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AUTHORS



GUIDE

Technical Publications Team

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This guide is for authors and others preparing manuscripts for publication by the Southern Research Station and external outlets consistent with U.S. Department of Agriculture Forest Service and Southern Research Station publishing policies.

The procedures and guidelines in this authors guide are based on rules and regulations prescribed by the U.S. Department of Agriculture Forest Service, the Government Publishing Office, and Congress. Some were developed or modified by the Southern Research Station Technical Publications Team.

PUBLISHING POLICIES

AUTHORSHIP

- The Southern Research Station follows guidelines for ethical authorship as set forth in the Forest Service Research and Development Code of Scientific Ethics:
 - 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.
 - Ethical authorship requires substantial involvement of each author 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.
- Those other than research scientists, such as administrators, technicians, and managers, can be included as authors if they meet the criteria for being authors.
- Authorship should not be claimed if a person 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 there are several coauthors, all should clearly understand what each is responsible for and where the names will fall in the order of authorship. Multiple authorship needs to be considered carefully so criteria for authorship are fully met by all.
- Financial support, contribution of other resources, and technical assistance should be credited in the acknowledgments.

REVIEWS

- **Policy review** is required for manuscripts submitted by station authors or cooperators for internal station series publications and to external outlets (e.g., scientific journals, books, proceedings).
- **Technical review** is required for station series manuscripts submitted by station authors or cooperators and may be waived for manuscripts submitted to external outlets, as determined by the Designated Responsible Official (DRO).
- The DRO is designated by the station director to evaluate the rigor and policy implications of the manuscript and can be an assistant director, center director, project leader, or program manager.

- The DRO is usually a project leader at the Southern Research Station.
- **Statistical review** may also be required, as determined by the DRO.

Policy review looks for manuscript content that compromises scientific integrity, credibility, and objectivity. This includes opinions on laws or policy, speculation without peer-reviewed experimental data and citations, and provocative statements inappropriate for scientific publication. The policy review will ensure that discussion of management implications, considerations, and potential outcomes are objective. Reviews are generally conducted by the senior Forest Service author's DRO, but may be delegated to a similarly qualified senior manager.

Technical review evaluates the use of statistics, experimental design, methods implementation, thoroughness of literature review and rigorous comparison to other work on the topic, clear presentation of findings, appropriate interpretation of results, and other technical aspects of the research to ensure maximum "quality, objectivity, utility, and integrity of information" (OMB Guidelines, Section 515, Public Law 106-554, Data Quality Act).

- Written review comments must be obtained from two peers competent in the subject matter (one **internal** and one **external**). In some cases, the DRO or executive team members may require additional reviews or blind peer review (i.e., a formal referee).
- The reviewers are selected, and review coordinated by the author (i.e., informally refereed) with concurrence by the supervisor unless blind peer review is needed. The supervisor coordinates blind peer reviews.
- An **internal reviewer** is generally considered to be within the author's research work unit, facility (lab), or organization (research station).
- An **external reviewer** is generally considered to be outside this circle of peers, and could be affiliated with a different research station or an organization outside of Forest Service Research and Development. Reviews may be **formally refereed**, if through a journal or third party (e.g., supervisor, DRO), or **informally refereed**, if coordinated directly by the author.
- Assessment of comments from reviewers and an author response are required prior to obtaining the DRO's signature on the manuscript approval form.

Statistical review by an internal or external expert knowledgeable of the manuscript's research methods may be required by the DRO when the manuscript is recommended for higher-level policy review or when methodological questions are unresolved by the technical review.

MANUSCRIPT APPROVAL FOR STATION SERIES PUBLICATIONS

- Complete and sign the [internal manuscript approval form \(1600-1 internal\)](#) when the senior Forest Service author is a Southern Research Station employee. If the senior Forest Service author is from a different station, then that station's 1600-1 form needs to be completed and signed instead.
- **The 1600-1 form**, and copies of the **technical**, **statistical**, and **policy review forms** should remain on file permanently with the Station Publications Control Officer (Publications Team 1630 folder).
- **1 internal and 1 external technical review**, each conducted by a peer competent in the subject matter who agrees to review the manuscript thoroughly and critically and complete a technical review form (which includes an initial review and review of the revised manuscript and author's response) must be completed prior to approval by the DRO.
- The **senior Forest Service author**, typically the primary investigator, is the Forest Service-affiliated author who contributed most to the work in terms of time, expertise, and resources. If the actual senior author of the manuscript is affiliated with a partner institution, then the Forest Service-affiliated author who contributed most to the work serves as the senior author for the purposes of completing and signing the 1600-1 form.
- The DRO approves the adequacy of technical content, technical review, statistical review (if included), and conducts a policy review (which includes completing a policy review form) prior to submission to the Technical Publications Team.
- When a project leader or nonprogram station employee (such as someone in the director's office) is an author, a member of the executive board will provide the policy review and approval to submit for publishing.

