides must include one of three possible statements about pesticides, usually printed on the inside front cover of the published paper. The three are shown in FSH 1609.11, sec. 17.3, but the following statement is the one most often used in publications reporting research:

Pesticide Precautionary Statement

This publication reports research involving pesticides. It does not contain recommendations for their use, nor does it imply that the uses discussed here have been registered. All uses of pesticides must be registered by appropriate State and Federal agencies before they can be recommended.

CAUTION: Pesticides can be injurious to humans, domestic animals, desirable plants, and fish or other wildlife—if they are not handled or applied properly. Use all pesticides selectively and carefully. Follow recommended practices for the disposal of surplus pesticides and pesticide containers.

Product Disclaimer (inside front cover)

The use of trade or firm names in this publication is for reader information and does not imply endorsement by the U.S. Department of Agriculture of any product or service.

Title Page

Page 1 is the title page and has three parts:

1. Title of manuscript; key the title flush left, uppercase and lower case letters.
2. Authors with names typed as they will appear on the cover of the finished publication.
3. Author statement. Name each author in upper and lower case, **bold**, 10 pt. followed by their title, which should be a working title (e.g., Research Ecologist), not administrative (e.g., Program Manager). Give the complete mailing address unless the author works from home. In that case, give only the city, State, and the two-letter postal abbreviation. If an author's affiliation has changed since the work was done, the new one is added at the end. Add "(retired)" after title, if applicable. If none of the authors is a Station employee, a statement must be added at the end showing the agreement under which the work was done. Examples follow on next page.

Examples of Author Statements:

Bert R. Mead is a Research Forester, Forestry Sciences Laboratory, Anchorage, AK 99503-3954.

Raymond M. Sheffield, Resource Analyst (now retired), **James W. Bentley**, Resource Forester, and **Michael Howell**, Resource Forester, U.S. Forest Service, Southern Research Station, Forest Inventory and Analysis Research Work Unit, 4700 Old Kingston Pike, Knoxville, TN 37919.

Abstract and Keywords

- “Abstract” is a number 1 heading (i.e., 12 pt. Helvetica bold, all caps).
- Key the abstract on page 2 of the manuscript.
- Keep the abstract between 200 and 250 words.
- At first mention, give both scientific and common names of organisms; thereafter, use the name appropriate to the audience.
- Keywords—List five to seven keywords in alphabetic order after the abstract. Select terms that will help in retrieving the publication. Include terms used in the title because not all computer programs search titles. An example follows:

Keywords: Diversity, ecosystem management, natural regeneration, pine-hardwood, shortleaf pine, visual quality.

Summary

- “Summary” is a number 1 heading (i.e., 12 pt. Helvetica bold, all caps).
- The summary is an expanded abstract, and the word “summary” is reserved for this use. The word is not used for a concluding section of the text.
- A summary is required in Resource Bulletins and is suggested for long papers.

Preface

- “Preface” is a number 1 heading (i.e., 12 pt. Helvetica bold, all caps).
- The function of a preface is to give the author’s rationale for writing the paper. A preface is not necessary in most SRS publications. It is used only in major works or in papers that are part of a series. The same preface is used in each paper.
- A preface also might be used in a very large work to explain some of the procedures used to compile it and the authorship of subsections (when those authors may not appear as authors of the entire document).

Cooperation

Authors are responsible for acknowledging contributions by Government and non-FS cooperators (FSM 1631.44), as well as cooperation with other agencies. A manuscript to be published in cooperation with another Government agency must have the approval of the cooperating agency before it is sent in for editing.

Acknowledgments

- “Acknowledgments” is a number 1 heading (i.e., 12 pt. Helvetica bold, all caps).
- Any acknowledgments go at the end of the text before “Literature Cited.”
- It is appropriate to acknowledge technicians, cooperators, reviewers (but be careful here: occasionally a reviewer will not want his/her name given), sources of special materials, artists, editors, publication specialists, and others who have gone above and beyond in helping with the research or the paper.
- Do not phrase an acknowledgment to imply endorsement.
- Do not acknowledge the authors of the manuscript; we assume they did a few things.
- The acknowledgment is simply worded: avoid aggrandizement and flowery language.

Contents

- “Contents” is a number 1 heading (i.e., 12 pt. Helvetica bold, all caps).
- If you need or want a Contents page in your paper, prepare it from the number 1 and 2 headings in the paper. Do not include number 3 headings.
- Type headings in **bold**.
- **Do not add page numbers to the contents; they will be added in final preparation.**
- A contents page usually is necessary in any paper over 25 to 30 pages in final published length (about 50 to 60 pages manuscript length). It is not required in shorter papers but can be useful to the reader in many instances so should be considered.

Text Citations

Make sure that (1) assertions not supported by data have literature citations, (2) there is a citation for every reference, and (3) a reference for every citation (text, tables, or figures). Use lowercase letters to distinguish references that have the same author(s)/year (example: Miller and Wear 2001a).

Personal Communications, Correspondence, and Unpublished References (Footnotes)

Required information for personal communication—year, author’s full name, job title, and complete address including ZIP code.

Example: Personal communication. 1999. A.B. Smith, Research Forester, Froghat Corporation, P.O. Box 10, Medusa, MS 10101.

Required information for personal correspondence—author’s full name, year, document title, and complete address including ZIP code where document is on file.

Example: Smith, A.B. 1999. Letter dated January 1 to Alan Romero. On file with: ROCORP, 100 River Road, Salmonella, ID 01010.

Required information for unpublished references—author’s full name, date, title, number of pages, document type, and complete address including ZIP code where document is on file.

Example: Smith, A.B. 1999. Observations on responses of loblolly pine to recorded music. 29 p. Administrative report. On file with: ROCORP, 100 River Road, Salmonella, ID 01010.

Example: U.S. Department of Agriculture Forest Service. 1998. Field instructions for the southern forest inventory-remeasurement of prism plots. Version 3. 29 p. Unpublished report. On file with: Southern Research Station, Forest Inventory and Analysis, 4700 Old Kingston Pike, Knoxville, TN 37919.

Required information for unpublished manuscript in preparation—author’s full name, title, document type, and complete address including ZIP code of author.

Example: Smith, A.B. Observations on responses of loblolly pine to recorded music. Manuscript in preparation. Author can be reached at Froghat Corporation, P.O. Box 10, Medusa, MS 10101.

Text Footnotes

- Footnotes are indicated in the text (and the appendixes) by superscript numbers. Try to limit the use of footnotes to personal communications and unpublished materials.
- Footnote numbers follow all punctuation marks except a dash but are inside a closing parenthesis if the footnote applies only to the parenthetical statement. Example:

The publication,¹⁶ which was written in 1929 to describe air-¹⁷ and water-born pollutants (as Thomas indicated in an earlier work¹⁸) by an anonymous author.¹⁹

- If you refer again to material already footnoted, follow this example:

These areas totaled about 1,900 acres (see footnote 23).

- In a publication divided into chapters, footnotes begin with 1 in each chapter.
- Footnotes in tabulations are numbered because tabulations are part of the text.
- Footnotes in tables and tables in appendixes are lowercase, italic letters.

Literature Citations

Examples are provided in the “Literature Citations” section of this guide.

Appendix

- “Appendix” is a number 1 heading (i.e., **12 PT. HELVETICA BOLD, ALL CAPS**).
- Number appendixes only if there are more than one. Use uppercase letters. Each appendix is a number 1 heading.

Correct: Appendix A
Incorrect: Appendix IV

- Explanations and elaborations not essential to the text (but helpful to the reader) belong in an appendix, as do texts from other documents, laws, etc., used to substantiate your paper.
- Lists of common and scientific names of species, other long lists, questionnaires, forms, how-to explanations, figures, and multitudinous tables also can go in appendixes.
- Appendix tables and figures are numbered consecutively. Appendix tables and figures are numbered separately from those within the text. When referring to appendix tables and figures within the text of the document, use table A.1 (appendix) or figure A.1 (appendix).
- Footnotes start with 1 in each appendix (see “Text Footnotes,” above).
- In the text, “appendix” is not capitalized unless it begins a sentence or used with a title; if used parenthetically, it’s abbreviated: (app. 3).

Glossary

- “Glossary” is a number 1 heading (i.e., **12 PT. HELVETICA BOLD, ALL CAPS**).
- When included, a glossary is put at the end of the text (after citations and any appendixes but before an index) so that the reader can find it easily.
- Arrange terms in alphabetical order, each with its definition.
- Terms are **10 pt. bold** and followed by an em dash.
- Subentries are indented, and the term being defined is in **bold italic**.
- Capitalize only proper nouns.

Glossary example:

Forest types—A classification of forest land based on.... The following summarizes the forest types of southeast Alaska:

aspen—Forests in which quaking aspen comprises more than 75 percent....

Tables, Tabulations, and Lists

Please use MS Word to create your tables. Use tabs or the table function, rather than spaces, to separate columns. It is the responsibility of the author(s) to ensure data is represented accurately.

General Guidelines

- Keep tables to a reasonable size. Standard portrait widths are 3-3/8, 5-1/2, 7-1/4 inches.
- Tables that don't fit within the column or page dimensions should be broken into separately numbered tables or be split into two parts.
- Number tables consecutively with Arabic numerals, with the table number separated from the title by an em dash (Table 1—Sample of SRS data...), and mention each in order in the text. The numbering continues through the text and begins anew for the appendices. Appendix tables need not be mentioned in the text, but if they are mentioned, can be out of numerical order.
- Capitalize only the first word of each entry and proper nouns in a table; this includes the title, headings, column entries, and footnotes. In text, the word table is not capitalized unless it starts a sentence.
- With the exception of metric, use abbreviations only when space is limited. Spell out “per” with English units of measure when space allows. If English units are abbreviated, substitute a slash (/) for the “per.”
- Use a slash or negative superscript numeral with metric units of measure (example: kg⁻¹, cm/day) for “per.”
- If a number in the data column is less than 1, place a zero before the decimal point (example, 0.89).
- Every cell must have data, an em-dash, or N/A with a note below the table explaining meaning.
- For questions about tables, call the Production Editor (828-257-4391), Editorial Assistant (828-257-4351), or Writer/Editor (828-257-4847).

Style Guidelines

To properly style tables, follow the guidelines in the table below.

Table 1—Specifications for styling a table for submission to SRS Technical Publications Group

Category	Element	Specs
Font	Title	Helvetica, 9 pt, bold, one blank line below
	Header row	Helvetica, 9 pt
	Table text	Helvetica, 9 pt
	Footnotes, source notes, etc. ^a	Helvetica, 8 pt
	Units of measure	<i>Helvetica, 8 pt, italic</i>
Rules ^b	Header row	0.5 width, black, above and below
	Bottom row	0.5 width, black, below
Alignment	Caption	Flush left
	Table text, left column	Flush left, indent text wrapped to next line
	Table text, other columns	Align as necessary to best present the data
	Units of measure	Center among columns using same unit

^a Footnotes, source notes, etc., are placed here (below bottom rule).

^b Rules are the solid black lines that define a row (or set of rows).

Sample table styled correctly:

Header row rules are 0.5 width, black.

Table title is 9 pt, bold, Helvetica w/no period and a line space between it and table. Em dash between table # and title.

Units of measure are 8 pt, italic, Helvetica; centered above columns and below the Header row rule. Use dashes to span columns.

Table 2—Estimated parameters (standard error) and associated -2LL and AIC values for ATC, MTC, and ATMSC fitted using eq. [1]

Variable	b_0	b_1	b_2	b_3	b_4	-2LL	AIC
	-----unit of measure a-----					unit b	unit c
ATC	2.5346 (0.1814)	0.0294 (0.0075)	168.82 (17.13)	-0134 (0.0021)	32.6940 (0.8666)	5484.1	5498.1
MTC	1.5314 (0.1312)	0.0230 (0.0054)	120.83 (12.59)	-0.0130 (0.0020)	32.5538 (0.8257)	4736.4	4750.4
ATMSC	3.8348 (0.2201)	-0.0048 ^a (0.0089)	177.02 (21.08)	-0.0131 (0.0022)	34.6174 (0.9865)	5536.6	5550.6

Note: P-values for all parameters were <0.0001 except for those noted.

^a Parameter estimate not significant at $\alpha = 0.05$.

Left column is aligned flush left; indent any text that is wrapped to next line.

Footnotes, source notes are 8 pt Helvetica, flush left, one blank line space after bottom

Bottom rule is 0.5 width, black.

Parts of the Table

Title

- Give each table a complete title that answers these questions: What? Where? When? Describe the stub column, the data columns, and the main limiting factors—agent, place, and time. Put all other information in footnotes.
- Capitalize only the first word of the title and proper nouns.
- The table title is the same point size as table text, boldface, with an em dash after the table number. It is not a complete sentence and does not end in a period. If you find the need for a period and a new sentence in your table title, try adding a semicolon between the sentences or, better yet shorten the title and put the extraneous information in footnotes.

Notes

Put explanatory information and other unlettered notes below the ending table line and above any footnotes in 8 point—examples: NA = not available, — = negligible, or — = not applicable (or whatever you mean by the dash). Put a period at the end of the note. Separate unlettered notes with a semicolon.

Footnotes

Each table has its own footnote letters when footnotes are necessary. The letters are lowercase, superscript, italic, and one point size larger than point size of table text. Footnote letters are always placed at the end of a heading—not in the middle. The letters also go after the complete entry in the stub

and data columns. If two footnotes appear together, separate them with a space, not a comma. Footnotes are in alphabetical order from left to right, top to bottom; in headings, from main heading to subheading.

Source notes

Source notes, such as Source: USDA Forest Service (1990) are formatted like footnotes, with a period at the end of the note, and are 8 point. Source notes follow footnotes (in alpha order, if citations).

Units of Measure

- Units of measure appear above the data columns and below the second table line. If all the entries are 1 or less (example, 0.97), make the unit of measure singular; otherwise, make it plural.
- Units of measure are 8 pt. lowercase italic and in the same font and point size as the table. If space permits, spell out English units of measure. Always abbreviate metric units of measure.
- If the same unit of measure applies to several adjacent columns, center it over the columns and add leaders (hyphen, space, hyphen) on both sides to bridge (but not overlap) those columns. Do not use leaders if the same unit applies to all the data columns or if the unit of measure is wide enough to extend over its columns. The unit of measure for the stub column is flush left.

Tabulations

- A tabulation is data presented in the text (unlike tables). It has at least two columns, but not more than five. It usually is preceded by a sentence (ending with colon) that explains the tabulation.
- A tabulation looks exactly like a table except without title and top and bottom lines.
- The box heads are bold.
- Footnotes in a tabulation are text footnotes; number them consecutively with other text footnotes.

The following tabulation shows study data:

Sample characteristics			
Stratum	Stand age	Area cut	Net wood residue volume
	<i>years</i>	<i>acres</i>	<i>cubic feet per acre</i>
Public	200–240	17–142	1,328–3,803
Private	200–500	11–100	2,304–5,248

Lists

A list is a single column of data in the text, usually preceded by an introductory sentence ending with a colon. It is never labeled as a table. Items are listed by number if order is important or with bullets if the order of the items is not a factor. When building lists, make sure all items are parallel. Avoid mixing phrases with complete sentences. If you start items with an -ing or -ed verb, do so all the way through the list. A colon precedes the list. Each item in the list has an initial cap, whether it is a complete sentence or not. Do not punctuate items in a list unless they are complete sentences. Do not key an and at the end of the penultimate item.

Graphics

“Graphics” include all figures (maps, charts, graphs), photographs, drawings, proposed cover art for your manuscript, and any agency logos needed for a formal title page.

General Guidelines

- Prepare graphic to be print-ready in one of three sizes: 3-3/8, 5-1/2, or 7-1/4 inches”. Avoid landscape orientation.
- **DO NOT EMBED GRAPHICS IN THE TEXT OF YOUR MANUSCRIPT.**
- Please provide graphics in their native format.
 - Acceptable formats: SigmaPlot, Excel, Illustrator, Freehand, and editable .eps (300 dpi).
 - Photographs must be submitted as .jpg, .png, or .tif files at 300 dpi and actual printing size.
 - ArcView and GIS maps must be submitted as editable .eps files.
- Include high-quality hard copies of all graphics with your paper.
- Each piece of graphics (except the cover art) has a caption, which starts with the word “figure” and then an Arabic numeral. Also see “Cover Art” (below) and examples (next page).
- In the text, the word “figure” is not capitalized unless it begins a sentence; it is abbreviated when used parenthetically (e.g., fig. 13).
- Avoid patterns use these grayscale amounts: 15 percent, 30 percent, 45 percent, 60 percent, 75 percent, and 100 percent.
- Make sure lines and any text within the graphic will be legible once reduced to column or page width. Determine the appropriate text size and line width by considering how the graphic will appear in the final publication (i.e., if you create a large map that will be reduced in size when printed, be sure to use a font size that will appear to be 8-10 pt. when reduced).
- Graphics embedded in MS Word or PowerPoint presentations will be treated as print-ready and will not be altered.
- The overall design (type, line weight, and other visual keys) should be consistent across all figures in a manuscript; for example, if a solid black line represents volume in one graph, use the same solid black line for volume in all the other figures.
- For questions about graphics, call the Production Editor (828-257-4391), Editorial Assistant (828-257-4353), or Visual Information Specialist (828-257-4330).

Style Guidelines

To properly style graphics, follow the guidelines in the table below.

Table 1—Specifications for styles within a graphic for submission to SRS Technical Publications Group

Category	Element	Specs
Font ^a	Figure caption	Helvetica, 8 pt, em dash follows figure number
	Axis unit values	Helvetica, 8-9 pt
	Axis label	Helvetica, 9-10 pt, initial caps
	Text within fig, graphic	Helvetica, 9 pt
Lines	X-Y axes	0.5 width, solid, 100 percent opacity (black)
	Gridlines	0.5 width, dashed, 50 percent opacity (gray)
	Lines within fig, graphic	0.5 width, 50 percent opacity (gray)

Cover Art

- Images for the cover should be provided in both hard copy and electronic copy. If graphic support (for illustrations, etc.) is needed, the author should sketch out or otherwise provide a visual concept for the cover.

- Credit line or caption for any photo or illustration used on the cover goes after the author information on the inside of the front cover.

Figures

Figure Guidelines

- Figures should be camera-ready at time of submittal of the manuscript.
- Lines in figures should be heavy enough and lettering large enough to permit reduction in the final layout.
- If one figure has multiple charts or graphs and they need explanation in the caption, use an uppercase, bold, sans serif letter in parentheses [(A), (B), (C)] no more than 2 points larger than the text font, in the upper left corner of each, preferably outside of the chart.
- Use three-dimensional graphs only when the data require three axes to be meaningful. Three-dimensional charts misrepresent data.
- Remove all signatures and initials on original artwork; instead, give credit in the acknowledgments or in a credit line at the end of the caption.
- Use descriptions (with units of measure in parentheses) for axis labels.

Photography

- All photographs, including those on the cover, must have captions, but they do not need to be numbered as figures unless they are referred to in the text.
- If photos are supplied as prints, they should preferably measure 13 by 18 cm (5 by 7 inches), but minimum 10 by 13 cm (4 by 5 inches).
- If you submit slides, indicate the figure number in the top right corner of the slide mount. Show proposed crop marks on the slide mount as well (in pencil).
- For digital image format, see “General Guidelines” above.
- Hint: If you scan slides for digital submission, dust them first.
- Include the photographer’s name as part of the electronic file name.
- All photographs must have attributions. Add the attribution to the caption; example: Photo by John Stanturf. Written permission is required if you want to use any photographs that are not in the public domain. Public domain photographs are those taken by Federal employees on Government time. Include a copy of the permission you received from the publisher and add a reference for the publication to the Literature Cited section. If the photo was taken by a Government employee or another individual (other than the author or authors) and has not appeared in a publication, add the attribution in parentheses at the end of the caption Photo courtesy of G. Bengsten. Photo by The Nature Conservancy.
- Photographs submitted for publication must be in sharp focus with clear, well-lit imagery. If photographs are to be printed in one color, black-and-white glossy prints provide an acceptable image quality. The film speed should be equal to 100 ISO or less. Recommended speed is 50 to 60 ISO. The lower speed will help assure that no “grain” will be visible in the final printing. Color prints can be converted to one color, but detail may be lost.
- The detail required in scientific publications is lost when blurred, washed out, or too light or too dark prints are used. If indoor photography is required to illustrate processes or systems, use photoflood lights on stands to adequately light the subject, as well as a tripod to stabilize the camera. This may require hiring (contracting) a professional indoor photographer for the best images for your publication.
- When using a digital camera, rely on the megapixel rating, not necessarily a brand name. Use the highest megapixel camera you can. If you must use a digital camera make sure that the rating is at least 8.0 megapixels, although 10.0 megapixels or greater is preferred. (A 10.0 MP digital camera will provide very clear photos when printed on 8- by 10-inch photo paper.)When using a digital camera, make sure the highest possible image quality is set on the camera, with its accompanying large file size. Many digital cameras place images on SmartMedia™ cards, CompactFlash™ cards, and other small storage media. Make sure you have enough cards for your project and transfer the images to your PC as soon as you return to the office. View every image for highest quality and delete the

images that do not meet your quality standards. Place the selected images on CD or other safe storage media as a backup.

- Remember, the quality of the photograph will only be as good as the film or the digital rating of your camera, and a photo that is too light cannot be saturated with an image that does not exist. A photo that is slightly dark is better than nothing, but one that is very dark will lose all detail of your image and is not usable.
- When emailing digital photos or low-resolution scans, send the original images without retouching or resizing. Low-resolution images can be used for placement only.

Captions

- Captions for all graphics (except any caption for a cover photo) go on a page at the end of the manuscript after the tables.
- The figures are numbered consecutively throughout the paper. The number is followed by an em dash (see examples below).
- Figure captions are flush left. Double-space between the captions.
- Identify the figure completely, but avoid such wording as “Map of...,” “Location of...,” or “Chart showing....”
- Each photo used needs a credit line at the end UNLESS all photos were taken by the author(s); if that’s the case, note it below the author statement on page 1 of the manuscript. Specially created figures and maps may also have a credit line.

Figure caption examples:

Figure 1—Mean temperature and relative humidity by sample period.

Figure 2—Uncut forest at Hoodoo in the Blue Mountains of northeastern Oregon, 1955: (A) protected, and (B) grazed. (photos by Art Tiedemann)

Figure 3—Juvenile steelhead trout. (photo courtesy of U.S. Forest Service, Southern Research Station)

Figure 4—Celilo Falls on the Columbia River, 1947. (illustration courtesy of Traci McMerritt)

Color Printing

- All color printing must be approved by the Washington Office under the rules of the Joint Committee on Printing.
- If color is needed in your paper, prepare a paragraph on exactly why you think it is needed and attach to the manuscript approval form. The Station Art Director and Production Manager are the only persons having authority to send a request letter to Washington and have the authority to decide if a request will be forwarded to Washington. Decisions are made based on your paragraph and review of the figures.
- Do not use color unnecessarily. Approval for printing in color usually hinges on object identification (species, diseases, damage not visible in black and white) or complex maps where additional color is needed for clarity.
- Color cannot be used to be decorative, in place of good design, or when printing in black and white (and shades of gray) will adequately convey the information.
- Printers’ proofs are reviewed in SDG and not by the author unless an exception is requested in writing and only if there is some compelling reason.

Writing Aids

Acronyms and Abbreviations

- Spell out State names in text unless you are giving an address, for which you use postal code abbreviations.
- Use acronyms, etc., with restraint; don't overwhelm the reader with them.
- At first mention in each section (i.e., chapter, appendix), give the complete term followed by the acronym or abbreviation in parentheses. Afterward, the short version may be used, except at the start of a sentence. There, either spell it out again or reword the sentence to avoid having it come first.
- See also "English Equivalents" in "Manuscript Preparation" for abbreviating units of measure.
- County, fort, mount, point, and port are not abbreviated; Saint (St.) and Sainte (Ste.) are.
- The guide we use for most abbreviations is the GPO style manual.

Apostrophes

- It is not necessary to use an apostrophe to show the plural form of most acronyms, initialisms, or abbreviations, except where clarity and sense indicate.

Correct: PMs, ABCs, CPUs, Ph.D.s

1990s, 1700s

temperatures in the 80s

twos, threes, and fours

three Rs; but dotting i's and crossing t's (for clarity)

the articles' links (possessive)

Windows' interface (possessive)

do's and don'ts

ins and outs

whys and wherefores

yeses and noes

Incorrect: RF's (unless it's referring to something possessed by one RF)

1970's

Windows' interface

don't's

- Generally, the apostrophe should not be used after words that are more descriptive than possessive.

Correct: authors guide

Bias-Free Language

- Use language free of stereotypes or assumptions.
- Use parallel terms in referring to ethnic groups, i.e., Black and White, OR African-American and Caucasian.