MANUSCRIPTS FOR EXTERNAL (NON-FOREST SERVICE) OUTLETS

- Complete the [external manuscript approval form \(1600-1 external\)](#) for all manuscripts submitted to external outlets (e.g., scientific journals, books, proceedings) for which the senior Forest Service author is a Southern Research Station employee. If the senior Forest Service author is from a different station, then that station's 1600-1 form needs to be completed and signed instead of this one.
- The 1600-1 form should remain on file permanently with the senior Forest Service author.
- The **senior Forest Service author**, typically the primary investigator, is the Forest Service-affiliated author who contributed most to the work in terms of time, expertise, and resources. If the actual senior author of the manuscript is affiliated with a partner institution, then the Forest Service-affiliated author who contributed most to the work serves as the senior author for the purposes of completing and signing the 1600-1 form.
- **Technical review** is not required for manuscripts being submitted to external outlets (e.g., scientific journals) that facilitate their own peer reviews, unless the DRO requests it.
- The DRO may require assessment of comments of the outlet-provided reviewers and the author reconciliation letter prior to resubmission to an external outlet.
- The DRO approves the adequacy of technical content, technical review, statistical review (if included), and conducts a policy review prior to submission to an external outlet.
- All correspondence with external outlets is the responsibility of the author(s) (i.e., Forest Service scientists or external partners).
- Forest Service authors should contact administrative support from their respective center to arrange for page or open access charges, and reprint orders prior to initial manuscript submission.
- Author(s) should follow the style, format, and other editorial considerations prescribed by the external outlet.
- For manuscripts prepared for external outlets, technical editing and styling by the Station's Technical Publications Team may be requested by the author(s), but priority will be given to station series manuscripts.

COPYRIGHT AND EXTERNAL OUTLETS

- Works (papers, books, maps, photos) created by employees as part of their duties for the U.S. Government are in the public domain and cannot be copyrighted.
- Articles, papers, books, and other material prepared by USDA employees as part of their official duties and published in private publications are in the public domain and can be reproduced at will.
- The fact that the private publication is itself copyrighted does not affect the material of a Government employee (17 U.S.C. 105).
- U.S. Government employees cannot “assign copyright” to another entity—there is none to assign. If asked to assign copyright, respond with “no copyright is available for the works of Federal employees.”
- The publisher may request that authors sign a copyright form. If the work was prepared by a combination of authors who are both within and outside the public domain, state as concisely as possible which parts of the paper are subject to copyright and which are not; for example, “All parts of the manuscript except the introduction were prepared by Federal employees,” or “The methods section was prepared by a Federal employee.”

DISCLAIMERS AND FUNDING ACKNOWLEDGMENTS FOR EXTERNAL OUTLETS

- Departmental policies explicitly allow Forest Service employees to communicate their scientific findings objectively without political interference or inappropriate influence. Procedures such as use of disclaimers help safeguard these employee rights.
- [Departmental Regulation 1410-001](#) and a May 8, 2019 Departmental memo titled *Policy Guidance on Disclaimers, Disclosures and Acknowledgements in Outside Scientific Publications and Presentations* contain guidance on use of disclaimers.
- Use discretion to determine whether a disclaimer is needed. Consult the station publications control officer for further assistance on use of disclaimers.
- A disclaimer may be needed if:
 - Statements are not consistent with USDA policy or U.S. Government position or policy
 - USDA is not the lead author and does not have the authority or ability to review and clear content in the final publication
 - The material treats a subject that interprets the policies of the USDA or deals with sensitive areas of any USDA program

- The study is classified as [Influential Scientific Information \(ISI\) or Highly Influential Scientific Assessment \(HISA\)](#)
- The study is about sensitive topics or contains prominent issues

Use the following standard disclaimer for Forest Service employees acting in their official capacity and participating in work not formally disseminated by the USDA:

The findings and conclusions in this publication/presentation/blog/report are those of the author(s) and should not be construed to represent any official USDA or U.S. Government determination or policy.