Biased	Alternatives
Chairman	Chair, moderator
European, Euro-American	Nonindigenous people, early settlers
Man	One, person, individual, people, human beings, human society
Man, mankind	People, humanity, humankind, human beings
Man hour or day	Staff hour or day, workday, average worker day, labor
Manmade	Manufactured, synthetic, handmade, constructed, produced
Manned	Staffed, operated, run
Manpower	Workforce, staff, personnel, employees, labor

Capitalization

- The basic rule is to capitalize the first letter of a proper name. The correlation is to **not** capitalize anything that is not clearly and irrevocably a proper or legal name.
 - Correct: College of Forestry, Oregon State University
the forestry department at Oregon State University
 - Incorrect: Forestry Department, Oregon State University
- Trend in English today is to less capitalization. Go with it.
- Good resources are the *Chicago Manual of Style* (1993: 233-292, for general guidelines), *American Heritage College Dictionary* (1993, for capitalization of specific words), and Microsoft Corporation (1998: 33-35, 81-85, app. A) for computer-related terms.
- Don't capitalize common nouns used with a number or letter.
 - Correct: mile 7.5, page 37, room 13, section 3, spring 1999, title IV, figure 92, option 9
 - Incorrect: Article 1, Paragraph 4, Rule 8, Schedule C
- Capitalization of geographic names follows GPO naming convention (see <http://geonames.usgs.gov>). Terms such as watershed and basin are not capitalized even with a name (Columbia River basin) unless they are part of the USGS name (Great Basin).

Correct capitalization of words frequently used in SRS manuscripts:

Alaska Native	National Park Service
Alaska Native corporations	Rainier National Park
Arctic Ocean	national park (without name), the
arctic (adjective)	park
Cascade Range (not mountains)	Native American
Chernozem soils (and all the others)	Neotropical
Chief (of the FS)	North Atlantic Ocean, South Atlantic
Clean Air Act of 1970	Ocean
the act	Pacific coast
Congress	Pacific Rim
congressional	ponderosa pine
Earth (the planet)	program manager
earth (soft part of land)	record of decision
East Coast (U.S.)	regional forester, but Regional Forester,
east side, west side	Southern Region
eastern North Carolina	southeast Alaska
Executive order; but	Southeast Asia
Executive Order 34	South Pacific Ocean, North Pacific
Far East	Ocean
Federal	State
Federal and State ownership	Washington State
Federal government (U.S.)	State of Alaska (unless an official
forest plan	agency name within State govern-
geographic information system	ment: State of Washington,
interior Alaska	Department of Natural Resources; or a
Internet (worldwide network)	region: Pacific Coast States)
intranet (single-organization network)	statewide
Mylar	station, but Southern Research Station
Nation	Station Director (of SRS)
nationwide	Sun
National Forest System	Third World
Tongass National Forest	U.S. government
national forest (without name), the	Federal government (U.S.)
forest	the Government

Federal and State governments, etc.
 Washington Office
 Web, Web page, Web site
 World Wide Web
 west coast (U.S.)

Western Europe
 Western North America
 Western United States (region)
 the West
 western Washington

- Irrational capitalization rationales (rephrased from Little 1998):
 “The Acronym is all CAPS, so I’d better capitalize the words when they’re spelled out.”
 “This word is highly technical and to show its importance, I’ll capitalize it.”

Correct: adaptive management area (AMA)
 threatened and endangered species

Latin

- Avoid “etc.” because it usually doesn’t give the reader any useful information, but it may be used to avoid heavy repetition.
- Roman font is used for Latin terms common in English use (*American Heritage College Dictionary* [1993] is good for checking these).
 Correct: ad hoc, a priori, ca., in situ, i.e., e.g., [sic], etc.
- See also “Quotations” and “Scientific Nomenclature,” below.

Mathematical Equations

- **Microsoft® equation editor and MathType®** are the preferred software programs for formatting equations. Normally, one explanation of equation variables is adequate.
- The correct order for signs of aggregation, beginning with the inside parenthesis, is {{{{ () }}}}
- Write mathematical equations as you do sentences; for example,

where	$TEF = BAF / (0.005454d^2n)$	(1)
<i>TEF</i> = tree expansion factor <i>BAF</i> = basal area factor of prism or single gauge <i>d</i> = diameter at breast height <i>n</i> = number of sample plots		

The equation is centered between the left and right margins on a separate line.

Because this equation is referred to in the text, it is numbered. The equation number is flush right and in parentheses. If an equation requires more than one line, the number goes on the last line. On the line below equation (1), “where” is flush left with no punctuation.

- When numbered equations are referred to in the text, the number is in parentheses. Variables are always italicized.
- The slant line is preferred to the horizontal fraction symbol. Operational signs (such as /, x, +, -, and =) have one space before and after them. For long, complex equations, layout person may have to break the equation because it exceeds the width of the column. If so, layout person will break it before the sign of operation, and the next line will start with the operational sign aligned with the first term to the right of the equal sign.

Mathematical Symbols

- The following math symbols are acceptable within the text: >, <, ≥, ≤, and ±. (These may not print correctly from your software; the symbols shown are for greater than, less than, greater than or equal to, less than or equal to, and plus or minus.)

- Normally, such symbols are printed a half space next to a number, but in equations, operators are set off by a whole space on either side.
- Do not use the symbol for percent (%) except in tight places in a table. See also “percent” in “Word Problems,” below.

Numbers

- Use numerals with units of time, measure, and money (6 years, 12 m, \$240); otherwise, spell out the number (five plots, two experiments, eight trees) unless the number is 10 or above (10 replications, 150 moths) or the number is in a series with numbers 10 or above (2 moths, 11 mayflies, and 23 snails).
- Measurements include height, length, area, weight, volume, points, picas, bits, bytes, and time.
 - Correct: 17 m
 - 4 bits
 - 3.5-inch disk
 - 5 days or 2 years
 - 4 minutes in duration
 - 35mm camera, 50mm lens (no space in photography)
 - 2 by 4 (for lumber; not 2 x 4)
- Use numerals for 10 and above; spell out one through nine. This same rule also applies in most cases for ordinals (ninth grade, 10th grade).
- For English units, use commas to separate groups of three digits on the left of the decimal point and print solid on the right (15,798,428.65938).
- For metric units, in numbers of two to four digits, run the numerals together (example: 8429); for more than four digits, use blank spaces to separate groups of three (example: 15 798 428.659 38). Even if you use metric units in your manuscript, show other measures in the paper in the traditional way
 - Correct: 1,000 trees in 21 000 ha
 - 36,000 seeds in 21 000 ha
 - Incorrect: 1000 trees in 21 000 ha
 - 36 000 seeds in 21 000 ha
- In the International System of Units (SI; what we call metric), spaces (to both the right and left of the decimal point) are used instead of commas to separate large numbers. Numbers of four digits are closed up when standing alone, but in a column of larger numbers, they too have a space. This looks unusual to U.S. eyes, but please remember that our research is read on five continents, and we should follow the international conventions for SI.
 - Correct: 6 879 000
 - 6 879 000.027 241 34
 - 7429
- If you’re merely counting something (1,215 trees, 46,738 seeds), the rules of metric do not apply; they apply only to measurement.
- In a number less than 1 (example: 0.78) that appears in the text, a zero always precedes the decimal point.
- Use a zero in front of a decimal point in the text except for customary expressions.
 - Correct: 0.25 m
 - 0.334 ha
 - .30 caliber
- If zero does not precede a unit of measure or isn’t some type of input, spell it out too.
 - Correct: zero probability
 - significantly different from zero at the 1-percent level
 - 0 megabytes
 - from zero to 2 cm
 - Incorrect: 0 offset
- A unit of measure expressed in numerals does not mean that numbers are used for other numerical expressions in the sentence.
 - Correct: Each of six boys earned 75 cents an hour.
 - Incorrect: Each of 6 boys earned 75 cents an hour.

- Be consistent within categories of information in a sentence; if one number requires numerals, use numerals for other numbers in that category in the sentence.
 - Correct: Wheat came from 16 fields, of which 8 were planted in spring.
The students were from 9th and 10th grades.
 - Incorrect: Wheat came from 16 fields, of which eight were planted in spring.
- Numbers less than 100 preceding a compound modifier containing a numeral are spelled out. (Short version: When two numbers are together, spell out one of them—the easier one.)
 - Correct: two $\frac{3}{4}$ -inch boards
forty-seven 0.2-mm threads
365 two-hour days
 - Incorrect: 2 $\frac{3}{4}$ -inch boards (if you mean two boards)
47 0.2-mm threads
365 2-hour days
three hundred and sixty-five 2-hour days
- For numbers in a series, use numerals.
 - Correct: camera location 2
lines 7 and 8
paragraph 2
row 3
step 6
chapter 3
- Numbers at the start of a sentence are spelled out. To avoid having to do this for large numbers, start with a modifier (e.g., The value 21 represents the mean) or reword the sentence.
- Fractions standing alone or followed by “of a” or “of an” usually are spelled out. But when fractions are used in a unit modifier, numerals are used.
 - Correct: nine-tenths of 1 percent
a quarter of an inch
three-fourths of a hectare
 $\frac{1}{2}$ -inch pipe
 $\frac{1}{2}$ -inch-diameter pipe
- Ranges of numbers
 - Correct: figures 31 through 76
pages 112–124 (pages use an en dash)
1985–87; but 1999–2000 and 2000–2001 and 2001–02 and 2000–10
(years use an en dash)
from 1985 through 1987
 - Incorrect: figures 31–76
figures 31 to 76 (ambiguous; is 76 included or not?)
pages 112 to 124
2000–01 or 2000–1
from 1985–87 (if you say “from,” have to say “through” or “to,” depending on meaning)

Quotations

- Type quotations exactly as in the original, including spelling, punctuation, etc.
- Quotes of more than three lines are indented about half an inch from each margin and quotation marks are not used.
- Quotes of less than three lines are run into the sentence and enclosed in quotation marks. The final period or comma goes inside the closing quotation mark. Other punctuation goes inside only if part of the quoted material.
- Quotes within an indented quotation are set off with double quotation marks.
- Quotes within an unindented quotation are set off by single quotation marks.
- Avoid using “[sic]” (in brackets, no italic) in quoted matter unless absolutely necessary. See also “Latin,” above, in this appendix.
- Text references giving page numbers are shown as: (Smith 1989: 14).

Scientific Nomenclature

- When giving scientific names for species, do so at the first mention in the text.
- Complete binomials (authorities are optional, but if used should be used consistently), are given for all species at their first mention in the manuscript. A binomial in the title of a manuscript shows only the genus and species (no authorities).
- Scientific names may be used throughout the text, but common names are easier for everyone to read. If there is no common name, then use the scientific one.
- After the scientific name has been given, use accepted shorthand when repeating references to the same genus. For example, *Sequoiadendron giganteum* can be referred to as *S. giganteum*. But the genus must be spelled out if another genus beginning with “S” has crept in since the first reference to *S. giganteum*.
- If the scientific and common names are the same (*Eucalyptus* and eucalyptus, *Armillaria* and armillaria), be very clear about which one you need or want to use in each situation.
- If many species are mentioned, create a list of common and scientific names in an appendix to avoid cluttering the text and use the common names throughout.
- Genera and species are always in italic. Divisions higher than genus are capitalized and in roman. Do not use underlining for italic; use the italic font.
- Specify your sources for names, e.g., Hickman 1993, Hitchcock and Cronquist 1973, Little 1979, or the NRCS PLANTS database (USDA NRCS 2006).

Units of Measure

- Do not abbreviate English units; use “per” instead of the slash (/).
- For metric, abbreviate units even at the first mention; instead of “per,” use the slash (/) or the superscript (example, kg⁻¹, 20 to 80 kg/ha/year).

Verb Tense

- In general, the new work you are reporting is in past tense (we **did** this, we **found** that), and findings already in the literature are in present tense (trees **grow** taller when . . .) Judgment has to be used, however, to avoid awkward wording. For example, Smith (1990) **reported** that trees **grow** taller when . . . (not Smith reports).
 - Abstract: Mostly past tense because it’s about your new work.
 - Introduction: Mostly in present tense because usually this section is bringing the reader up to date on what is already known and documented.
 - Materials, methods, and results: Mostly in past tense because you’re talking about what you did and what you found.
 - Discussion: A combination of past and present tense.
- Use present tense to introduce tables and figures.
 - Correct: Table 2 **shows** that pileated woodpeckers inhabited. . .
 - Figure 6 **shows** the site in 1967.

Wordiness

Wordy	Better	Wordy	Better
accomplish	do	few in number	few
a majority of	most	finalize	end
a number of	a few, many, several	following	after
approximately	about	for the purpose of	for, to
as a result of	from, because	for the reason that	because
at this point in time	now	greater number of	more
based on the fact that	because	great majority of	most
blue in color	blue	in addition to	besides
by means of	by, with	in all cases	always
demonstrate	show	in a number of cases	many, some
due to the fact that	because	in close proximity	near
fabricate	make	initiate	begin, start

in most cases	usually	large in size	big, large
in order to	to	methodology	methods
in respect to	about	modification	change
in some cases	sometimes	needless to say	(don't say it)
in terms of	about, as, for	on a daily basis	daily
in the absence of	lacking, without	on a regional basis	regionally
in the event that	if	print out	print
in the vicinity of	near	prior to	before
is defined as	is	referred to as	called
it is apparent that	apparently	subsequent to	after, later
it is believed that	I think	terminate	end
it is clear that	clearly	ultimate	last
it is doubtful that	possibly	utilize	use
it is evident that	(delete)	we wish to thank	we thank
it is important to note that	(delete)	with regard to	about, concerning
it is reported by Smith	Smith reports	with respect to	about
it is suggested that	I think	with the possible	
lacked the ability to	could not	exception of	except

Word Problems

- **affect/effect**

“Affect” is usually a verb (Precipitation will affect the growth rate.) but sometimes can be a noun referring to emotional state (Her usual affect was sadness.).

“Effect” is usually a noun (We measured the effect by . . .) but sometimes can be a verb meaning to bring about a particular outcome (She worked to effect rights for children.).

- **and/or**

“And/or” is a legal term, and although used informally as well as in legal writing, it should not be used in scientific writing. Say “x or y, or both.”

- **anthropomorphic**

Correct meaning: Having a human form or human attributes; ascribing human characteristics to nonhuman things.

Incorrect meaning: Human caused; if this is what is meant, say so. Using “anthropomorphic” to say this is euphemistic and jargon.

- **between vs. among**

“Between” is used to compare two items; “among” is used for more than two. “Between” also is used to show the relation of one thing to many other things, both severally and individually.

Correct: between-tract variation (two tracts)
was distributed among five plots
switch between the programs installed on your computer (more than two)
relations between Hong Kong, China, and Taiwan continue to be nervous

- **comprise**

“Comprise” means to consist of or contain. The whole comprises the parts; the parts compose the whole.

Correct: The United States of America comprises 50 states.
The United States of America is composed of 50 states.
Alaska, Washington, and Oregon make up the PNW Station.
Incorrect: The United States of America is comprised of 50 states.
Alaska, Washington, and Oregon comprise the PNW Station.

- **data**

In science, **datum is** and **data are**.

- **differ vs. vary**

One thing **varies** within itself and two or more things **differ**.

Correct: stream temperature varied by season (one thing varying within itself)
inventories of the roads differ widely (two or more inventories)
interactions differ with time and space (more than one interaction)
effects differ in degree (more than one effect)
results differ among sites (more than one site; “among” is used if there were more than two sites involved [also see “between vs. among,” above])

- **lead**

Correct meaning: Present tense of verb “to lead;” metallic element.
Incorrect meaning: Past tense of the verb “to lead;” that word is “led.”

- **link vs. linkage**

“Link” (noun) = a connecting element (including in computer science).
“Link” (verb) = to connect or become connected with.
“Linkage” (noun) = the manner or style of being linked; the state of being linked, especially the relationship between genes on the same chromosome that causes them to be inherited together.

- **Percent vs. percentage**

“Percent” is spelled out and used only with a number. (The symbol, %, is not used.) When used alone, the noun is “percentage.” Saying “percent cover,” etc., is jargon.

Correct: 70-percent crown closure
40 percent greater
9- to 10-percent moisture content
percentage of harvest
percentage of ground cover

Incorrect: percent harvest
percent ground cover

- **relationship**

“Relationship” = kinship; “relation” = association. “Relationship” also has some mathematical meanings and is correct in those instances.

- **since vs. because**

“Since” refers to passage of time; “because” gives a reason—not interchangeable.

- **using**

“Using” cannot modify a verb (show how something was done), but can be changed into a prepositional phrase by inserting “by” as in the following examples.

Correct: the intention was to rethin **by** using...
was installed **by** using...(a prepositional phrase can modify anything)

Incorrect: the intention was to rethin using
was installed using...

- **while**

“While” means at the same time as. “Although” or “even though” (meanings: regardless of the fact that or notwithstanding) or “whereas” (meanings: inasmuch as or on the contrary) may be used in most cases.

Literature Citations

Sample Citations for Most Publication Types

Directory

The USDA FS style for citing bibliographic references is based on ANSI (American National Standards Institute. 1977. American national standard for bibliographic references. ANSI Z39.29. New York. 92 p.). To simplify, condense, and illustrate the rules outlined in ANSI, we show examples of the most common types of citations used in SRS publications. The examples also account for USDA FS requirements. Some examples are not real but have been created for this guide. If you have an unusual paper that you are not sure how to cite, ask an editor for assistance.

This directory is provided to help you find the examples you need. The numbers in the directory correspond to the numbers in parentheses along the right margin of each page.

<p>Abbreviations of edition number, 25-26 of monograph name, 40 of series name, 4, 15, 16, 17, 19, 20, 21, 22, 25</p> <p>Abstract, 54</p> <p>Anonymous, 71</p> <p>Article in journal. See Journal article</p> <p>Article published in larger work. See Book or monograph, chapter, or section</p> <p>Author's name Anon., 71 as a collaborator, 56 corporation or organization name, as 19, 27, 29, 59-61 diacritical marks in, 47 editor's or compiler's name, as 6, 15, 47, 57, 95 Jr., 69 misspelled, 33 more than three authors, 5, 50, 72-75, 94 when work was not published, 55</p> <p>Availability statement in citation of a report, 50 for works available from NTIS, 55 for works available from another source, 71</p> <p>Bibliographic elements deviations from normal sequence, 36 39, 48 missing, 69-71 in non Roman alphabet, 102</p> <p>Book or monograph, 1-28 See also Series all volumes of, 12, 13, 18 article in, published as</p>	<p>supplement to journal issue, 40 article in specified volume of, 14 chapter or section, 4 9, 28 chapter number, 7 9 edition number, 3, 25-26 name of series or monograph abbreviated, 4, 15, 40 page numbers not used, 8-9 part of a publication, 82-83 review, 10-11</p> <p>Brochure, 27, 29</p> <p>Byline, in newspaper article, 78</p> <p>CD-ROM, 104, 106-107</p> <p>Chapter, work published as, 7-9</p> <p>Collaborator named, 56</p> <p>Compiler named, 6, 15</p> <p>Contract number indicated, 49-51,</p> <p>Contracting organization named, 49-51</p> <p>Cooperators named, 27, 29, 57</p> <p>Corporate author named, 19, 27, 29, 59-60</p> <p>Date of publication. See Publication date</p> <p>Dateline, in newspaper article, 78</p> <p>Diacritical marks, 47, 100-101</p> <p>Dissertation, 53</p> <p>Edition. See also Book or monograph, edition number abbreviating, 25-26 revised, status indicated, 26-27, 29</p> <p>Editor named, 6, 47, 57, 95</p> <p>Electronic material</p>	<p>CD-ROM, diskette, and magnetic tape, 104, 106-107</p> <p>Online journal, 105</p> <p>Online publication, 106-112</p> <p>Proceedings on CD-ROM, 106</p> <p>Published both on paper and online, 108-110</p> <p>Software program, commercial, 113-114</p> <p>Software program, government, 115-116</p> <p>In press, 61-64</p> <p>Inventors named, 84-85</p> <p>Issue number of journal, 33-35, 37 proceedings using annual, 45</p> <p>Journal article, 31-41 in press, 62-64 issue number, placement, 32 journal name, 31-35 naming publisher of journal, 38-39, 41 page numbers for, when supplied, 37 part of, citing, 81-83 published in proceedings within a journal, 41 published as supplement to journal issue, 40</p> <p>Leaflet, 30</p> <p>Location of publication cited. See Availability statement of publisher, State name omitted, 1 4, 12-13, 22, 24, 44, 53, 56, 88</p>
--	---	---

Magazine article, 79
 Map, 16, 65-68, 88
 Medium of work not a full length paper,
 designating, 29-30, 54
 Missing information, 68-71
 Monograph. *See* Book or monograph
 Multiple publishers, 88, 103
 Multiple authors. *See* Author's name, more than three authors

Name, misspelled, 33
 Name of series, abbreviating, 4, 15, 40
 National Technical Information Service (NTIS), work available from, 55
 Newspaper article, 76-78
 No date [n.d.], 55, 71
 Numerals
 Roman and ordinal, 91-93, 95
 title beginning with, 78

Ordinals. *See* Numerals

Page numbers
 when citing part of a publication, 81-83
 of journal article, citing, 32
 of journal article, supplying, 37
 noninclusive, 78, 91
 Roman numerals, 92
 total, 3
 unconventional, 14
 with a comma, 35
 with or instead of chapter number, 7-9
 work not paged, 8-9, 27
 Paper, Station, 20-22, 25-27
 Parts of a citation. *See* Bibliographic elements
 Part of a publication, citing, 81-83
 Part of a series, citing, 80
 Patent, 84-85
 Proceedings, 14, 42-47, 94-97
 annual issue number used for, 45
 capitalization in identifier, 44, 96-97
 citing article in, 42-46
 citing entire, 47, 95
 cooperators, 27, 29, 57
 editor of, 44, 47, 57
 identifier, 42-47, 96-97

in press, 75
 published in journal, 41
 publisher of, 42-47
 punctuation when citing, 42-47, 96-97
 Roman numerals and ordinals
 when citing, 91-93, 95
 sponsors, 94-95
 title, formal, 43-44, 46
 title, formal, not used in publication, 42
 volume numbers, 14
 Publication date
 copyright date used as, 58
 in press, 61-64
 not indicated, use of [n.d.], 55, 71
 range of years, when to use, 13, 89-90
 supplying, when known, 30
 Publication in larger work, citing, 4-9, 28
 Publisher's location
 multiple locations named, 86-87
 not indicated, 54, 69-70
 State name omitted from, 1-4, 22, 24
 Publisher's name
 Agency uses USDA series, 15
 author of work is corporation or organization, 19, 27, 29, 59-60
 citing, as shown on publication, 22-24, 44
 journal, citing, 38-39
 multiple publishers named, 103
 name of originating organization used, 49
 not indicated in unpublished report, 55
 proceedings, citing, 42-47
 shortened, 2-3
 Punctuation
 after journal name, 32
 in proceedings identifier, 42-47, 95-97
 in series statement, 80
 in title, modified for keyboarding citation, 19, 57
 in title reflecting more than one part, 99, 102
 with more than three authors, with multiple cooperators, 57, 95
 with multiple locations of publisher, 86
 with multiple publishers, 103
 with multiple sponsors, 95
 when naming publisher of journal, 38-39

with supplied information. *See* Supplying information
 with translated and transliterated titles, 101-102
 with unconventional pagination, 14

Recurring publication, 89-90
 Report, 48-51
 contracting agency named, 49-51
 contract numbers pertaining to, given, 49-51
 final, 50-51
 identifier, 49-51
 organization, originating, 48-51
 Revised edition, status indicated, 25-27
 Roman numerals. *See* Numerals

Section in larger work. *See* Book or monograph, chapter, or section
 Series, 15-28. *See also* Book or monograph
 Agencies using, published by USDA, 15
 of Agency other than USDA, of Department of Agriculture, 15-18
 Forest Service (Station or Region), 20-27
 Forest Service (WO), 17, 19, 46
 in press, 61
 name of, abbreviating, 4, 15-28
 work published as part of, 80
 unnumbered, 23
 Software,
 commercial, 113-114
 government, 115-116
 Sponsors named, 94-95
 Subordinate title, 96-97. *See also* Title capitalization
 in, 44, 96-97
 differences from formal title, 98
 proceedings identifier as, 42-47, 95
 punctuating, 96-97
 Supplement to journal issue, work published as, 40
 Supplemental note
 for chapter number, 7
 for cooperators, 57, 95
 for creation date of unpublished report, 55
 for sponsors, 94-95
 for volume number, 14, 91
 to indicate availability of work

cited, 71
 to indicate number of volumes,
 12-13, 18
 to indicate theses and
 dissertations, 52-53
 for recurrence of publication,
 89-90
 to show language of article,
 Supplying information
 medium designator, 29-30, 54,
 65-68
 newspaper article, location
 added to newspaper name,
 76
 translated title, 100-101
 when missing information is
 known, 30, 36, 54
 page numbers of journal
 article, 37

publication date, 30, 71
 publisher's location, 30, 54
 publisher's name, 24
 when missing information is not

Thesis, 52

Title. *See also* Subordinate title
 beginning with numeral, 78
 diacritical marks in, 100
 given in more than one
 language, 100
 in non Roman alphabet, 102
 none given, 83
 of journal article, 32
 of proceedings, formal, 43-44,
 46
 punctuation, modifying to
 keyboard citation, 19, 57
 reflecting more than one part,
 99, 102
 scientific name, 31, 99, 108
 Roman numerals and ordinals
 in,

translated, 100-101
 of work not a full length paper,
 29-30, 54
 Untitled work, citing, 83

Version, 114-115
 Videocassette, 117
 Volume number
 citing all, 12-13, 18
 citing article in specified, 14,
 91
 number is Roman numeral, 91

Web, 51, 105-112, 115-116
 Work unit fraction, citing, 81-83

Year of publication. *See*
 Publication date

Text References

Refer to literature in the text by author-year. In the author-year method, the author's last name and the year of publication are cited:

. . . may result in increased peak flows (Brown 1980).
 Later experiments by Miller (1981) showed . . .

When listing more than one reference as support for a statement, give the references alphabetically by senior author. (Note: In the literature cited section, when a work has three or more authors, all authors are named. For a work by four authors, all four are named because it makes no sense to drop the fourth name only to add the notation [*and others*].) Do not punctuate between the author's name and the year except when the year must be given as *in press*.

Examples of how references should be cited in the text:

(Adams 1980; Endres and Thompson, in press; Petersen 1974)
 (Adams 1980, Endres and Thompson 1988, Petersen 1988)
 (Barnes and Clark, no date)
 (Jones 1980, 1981)
 (Jones 1980, 1981, 1993a; Jones and others 1971; Miles and Anderson 1979)
 [Pan and others 1996, in press; Parton 1996; Ryan and others in press (a), in press (b)]
 (Remington 1982a, 1982b)
 (Vose and Swank 1993, Vose and others 1995)

Alphabetizing

List entries alphabetically by author in the Literature Cited or References section.

Brown, A.T.
 Brown, J.S.
 Campbell, R.K.
 Campbell, R.K.; Echols, R.W.
 Crossley, D.A., Jr.
 D'Antonio, D.M.
 Davis, E.L.
 de Steiguer, J.E.
 Gansner, D.
 Gansner, D.A.
 Stout, B.M., III

List a single-author entry before a multiple-author entry beginning with the same name:

Mason, P.
 Mason, P.; Street, D.; Drake, P.

For several entries by the same senior author with different coauthors, alphabetize by the last names of the junior authors:

Brown, G.W.; Gahler, A.R.; Marston, R.B.
 Brown, G.W.; Krygier, J.T.

When the author or authors of several entries are the same, arrange the citations chronologically:

Rickard, W.H. 1967.
 Rickard, W.H. 1970.
 Rickard, W.H. 1985.

When the author or authors and the year are identical for two or more entries, add a lowercase letter to the year and use the first word of the title to arrange the citations (but ignore a, an, and the when alphabetizing):

Hall, F.C. 1979a. The ecology of
 Hall, F.C. 1979b. Silvicultural options

Entries by the same senior author with the same year but two or more coauthors with different surnames also require lowercase letters after the year. In the following example, each entry would appear as Miller

and others (1975) in the text; the letters distinguish which publication is being cited:

Miller, J.A.; Anderson, A.B.; Franks, M.B. 1975a.

Miller, J.A.; Franks, M.B.; Williams, A. 1975b.

Miller, R.A.; Smith, W.A.; Mitchell, S. J. 1975c.

Entries that begin with a year are listed first:

1998 Lockwood-Post's Directory. 1998. Pulp and paper mills in the United States. 1998 Lockwood-Post's Directory of the Pulp, Paper and Allied Trades: 38-140.

Paper Industry Management Association. 1999. Papermaker's top 50: muddling through. PIMA's North American Papermaker. 81(6): 58-73.

Book or Monograph

Abercrombie, M.; Hickman, C.J.; Johnson, M.L. 1964. A dictionary of biology. Chicago: Aldine Publishing Co. 798 p. (1)

Echternacht, A.C., ed. Biodiversity of the Southeastern United States: lowland terrestrial communities. New York: John Wiley. 502 p. (2)

Strunk, W.J.; White, E.B. 1971. The elements of style. 2d ed. New York: Macmillan. 78 p. (3)

The third reference shows an edition number; all references show no State for the publisher's location and shortened name of well-known publishers. (No states are used for major cities.)

Chapter in Book or Monograph

Beasley, R.S. 1979. Assessment of nonpoint source pollution from forest practices in the south central region. In: Current research, research needs and problems in assessing impact of forest management practices on water quality and utility. Tech. Bull. 328. New York: National Council of the Paper Industry for Air and Stream Improvement: 10-13. (4)

The reference cites a section within a monograph; the monograph is in a numbered series. The series name is abbreviated.

Stoltenberg, C.H.; Ware, K.D.; Marty, R.J. [and others]. 1970. Preparing written study plans. In: Planning research for resource decisions. Ames, IA: Iowa State University Press: 81-88. (5)

The reference has more than four authors.

Stein, W.I. 1978. Reforestation evaluation. In: Cleary, B.D.; Greaves, R.D.; Hermann, R.K., comps., eds. Regenerating Oregon's forests: a guide for the regeneration forester. Corvallis, OR: Oregon State University Extension Service: 205-221. (6)

Reference shows compilers and editors for the larger work.

When page numbers of the chapter being cited are known, the chapter number is not required. It may be added, however, as a supplemental note:

Stein, W.I. 1978. Reforestation evaluation. In: Cleary, B.D.; Greaves, R.D.; Hermann, R.K., comps., eds. Regenerating Oregon's forests: a guide for the regeneration forester. Corvallis, OR: Oregon State University Extension Service: 205 221. Chapter 11. (7)

If this book had not been paged, the reference could be written in one of two ways:

Stein, W.I. 1978. Reforestation evaluation. In: Cleary, B.D.; Greaves, R.D.; Hermann, R.K., comps., eds. Regenerating Oregon's forests: a guide for the regeneration forester. Corvallis, OR: Oregon State University Extension Service: chapter 11. (8)

Stein, W.I. 1978. Reforestation evaluation. In: Cleary, B.D.; Greaves, R.D.; Hermann, R.K., comps., eds. Regenerating Oregon's forests: a guide for the regeneration forester. Corvallis, OR: Oregon State University Extension Service. [Not paged]. Chapter 11. (9)

Book Review

Hamel, P.B. 1999. Review of Atlas of the breeding birds of Maryland and the District of Columbia. *Journal of Wildlife Management*. 63: 760-761. (10)

The title of the book being reviewed begins with an uppercased letter.

Greenberg, C.H. 1999. Stemming the tide of invaders. Review of Strangers in paradise. *Biodiversity Letters*. 4: 152-153. (11)

This book review has a separate title.

All Volumes of Multivolume Work and Article in Specified Volume

Iverson, L.L.; Iverson, S.D.; Snyder, S.H., eds. 1975. Handbook of psychopharmacology. New York: Plenum Press. 6 vol. (12)

Colowick, S.P.; Kaplan, N.O. 1955-63. Methods in enzymology. New York: Academic Press. 6 vol. (13)

Both examples above cite all volumes of multivolume works. In the second example, the volumes were published in different years; the range of years is given.

Zook, L.M. 1980. Lessons learned—not always by choice. In: Technical communication—the bridge of understanding: Proceedings, 27th international technical communication conference. Washington, DC: Society for Technical Communication: W-31 to W-36. Vol. 2. (14)

Cites an article in one volume of a multivolume work. The volume number is given in a supplemental note. The published titles of the article and the proceedings use an em dash. Pagination of the work is unconventional; because a hyphen appears as part of the page number on the original, the word to is used rather than a hyphen to indicate inclusive pages.

Series, Department of Agriculture

Publications in a Department series, such as Agriculture Handbooks, Forest Resource Reports, Miscellaneous Publications, and Technical Bulletins, show on the cover the name of the Agency using the series. The Agency, however, is not named as publisher in the reference. The series name is abbreviated.

Fowells, H.A., comp. 1965. Silvics of forest trees of the United States. Agric. Handb. 271. Washington, DC: U.S. Department of Agriculture. 762 p. (15)

Although the Forest Service, U.S. Department of Agriculture, is the Agency named on the publication, only the Department is shown as the publisher of a Department series. The reference shows the compiler as author.

Bailey, R.G. 1995. Description of the ecoregions of the United States. 2d ed., rev. Misc. Publ. 1391. Washington, DC: U.S. Department of Agriculture. (16)

108 p. + map.

McNab, W.H.; Avers, P.E., comps. Ecological subregions of the United States: section descriptions. Admin. Publ. WO-WSA-5. Washington, DC: U.S. Department of Agriculture Forest Service. 267 p. (17)

Koch, P. 1972. Utilization of the southern pines. Agric. Handb. 420. Washington, DC: U.S. Department of Agriculture. 2 vol. (18)

Cites a book with more than one volume; the collection is being cited. (If only one volume of a collection were being cited, the volume number would follow Vol.) The collection is in a numbered series.

Series, Forest Service (WO)

U.S. Department of Agriculture Forest Service. 1981. Report of the Forest Service: fiscal year 1980 highlights. FS 364. Washington, DC: U.S. Department of Agriculture Forest Service. 38 p. (19)

Reference shows a corporate author. Repeating the publisher's name is optional. Where different type sizes were used on the publication to set off the last portion of the title (fiscal year 1980 highlights), a colon was used in the keyboarded citation.

Series, Forest Service (Station or Region)

Thompson, M.T.; Johnson, T.G. 1996. A forested tract-size profile of Virginia's NIPF landowners. Res. Pap. SRS-1. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 8 p. (20)

Ince, P. 2000. Industrial wood productivity in the United States, 1900-1998. Res. Note FPL-RN-0272. Madison, WI: U.S. Department of Agriculture Forest Service, Forest Products Laboratory. 14 p. (21)

Rudis, V. 1988. Nontimber values of Louisiana's timberland. Resour. Bull. SO-132. New Orleans: U.S. Department of Agriculture Forest Service, Southern Research Station. 27 p. (22)

The publisher's location is a domestic city that stands alone and the name is shown as Southern Research Station on the cover of the publication.

Jackson, G.H.; Henley, J.W.; Jackson, W.L. 1963. Log diagramming guide for western softwoods. Portland, OR: U.S. Department of Agriculture Forest Service, Pacific Northwest Forest and Range Experiment Station. 21 p. (23)

The publication is in an unnumbered series. The publisher's name is shown as Pacific Northwest Forest and Range Experiment Station on the cover of the publication.

Levitan, J.S. 1969. Lumber and veneer recovery from Douglas fir trees in California. San Francisco: U.S. Department of Agriculture Forest Service, Pacific Southwest Region. 56 p. (24)

Names of regional offices should be given rather than numbers (R-5). If the cover of the publication shows only the number, however, use the number in the citation but supply the name in brackets: . . . Forest Service, R-5 [Pacific Southwest Region].

When a publication is revised and reissued, identify the revision or edition number after the title. You may abbreviate the words *revised* and *edition*. The following three examples illustrate different styles used in publications to indicate revised status.

- Martignoni, M.E.; Iwai, P.J. 1977. A catalog of viral diseases of insects and mites. 2^d ed. Gen. Tech. Rep. PNW 40. Portland, OR: U.S. Department of Agriculture Forest Service, Pacific Northwest Forest and Range Experiment Station. 28 p. (25)
- Martignoni, M.E.; Iwai, P.J. 1986. A catalog of viral diseases of insects, mites, and ticks. 4th ed., rev. Gen. Tech. Rep. PNW 195. Portland, OR: U.S. Department of Agriculture Forest Service, Pacific Northwest Research Station. 50 p. (26)
- U.S. Department of Agriculture Forest Service, Pacific Northwest Research Station. 1987. FIR program: reforestation research and application in southwestern Oregon [Brochure]. Revised. Portland, OR. [Not paged]. In cooperation with: Oregon State University. (27)

The publisher is named as author; therefore, the publisher's name is not repeated as the publisher. The document cited is a brochure, is not paged, and the cooperating agency is named.

Series of Another Government Agency, University, or Organization

The series must also meet the ANSI definition of a monograph.

- Ursic, S.J. 1979. Sediment contributions from southern forest management practices. In: Pollution control in the forest products industry. Semin. Publ. 625/3 79 010. Cincinnati, OH: U.S. Environmental Protection Agency, Office of Technology Transfer: 53-55. (28)

Reference shows an article within a larger work.

Brochure and Leaflet

The physical format of a brochure or leaflet is different from that of a technical publication. Usually a brochure or leaflet is a foldout with unnumbered pages and, when folded, may be larger or smaller than standard. A brochure is roughly the standard 8 1/2 by 11 inches, and a leaflet is smaller (usually narrower) than standard. Because the physical format of such publications is different, a medium designator is given in brackets at the end of the title.

- U.S. Department of Agriculture Forest Service, Pacific Northwest Research Station. 1987. FIR program: reforestation research and application in southwestern Oregon [Brochure]. Revised. Portland, OR. [Not paged]. In cooperation with: Oregon State University. (29)

The organization named as author is not repeated as the publisher. The word revised indicates an earlier version was published. The cooperating organization is named.

- Holsten, E.H.; Werner, R.A. [1987]. Engraver beetles in Alaska forests [Leaflet]. (30)
[Portland, OR]: U.S. Department of Agriculture Forest Service, Pacific Northwest Research Station. [Not paged].

The publication date does not appear on the leaflet. The writer knows the date, however, and supplies it in brackets. The publisher's location is not given on the leaflet, is supplied in brackets.

Journal or Periodical Article

Spell out names of journals and put a period after the name. Show the title of the article as given on the publication.

- Gavin, D.G.; Peart, D.R. 1993. Effect of beech bark disease on the growth of American beech (*Fagus granifolia*). Canadian Journal of Forest Research. (31)

23: 1566-1575.

The title of the journal article includes a scientific name, that is italicized.

- Adams, L. 1947. Food habits of three common Oregon birds in relationship to reforestation. *Journal of Wildlife Management*. 11(3): 281-282. (32)

For journals that have issue numbers, show the number in parentheses.

- Conner [Connor], R.N. 1979. Minimum standards and forest wildlife management. *Wildlife Society Bulletin*. 7: 293-296. (33)

The author's name is misspelled on the publication. The corrected name cannot be shown first because the name given on the publication will be the one used in library records and bibliographic databases. The journal uses only a volume number.

Some journals do not use either volume or issue numbers. The month of the issue must then be substituted.

- Bergstrom, D. 1981. Understanding the habitat needs of anadromous salmonids. *Forestry Research West*. March: 1-6. (34)

- Harding, J.S.; Benfield, E.F.; Bolstad, P.V. [and others]. 1998. Stream biodiversity: the ghost of land use past. *Proceedings of the National Academy of Sciences of the United States of America*. 95: 14,843-14,847. (35)

A comma is used in the page number sequence when there are more than four digits.

When citing an article in a journal that is not widely known, including the publisher's name is helpful. Copies of the journal show the publisher as the U.S. Department of Agriculture Forest Service. If the writer knows that Rocky Mountain Station is the Forest Service unit publishing the journal, the citation reads:

- Bergstrom, D. 1981. Understanding the habitat needs of anadromous salmonids. *Forestry Research West*. Fort Collins, CO: U.S. Department of Agriculture Forest Service, [Rocky Mountain Forest and Range Experiment Station]; March: 1-6. (36)

The comma appears after Forest Service because normal ANSI punctuation is followed when information is supplied. A semicolon appears after the publisher's name.

If a journal uses only an annual volume number, the date of issue also might be needed for clarity as in the following example, which also shows the publisher and supplied page numbers for the article.

- Leckenby, D.A. 1980. Oregon elk habitat study. Pixel facts. Moffett Field, CA: National Aeronautics and Space Administration, Ames Research Center; April; 24: [2-4]. (37)

Publisher of Journal Shown

The publisher of a journal article usually is not shown; if the journal is not widely known, however, naming the publisher might be helpful to the reader. If given, the publisher's location and name precede the volume and issue numbers.

- Harrington, C.A.; McElroy, J.P.; DeBell, D.S. 1981. Red alder. *Western wildlands*. Missoula, MT: Montana Forestry and Conservation Experiment Station, University of Montana; 7(1): 19-21. (38)

- Renkin, B.A. 1979. Ethics and publication: the journal as mentor. *CBE views*. Washington, DC: Council of Biology Editors; 2(4): 2-7. (39)

Article in Monograph Published as Supplement to Journal Issue

- Forsman, E.D.; Meslow, E.C.; Wight, H.M. 1984. Distribution and biology of the spotted owl in Oregon. *Wildl. Monogr.* 87. Washington, DC: The Wildlife Society. 64 p. Supplement to *Journal of Wildlife Management*. 48(2): 1984 April. (40)

The monograph name is abbreviated; journal name and volume and issue numbers are also cited, followed by the year and month.

Article in Proceedings Published in Journal

- Bull, E.L. 1981. Indirect estimates of abundance of birds. Estimating numbers of terrestrial birds: Proceedings, international symposium. In: *Studies in avian biology*. Cooper Ornithological Society. 6: 76-80. (41)

The proceedings has a title; the publisher of the journal is shown.

Proceedings

Citations for proceedings or articles in proceedings include the number of the meeting, for example, *11th spring symposium of the Florida section of the Society of American Foresters; 1979 Mississippi water resources conference*. For lack of a better name, this information is called the proceedings identifier. The precise form the identifier takes depends on whether the proceedings has a formal title, what information appears on the publication, and how the information is shown. The name of the meeting sometimes appears on the cover or title page as the title of the proceedings or just as information for the reader. Often, however, the information appears in small print elsewhere in the document. Because the identifier is not part of the formal title, Roman numerals and ordinals are converted to Arabic. The following examples illustrate forms the identifier may take and the correct punctuation and capitalization.

- Dendy, F.E.; Ursic, S.J.; Bowie, A.J. 1979. Sediment sources and yields from upland watersheds in north Mississippi. In: *Proceedings of the 1979 Mississippi water resources conference*. Jackson, MS: Mississippi State College Press: 49-54. (42)

The article is in a proceedings without a title.

- Ursic, S.J. 1979. Forestry practices and the water resource of the upper Coastal Plain. In: *Florida's water resources—implications for forest management: 11th spring symposium of the Florida section of the Society of American Foresters*. Gainesville, FL: University of Florida Press: 83-91. (43)

The article is in a proceedings with a title.

- Brooks, D.J. 1987. Issues in trade modeling: aggregation of products. In: Cardellichio, P.A.; Adams, D.M.; Haynes, R.W., eds. *Forest sector and trade models: theory and applications: Proceedings of an international symposium*. Seattle: Center for International Trade in Forest Products, University of Washington, College of Forest Resources: 111-120. (44)

The formal titles of both the article and the proceedings contain a colon; the first word after that colon is not capitalized unless it is a proper noun. The proceedings identifier, as the subtitle, does begin with a capital letter. Identity of the publisher and the organization levels responsible for the publication is written in the sequence shown on the publication.

- Martin, R.E.; Robinson, D.D.; Schaeffer, W.H. 1976. Fire in the Pacific Northwest—perspectives and problems. In: *Proceedings, 15th annual Tall Timbers fire ecology conference*. Tallahassee, FL: Tall Timbers Research Station; 15: 1-23. (45)

The article is in a proceedings that shows an annual issue number on the cover.

- MacLean, C.D. 1981. Walk through inventory: a short cut substitute for remeasuring slow growing inventory plots. In: Arid land resource inventories: developing cost-efficient methods: Proceedings of an international workshop. Gen. Tech. Rep. WO 28. Washington, DC: U.S. Department of Agriculture Forest Service: 389-393. (46)

The proceedings has a title and is in a numbered series.

- Gutiérrez, R.J.; Carey, A.B., tech. eds. 1985. Ecology and management of the spotted owl in the Pacific Northwest: Proceedings of a symposium. Gen. Tech. Rep. PNW 185. Portland, OR: U.S. Department of Agriculture Forest Service, Pacific Northwest Forest and Range Experiment Station. 119 p. (47)

Cites the proceedings, not an article in it. The proceedings identifier, which follows the colon, is not part of the formal title of the proceedings. The diacritical mark has been retained in name of the senior technical editor.

Report

- Bryant, M.D. 1968. Transplanting pecan trees. Las Cruces, NM: New Mexico State University Cooperative Extension Service; Plant Sci. Guide 400 H 603. 2 p. (48)

Cites a work that is a report rather than a monograph. (A report usually is a less formal document than a monograph. It generally is neither typeset nor produced commercially; that is, it's photocopied.) The report number is given after the name of the originating organization; for a monograph, it is given after the title. Other bibliographic elements remain in their normal sequence.

- Annear, T.C.; Conder, A.L. 1983. Evaluation of instream flow methods for use in Wyoming. Cheyenne, WY: U.S. Department of the Interior; completion report; contract YA 512 CT9 226. 248 p. (49)

Completion report is the only report identifier shown on the document; the contract number given on the report is included to help identify it. The originating agency is named as the publisher. The contracting organization is not indicated on the report.

- Agee, J.K.; Pickford, S.G.; Kertis, J. [and others]. 1985. Vegetation and fuel mapping of North Cascades National Park Service complex. [Place of publication unknown]: [Publisher unknown]; final report; NPS contract CS 9000 3 E029. 111 p. Available from: National Park Service Cooperative Park Studies Unit, College of Forest Resources, University of Washington, Seattle, WA. (50)

Final report is the only report identifier shown on the document; the contract number given on the report is included to help identify it. The document does not indicate the organization originating the report so a statement on availability is given to help the reader locate the report; the contracting organization, named on the report, is given as that source. The report was written by more than three authors.

- Mercer, D.E.; Pye, J.M.; Prestemon, J.P. [and others]. 2000. Economic effects of catastrophic wildfires: assessing the effectiveness of fuel reduction programs for reducing the economic impacts of catastrophic forest fire events. 68 p. Final report. [Topic 8 of the research grant "Ecological and economic consequences of the 1998 Florida fires," funded by the Joint Fire Science Program]. <http://www.rtp.srs.fs.fed.us/econ/pubs/misc/fl-fire-report2000-lores.pdf>. [Date accessed: February 15, 2001]. (51)

This document is also posted on the Web.

Thesis and Dissertation

Schulz, M.G. 1980. The quantification of soil mass movements and their relationship to bedrock geology in the Bull Run watershed, Multnomah and Clackamas Counties, Oregon. Corvallis, OR: Oregon State University. 170 p. M.S. thesis. (52)

Sampson, D. 1980. End joint tensile strength of 3/4 inch Douglas fir laminated veneer (LVL). Seattle: University of Washington. 88 p. Ph.D. dissertation. (53)

Abstract

Abstracts are considered unpublished works. If you must cite an abstract, indicate the work is not a full-length paper by identifying its physical format in brackets at the end of the title.

Harrington, C.A.; Deal, R.L. 1981. Sitka alder and Douglas fir mixtures look promising [Abstract]. In: Northwest science program and abstracts: 54th annual meeting of the Northwest Scientific Association. [Pullman, WA]: Northwest Scientific Association: 41. (54)

The publisher's location was not given on the original; the information is supplied within brackets.

Available from NTIS

McKillop, W. (Department of Forestry and Resource Management, University of California, Berkeley, CA); Adams, D.; Haynes, R.; Geissler, P. [N.d.]. Social, economic and environmental effects of rising timber prices. 59 p. Available from: National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161; \$11.50; PB 83 105 387. Written in 1980. (55)

This report was not published but was made available to users through NTIS. Without a publisher's name, however, the work cannot be attributed to an organization; to help identify the origin of the work, the affiliation of the senior author is shown. Because a publication date does not exist on the document, a statement, Written in 1980, is added to the reference as a supplemental note.

Collaboration Shown

A collaborator is different from a coauthor. Rather than participating in writing the work, the collaborator might relate a story or experience to another individual who writes it. Collaboration is usually shown on the publication by a named author with the collaborator.

Wakefield, P.A.; with Carrara, L. 1987. A moose for Jessica. New York: E.P. Dutton. (56)
[Not paged].

Cooperation Shown

When cooperators are named, their role is shown in a supplemental note at the end of the citation. Include a cooperator's location when necessary to distinguish between geographically separate locations of the organization. For example: *U.S. Department of the Interior, Bureau of Land Management* could imply the Washington, DC, headquarters of the Agency. If the document indicates BLM in Reno, the location is necessary information for the reader: *U.S. Department of the Interior, Bureau of Land Management, Reno NV*. If the list of cooperators is lengthy—more than three names—do not include them in the citation.

Thomas, J.W., tech. ed. 1979. Wildlife habitats in forests: the Blue Mountains of Oregon and Washington. Agric. Handb. 553. Washington, DC: U.S. Department of Agriculture. 512 p. In cooperation with: The Wildlife Management Institute; U.S. U.S. Department of the Interior, Bureau of Land Management. (57)

The technical editor is named as author. Where a change of type size on the cover and title page is used to distinguish between portions of the formal title, a colon is used in the keyboarded citation. A semicolon separates names of the two cooperators because the name of one contains a comma.

Copyright Date Used as Publication Date

G. & C. Merriam Company. ©1951. Webster's dictionary of synonyms. Springfield, (58)

MA: G. & C. Merriam Co. 907 p.

The publication date is not shown on the original. Using the copyright date is preferred over the notation [N.d.]—meaning no date—when publication date is not indicated.

Corporate Author

- U.S. Department of the Interior, Bureau of Land Management. 1964. Water developments: range improvements in Nevada for wildlife, livestock, and human use. Reno, NV: U.S. Department of the Interior, Bureau of Land Management. 37 p. (59)

When the author and publisher are the same, the name is supposed to be repeated in the bibliographic element stating the publisher's name. When such repetition creates a wordy citation—especially when a U.S. Government Agency is author and publisher—the second appearance of the name may be omitted.

- U.S. Department of Agriculture Forest Service. 1988. The South's fourth forest: alternatives for the future. For. Resour. Rep. 24. Washington, DC. 512 p. (60)

In Press

Only manuscripts accepted for publication can be classed as in press. The notation appears in the same position as the publication date. A manuscript not yet accepted for publication cannot be cited as in press. Such a manuscript is in preparation and is referenced in a footnote or endnote to the text.

- Porter, P.E.; Meehan, R. [In press]. Seasonal composition of vertebrates in several Oregon streams. Res. Pap. Portland, OR: U.S. Department of Agriculture Forest Service, Pacific Northwest Research Station. (61)

The work has been approved by the Project Leader and the Communications Program Manager and has, therefore, been accepted for publication in an SRS series. In the text, the reference is (Porter and Meehan, in press).

- Hard, J. [In press]. Comparative success of spruce beetle attacks in pruned and unpruned boles of Lutz spruce. Forest Ecology and Management. (62)

The paper has been accepted for publication by the journal but is not yet published. Merely sending a paper to a journal does not constitute acceptance.

- Ryan, M.G.; Hunt, E.R., Jr.; Agren, G.I. [and others]. [In press (a)]. Comparing models of ecosystem function for temperate conifer forests, I. Journal of Forestry. (63)

- Ryan, M.G.; Hunt, E.R., Jr.; Agren, G.I. [and others]. [In press (b)]. Comparing models of ecosystem function for temperate conifer forests, II. Journal of Forestry. (64)

These articles have been accepted for publication by the journal. Lowercased letters are included with in press to indicate alphabetical order.

Map

- Oregon [Topographic]. 1966. Washington, DC: U.S. Geological Survey. 1: 500,000; Lambert conformal conic projection; colored. (65)

- World [Political]. 1957 March. Washington, DC: National Geographic Society. 1: 39,283,200; Van der Grinten projection; 41 x 29 in.; colored. Prepared for the National Geographic Magazine. (66)

- Potential natural vegetation of the conterminous United States [Vegetation]. A.W. Kuchler, cartog. 1964. New York: American Geographical Society. 1: 3,168,000; colored. (67)

- Wyoming general soil map [Soil]. J.F. Young, P.C. Singleton, cartogs. 1977. [Place of publication unknown]: University of Wyoming, Agriculture Experiment Station. [Scale unknown]; [Projection unknown]. 40 p. [Explanatory manual]. (68)

Missing Information

When required information is missing, identify the missing element in brackets and retain normal punctuation, which goes outside the closing bracket.

- Reutebuch, S.E., Jr.; Murphy, G.E. 1985. Using a computer aided planning package to assess the impact of environmental restrictions on harvesting systems. (69)
In: Forest operations in politically and environmentally sensitive areas: Proceedings, 8th annual meeting, council on forest engineering. [Place of publication unknown]: [Publisher unknown]: 16-25.

Two pieces of information are missing. Each piece goes in its own set of brackets with normal punctuation following each piece.

- Holsten, E.H.; Wemer, R.A. [1987]. Engraver beetles in Alaska forests [Leaflet]. (70)
[Portland, OR]: U.S. Department of Agriculture Forest Service, Pacific Northwest Research Station. [Not paged].

The publication date does not appear on the leaflet. The writer knows the date, however, and supplies it in brackets. The publisher's location is not given on the leaflet and also is supplied in brackets. The information [Leaflet] supplied at the end of the title indicates a physical format different from the standard; it does not indicate missing information.

- Anon. [N.d.]. Summary of research activities at Trout Creek Division, Wind River Experimental Forest. [Place of publication unknown]: [Publisher unknown]. 6 p. (71)
On file with: Biomass and Energy Research Unit, Pacific Northwest Research Station, P.O. Box 3890, Portland, OR 97208-3890.

Because so much information is missing from the reference, a supplemental note was added to help readers locate a copy of the document.

More Than Three Authors

When a publication has three authors, all authors are named **in the list of citations (but not in the text citation)**. [Please note: In the text citation (i.e., in the body of the text), for publications by **three or more** authors, the lead author is named, followed by "and others" and the date of publication (e.g., Vose and others 2009)].

For a publication by four authors, all four are named **in the list of citations (but not in the text citation)** because it makes no sense to drop the fourth name only to add the notation [*and others*]. In the list of citations, for a publication by more than four authors, names after the third author are replaced with the notation [*and others*].

- Yoakum, J.; Dasmann, W.P.; Sanderson, H. [and others]. 1980. Habitat improvement techniques. (72)
In: Schemnitz, S.D., ed. Wildlife management techniques manual. Washington, DC: The Wildlife Society: 329-403.

More than four authors are shown on the publication.

- Beschta, R.L.; O'Leary, S.J.; Edwards, R.E.; Knoop, K.D. 1981. Sediment and organic matter transport in Oregon Coast Range streams. WRRRI 70. Corvallis, OR: Oregon State University, Water Resources Institute. 67 p. (73)

The fourth author is named.

When an author's initials precede the notation [and others], do not punctuate before the notation.

- Nichols, J.D.; Conroy, M.J. 1996. Estimation of species richness. In: Wilson, D.E.; Cole, F.R.; Nichols, J.D. [and others], eds. Measuring and monitoring biological diversity: standard methods for mammals. Washington, DC: Smithsonian Institution Press: 226-234. (74)

The article is in a publication with more than three editors.

- Franklin, J.F.; Spies, T.; Perry, D. [and others]. [In press]. Modifying Douglas-fir management regimes for nontimber objectives. In: Douglas fir: stand management (75)

for the future: Proceedings of the symposium. Seattle: University of Washington.

The article has been accepted for publication in the proceedings.

Newspaper Article

Glen Cove [NY] Record Pilot. 1974. Nassau Trust to open branches. July 18: 3 (col. 2). (76)

[NY] is added for clarity.

The Oregonian. 1981. Crews contain blazes; lightning ignites more. August 20; Sect. B: 5 (col. 1). (77)

This is an article without a byline. Cite as The Oregonian 1981 in the text and Literature Cited, but alphabetize under O.

Burnham, D. 1977. 1 in 4 Americans exposed to hazards on job, study says. The New York Times. October 3: 1 (col. 2), 22 (col. 1). Washington, DC, Oct. 2. (78)

This is an article with a byline and dateline. The article is not on successive pages. Note: Titles of technical publications should not begin with a numeral, but when citing an item that does, give the title as published.

Magazine Article

Harper, R.M. 1923. Development of agriculture in Georgia from 1850-1920: a series of four articles. Georgia Historical Quarterly. 6(1): 3-27; 6(2): 97-121; 6(3): 211-232; 6(4): 323-354. (79)

This article is published in a magazine in four different issues.

Part of a Series

Martin, S.B.; Platts, W.S. 1981. Effects of mining. Gen. Tech. Rep. PNW 119. Portland, OR: U.S. Department of Agriculture Forest Service, Pacific Northwest Forest and Range Experiment Station. 15 p. (Meehan, W.R., tech. ed.; Influence of forest and rangeland management on anadromous fish habitat in Western North America; pt. 8). (80)

The series the publication appears in is shown in parentheses at the end of the citation. Semicolons separate bibliographic groups in the series statement.

Part of a Work (Work Unit Fraction)

Thompson, R.P.; Jones, J.G. 1981. Classifying nonindustrial private forestland by tract size. Journal of Forestry. 79(5): 288-291 (p. 290, table 2). (81)

The article appears on pages 288 through 291 of the journal, but table 2 on page 290 is the part being cited.

Bryant, M.D. 1981. Evaluation of a small diameter baffled culvert for passing juvenile salmonids. Res. Note PNW 384. Portland, OR: U.S. Department of Agriculture, Forest Service Pacific Northwest Forest and Range Experiment Station (p. 3, fig. 2). 8 p. (82)

This publication does not appear within another; therefore, the total number of pages must be shown (8 p.). The work-unit fraction being cited (fig. 2 on page 3) must then be given before the total number of pages.

Howes, S.; Hazard, J.; Geist, J.M. 1981. [Untitled]. In: Guidelines for sampling soil resource conditions. Portland, OR: U.S. Department of Agriculture Forest Service, Pacific Northwest Region; R6 WM 066 1981 (p. 1-15). 20 p. (83)

Cites a report, not a monograph. The authors wrote a portion of the work being cited. Their section, which is untitled, is not a chapter or a unit that could be cited by itself, so the number of pages in the entire publication must be given. The authors' portion being cited is shown in parentheses.

Patent

Harred, J.F.; Knight, A.R.; McIntyre, J.S., inventors; Dow Chemical Co., assignee. (84)
1972. Epoxidation process. U.S. patent 3,654,317. April 4. 2 p. Int. Classif. C07D
1/08.

Titcomb, S.T.; Juers, A.A., inventors; International Telephone and Telegraph Corp., (85)
assignee. 1974. Reduced calorie bread and method of making same. U.S. patent
3,979,523. Sept. 7. 4 p. Int. Classif. A20D 2/00.

Publisher with Two or More Locations

Burges, A.; Raw, F., eds. 1967. Soil biology. London; New York: Academic (86)
Press. 532 p.

The title page of the book shows two locations for the publisher. Because the U.S. city was shown second, both cities are included in the citation. For cities not well known, include the States. Multiple locations are separated by semicolons.

Guyer, M.F.; Lane, C.E. 1964. Animal biology. 5th ed. New York: Harper (87)
& Row. 789 p.

The title page of the book names three locations for the publisher: New York, Evanston, and London. Because the first shown is a U.S. city, the other locations do not have to be included in the reference.

Kilpatrick, W.C.; Henry, C., Jr.; Ragus, J. [and others]. 1985. Soil survey in Grant (88)
Parish, Louisiana. New Orleans: U.S. Department of Agriculture, Soil
Conservation Service and Forest Service; and Louisiana State University
Agricultural Experiment Station. 143 p. + 20 maps.

The publication was published in a domestic city that stands alone and all the publishers are located in the same city. This publication has 143 pages and 20 maps.

Recurring Publication

To cite many issues of a recurring publication, give the range of years; indicate in a supplemental note the frequency of publication.

State of California, Division of Forestry. 1973-86. Brushland range improvement. (89)
Sacramento. Annual.

Library of Congress. 1984-85. National union catalog. Washington, DC. Monthly. (90)

Each citation implies that all or most issues published in the years given were used as reference.

Roman Numerals and Ordinals

Roman numerals (*I, II, IX*) and ordinals (*first, second, third*) should be converted to Arabic numbers (*1, 2, 9; 1st, 2d, 3d*), except in titles and where required for specific meaning.

Kline, R.F. 1961. Economic logging sale layout. In: Pacific logging congress (91)
loggers handbook. Portland, OR: Pacific Logging Congress: 29-31, 115-125.
Vol. 21.

Vol. 21 appears as Volume XXI on the original document.

- Thomas, J.W. 1986. Wildlife habitat modeling cheers, fears, and introspection. In: (92)
 Verner, J.; Morrison, M.L.; Ralph, C.J., eds. *Wildlife 2000: modeling habitat relationships of terrestrial vertebrates*. Madison, WI: The University of Wisconsin Press: xix-xxv.

The work cited precedes the numbered pages in the document. The Roman numerals used as page numbers must be retained in this case to indicate proper location of the work within the document.

- Geist, J.M.; Edgerton, P.J. 1984. Fourwing saltbush establishment in the Keating (93)
 uniform shrub garden first year results. Res. Note PNW 416. Portland, OR: U.S. Department of Agriculture Forest Service, Pacific Northwest Forest and Range Experiment Station. 8 p.

The ordinal first is retained rather than being changed to 1st because it appears in the title.

Sponsorship Shown

Organizations sponsoring a meeting or workshop are sometimes named on the cover or title page of published proceedings. Their role should be indicated after the pages cited but before any cooperators are named. Include the sponsor's location when necessary to distinguish among geographically separate locations of an organization. Add appropriate punctuation to separate different sponsors. If more than three sponsors are listed, do not include them in the citation.

- Spanner, M.A.; Teuber, K.; Acevedo, W. [and others]. 1984. Remote sensing of the (94)
 leaf area index of temperate coniferous forests. In: *Machine processing remotely sensed data: Proceedings of a symposium*. West Lafayette, IN: Purdue University: 362-370. Sponsored by: Landsat Application and Remote Sensing.

Cites a publication by more than three authors.

- Murray, M., ed. 1986. The yield advantages of artificial regeneration at high (95)
 latitudes: Proceedings of the 6th international workshop on forest regeneration. Gen. Tech. Rep. PNW 194. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 60 p. Sponsored by: School of Agriculture and Land Resources Management, University of Alaska-Fairbanks; Canadian Forestry Service, Ottawa, ON. In cooperation with: School of Agriculture and Land Resources Management, University of Alaska Fairbanks.

The editor of the proceedings is named as author. A proceedings is being cited rather than an article within; the proceedings identifier is not part of the formal title of the proceedings. The ordinal 6th appears as sixth on the publication. Sponsors and cooperators are named. University of Alaska-Fairbanks is punctuated as shown on the publication. A semicolon separates the two sponsors because a comma was used in the name of one.

Subordinate Title

A subordinate title is a term or phrase after the formal title that completes or qualifies the title. A proceedings identifier is a subordinate title. The subordinate title is separated from the main title by a colon. The first letter of a subordinate title is capitalized (*Transactions* in the Hoekstra reference, and *Proceedings* in the Hall reference below):

- Hoekstra, T.W.; Thomas, J.W.; Lennartz, M.R.; Worley, D.P. 1981. Managing of (96)
 Federal lands for production and use of wildlife and fish. In: Sabol, K., ed. *Resource management for the eighties: Transactions, 46th North American wildlife and natural resources conference*. Washington, DC: Wildlife Management Institute: 336-344.

- Hall, J.D.; Campbell, H.J. 1968. The effects of logging on the habitat of coho salmon (97)
 and cutthroat trout in coastal streams. In: *Logging and salmon: Proceedings of a forum*. Juneau, AK: The American Institute of Fisheries Research Biologists, Alaska

District: 5-37.

The portion of the formal title following a colon is not a subordinate title. The first word after the colon, therefore, is not capitalized (tests in the following example) unless it is a proper name:

- Darr, D.R. 1981. Interactions between domestic and export markets for softwood
lumber and plywood: tests of six hypotheses. Res. Pap. PNW 293. Portland, OR:
U.S. Department of Agriculture Forest Service, Pacific Northwest Forest and
Range Experiment Station. 22 p. (98)

Title Reflects More Than One Part

Parts are identified according to the publisher's style. They may be numbered (as in the following example), lettered (*Part A*), or identified in other ways. Punctuate between the main title and title of the part.

- Sartwell, C.; Daterman, G.E.; Sower, L.L. [and others]. 1980. Mating disruption with
synthetic sex attractants controls damage by *Eucosma sonomana* (Lepidoptera:
Tortricidae, Olethreutinae) in *Pinus ponderosa* plantations. 1: Manually applied
polyvinyl chloride formulation. Canadian Entomologist. 112: 159-162. (99)

Translated Title

Follow the capitalization rules of the language. Include all diacritical marks; omitting such marks is equivalent to misspelling. If the publication gives the title in more than one language, separate the title in the original language from the parallel title by an equal sign.

- Ruetz, W.F. 1981. Die Pazifische Edefanne nobilis eine Baumart für höhere Lagen?
=The Pacific noble fir, a species plantable at higher elevations? Allgemeine
Forstzeitschrift. 22: 549-551. (100)

When the title appears only in the original language, you may supply a translated title immediately after the original. Separate the original from the translated title by a colon. Normally, information being supplied is enclosed in brackets; a translated title, however, does not require brackets.

- Dietrichson, J. 1967. Klimaskader, vekstrytme og høydeutvikling: Climate damage,
growth rhythm and height development. Meddelelser frå det Norske
Skogforsøeksvesen. 21: 144-158. (101)

Transliterated Title

When bibliographic data on the original document are given in a non-Roman alphabet, transliterate the title to the Roman alphabet (you need not enclose the transliterated title in brackets). Indicate the language of the document in a supplemental note.

- Ogawa, M. 1977. Role of ecology of mushroom types in forest soil. 1: Ecological
research methods and their problems. Soil Microbiology. 19: 39-50. In Japanese. (102)

The reference also shows a title with more than one part.

Two or More Publishers

Separate multiple publishers with a semicolon. If the publishers are in the same city, separate the publishers' names with a semicolon but do not repeat the city.

- Allen, D.L., ed. 1956. Pheasants in North America. Harrisburg, PA: Stackpole
Co.; Washington, DC: Wildlife Management Institute. 71 p. (103)

CD-ROM, Diskette, and Magnetic Tape

- U.S. Department of Commerce, Bureau of the Census. 1992. Census of
population and housing, 1990 [CD-ROM]. Summary tape file 3. Washington,
DC: U.S Department of Commerce, Bureau of the Census. (104)

Online Journal

- Pastor, J.; Light, S.; Sovell, L. 1998. Sustainability and resilience in boreal regions:
sources and consequences of variability. Conservation Ecology. 2(1): 16.
<http://www.consecol.org/Journal/vol2/iss2/art16>. [Date accessed: July 24, 2000]. (105)

The date the author first accesses the Web site is listed in the reference. If the year is the same as the publication year, you do not need to repeat it.

Proceedings on CD-ROM

- Keep America Growing. [N.d.]. Keep America growing: Conference proceedings (106)
[CD-ROM]. [Place of publication unknown]. Additional information at:
<http://www.nhq.nrcs.usda.gov/CCS/KAGnrcs.html>. [Date accessed: May 13, 2000].

Published on CD-ROM and Online

- Hargrove, W.H.; Luxmoore, R.J. 1998. A new high-resolution national map of (107)
vegetation ecoregions produced empirically using multivariate spatial clustering
[CD-ROM]. Redlands, CA: Environmental Systems Research Institute, Inc.
[Number of pages unknown]. http://www.esri.com/library/userconf/proc_98/PROCEED/TO350/PAP333/P333.HTM [Date accessed: February 11, 2001].

Published Both on Paper and Online

- Edson, J.L.; Everett, R.L.; Wenny, D.L.; Henderson, D.M. 1998. Shoot culture (108)
of *Astragalus*: toward conserving a threatened genus. In: Botanic gardens
micropropagation news. [Location of publisher unknown]: Royal Botanic Gardens,
Kew. 2(3): 34–36. <http://www.rbgekew.org.uk/science/micropropagation/bgmnews.html>.
[Date accessed unknown].

- Raettig, T.L. 1999. Trends in key economic and social indicators for Pacific (109)
Northwest States and counties. Gen. Tech. Rep. PNW-GTR-474. Portland, OR:
U.S. Department of Agriculture Forest Service, Pacific Northwest Research
Station. 30 p. http://www.fs.fed.us/pnw/pubs/gtr_474.pdf. [Date accessed: June 16].

- Hamel, P.B.; Brunswig, N.L.; Dawson, M.R.; Staten, M. 1999. Lying in wait for (110)
partners in flight: some experiences monitoring birds in southeastern bottomlands.
In: Strategies for bird conservation: the partners in flight planning process. Ithaca,
NY: Cornell University Lab of Ornithology. 11 p.
<http://www.ornith.cornell.edu/pifcapemay/hamel.htm> and
<http://www.ornith.cornell.edu/pifcapemay/twedt.htm> [Date accessed: July 10, 2001].

This publication is located on two Web sites.

Online Publication

- Prasad, A.M.; Iverson, L.R. 2000. A climate change atlas for 80 forest tree (111)
species of Eastern United States. <http://www.fs.fed.us/ne/delaware/atlas/>.
[Date accessed: October 8, 2002].

- U.S. Environmental Protection Agency. 1998. Interim air quality policy on wildland (112)
and prescribed fires. 43 p. <http://www.epa.gov/ttn/oarpg/tl/memoranda/firefnl.pdf>.
[Date accessed: February 15, 2002].

Software Program, Commercial

- Intuit, Inc. ©1999. Turbo tax deluxe. San Diego, CA. (113)

- SAS Institute Inc. 1989. SAS/STAT user's guide. Version 6. 4th ed. Cary, NC: (114)
SAS Institute Inc. 846 p.

This software has a version and an edition.

Software Program, Government

- U.S. Department of Agriculture Forest Service. 1999. PPHARVEST. Version 2.0. (115)
Portland, OR: U.S. Department of Agriculture Forest Service, Pacific Northwest
Research Station. http://www.fs.fed.us/pnw/data/ppharvest/ppharvst_home.htm.
[Date accessed: August 22, 2000].

McGaughey, B. [N.d.] Stand visualization system. Portland, OR: U.S. Department of Agriculture Forest Service, Pacific Northwest Research station. (116)
<http://forsys.cfr.washington.edu/>. [Date accessed: August 22, 2000].

Unpublished Reference

There are two ways to cite an unpublished reference in your manuscript: (1) as a footnote or (2) as a source listed in the literature cited list. Which way you should use depends on whether the reference appears in the text or in a table.

If it appears in the text, cite it as a footnote, e.g.,

¹U.S. Department of Agriculture Forest Service. 1998. Field instructions for the southern forest inventory-remeasurement of prism plots. Version 3. 29 p. Unpublished report. On file with: Southern Research Station, Forest Inventory and Analysis, 4700 Old Kingston Pike, Knoxville, TN 37919.

If it appears in a table, cite it in the literature cited list—and in that case, also refer to the literature citation by listing the source below the table, e.g., (Source: U.S. Department of Agriculture Forest Service 1998).

(117)

Videocassette

Rummer, R.B. 1999. Forest engineering research: 30 years of research to support forest operations [Videocassette]. Auburn, AL: Auburn University Educational Television. (118)
 [VHS format, 55-min.].

Appendix

AUTHORS CHECKLIST For Preparing and Submitting Manuscripts for SRS Publication

Please reference the SRS Authors Guide for complete instructions on manuscript preparation.

CHECKLIST FOR SUBMITTING MANUSCRIPT

- Manuscript Approval Sheet [Form SRS-FS-1600-4a(6/98)] is completed.
- Letters of permission to use copyrighted material, unpublished references, and personal communication are included.
- Reviewers' copies and letters of reconciliation for all reviewers are included.
- Text is provided in hard copy and electronic format; it includes tables of contents, lit cited, and figure captions.
- Figures and tables are provided in hard copy and electronic format, with each as a separate e-file.
- Photographs (hard copy and e-file), with photo credits and captions for each, and within-text placement information.

MANUSCRIPT TEXT

- All punctuation followed by one space (not two).
- All pages have a header (right justified) with senior author's last name and page number.
- Do not imbed figures, tables, photos, etc., in the text.
- Do not underline URLs; remove hyperlink function from URLs.
- Do not use software to generate table of contents, footnotes, or index.
- Do not include page numbers with a table of contents page.
- Scientific names of trees, plants, and other organisms are included in parentheses and *italics* after first use only.
- There is a citation for every reference and a reference for every citation (text, tables, or figures).
- Include author(s) information (i.e., working title, affiliation, and address) on the cover page.
- Units of measure (English, metric, or both) should be tailored to the audience; see *Authors Guide* for specifications.
- Use Microsoft equation editor or MathType[®] for mathematical equations.
- Font and paragraph styles (use Heading 4 only if necessary):
 - **HEADING 1** (use Helvetica 12 pt. bold, CAPS, and start text on next line, flush left)
 - **Heading 2** (use Helvetica 10 pt. bold and start text on next line, flush left)
 - **Heading 3**—Text follows. (use Times New Roman 10 pt. bold followed by an em dash)
 - **Heading 4**—Text follows. (use Times New Roman 10 pt. bold, *italic* followed by an em dash)
 - Text is single-spaced. (use Times New Roman 10 pt. for text, single-spaced, and flush left)

TABLES AND TABULATIONS

- Do not imbed tables in the text—keep them separate at the end of the manuscript.
- Submit hard copy and electronic copy (in MS Word or Excel) of all tables.
- Save each table into an individual table file (e.g., **table1.doc**).
- Keep tables to a reasonable size. Typical widths are 3-³/₈, 5-¹/₂, and 7-¹/₄ inches.
- Type of 9 pt. Helvetica is recommended, but use no smaller than 8 pt.
- Tables are single-spaced.
- Avoid using spaces or empty columns to separate or line up data—use **tabs** or the MS Word table function.
- See *Guidelines for Tables and Authors Guide* for complete specifications.

GRAPHICS—“Graphics” include all figures (maps, charts, and graphs), drawings, proposed cover art, and agency logos.

- Do not imbed graphics in the text. Captions are included after the text, single-spaced, and on a separate page.
- Submit hard copy and electronic copy of all graphics.
- Use Helvetica type font for labels within graphics.
- Save each figure into an individual graphic file (e.g., **fig1.eps**, **fig2.ai**, etc.).
- Acceptable formats: *.eps, *.ai, and *.xls.
- Graphics should be no smaller than 300 dpi and 3-³/₈ inches wide.
- See *Guidelines for Graphics and Authors Guide* for complete specifications.

PHOTOGRAPHS

- Acceptable formats: *.tif and *.jpg.
- 2000x3000 pixel dimension; at least 300 dpi at the final placement size.

LITERATURE CITED

- Do not underline URLs; remove hyperlink function from URLs.
- Do not link the within-text citations, e.g., Miller (1980), with the lit cited section.
- Cite references within text as follows: (Harris 1980, Stern and Walls 1998a) or (Jones, in press; Mills 1988).
- Follow ANSI for styling citations; see *Guidelines for Citations and Authors Guide* for specifications and examples.