For a draft report or other information released by the Forest Service solely for purposes of peer review, use the following:

This information is distributed solely for the purpose of pre-dissemination peer review under applicable information quality guidelines. It has not been formally disseminated by the Forest Service. It does not represent and should not be construed to represent any agency determination or policy.

For draft influential scientific information presented at scientific meetings or shared confidentially with colleagues for scientific input prior to peer review, use the following:

The findings and conclusions in this report/presentation have not been formally disseminated by the Forest Service and should not be construed to represent any agency determination or policy.

For external publications and presentations, acknowledge the public funding of the published work by the Forest Service with the following:

This research/work/presentation was supported [in part] by the U.S. Department of Agriculture, Forest Service.

STATION SERIES PUBLICATIONS

MANUSCRIPT SUBMISSION PACKAGE

- Manuscripts must be in their final form before being submitted, and they must be accompanied by:
 - a completed [internal manuscript approval form \(1600-1 internal\)](#)
 - two completed [technical review forms](#)
 - a completed [policy review form](#)
 - a completed [statistical review form](#) (if requested by the DRO)
 - letters of permission to use copyrighted material (if necessary)
 - signed [photo release form\(s\)](#) (if necessary)
 - signed [author release forms](#) (if there are non-Forest Service authors)
- The manuscript package can be submitted through the [Submission Form](#) or sent directly to the publications team leader.
- See the [Authors Checklist](#) for materials to submit and how to organize them.

[Author Resources: INTERNAL Site](#)

[Author Resources: EXTERNAL Site](#)

STATION SERIES PUBLICATION CATEGORIES

CATEGORY	AUDIENCE	CLASS OF MATERIAL
General Technical Report (GTR)	Scientists, resource managers, general forestry public	Information of a technical nature, but not an original report: proceedings, computer programs, annotated bibliographies
Research Paper (RP)	Scientists and resource managers	Results, analyses, conclusions of formal studies or experiments
Resource Bulletin (RB)	Scientists and resource managers	Economic information of permanent value on timber and other forest resources or their utilization
Resource Update (RU)	Scientists and resource managers	Economic information of permanent value on timber and other forest resources or their utilization
Research Note (RN)	Scientists and resource managers	Observational information on new techniques or instruments, especially of how-to-do-it type or incidental discovery
Research Map (RMAP)	Scientists and resource managers	Stand-alone maps, primarily those conveying new geospatial information derived from Forest Service research
Science Update (SU)	General public, members of Congress, cooperators, and supporters	Annual reports, State update sheets, interpretive brochures, program/project descriptions
Unnumbered publication	Any Forest Service audience, depending on subject matter	Nontechnical information that does not become part of forestry literature, such as publications lists, facilities brochures, and forest guides

PUBLISHING PROCESS

MS APPROVAL

Team Lead

- Checks that required reviews are included and manuscript is in compliance with Forest Service Handbook/Forest Service Manual and Quality Assurance plan
- Consults with DRO regarding higher-level review (if needed)

MS CHECK-IN

Team Lead (w/ Editor and VIS¹)

- Checks submitted files for compatibility and completeness

PRE-FLIGHT MEETING

Editor, VIS, and Author(s)

- Discuss key messages and audience
- Review figures and tables
- Discuss specific design concerns

EDIT

Editor

- Edits and styles manuscript, figures, and tables
- Sends edited files to **Author**
- Revises files according to Author's comments

DESIGN/LAYOUT

VIS

- Conceptualizes overall look of pub or collection of pubs
- Formats tables and graphics
- Flows text and designs document

PROOF

VIS, Editor, and Team Lead

- **VIS** and **Editor** do internal QA/QC
- **Team Lead** does read-through/proofread
- **VIS** makes corrections
- **Editor** sends proof PDF to author
- **Editor** and **Team Lead** review comments
- **VIS** makes final changes
- **Author** approves final PDF

PUBLICATION

VIS, Editor, and Editorial Assistant

- All Station publications are entered into Treesearch
- **VIS** creates 508-compliant PDF
 - **Editorial Assistant** uploads to Treesearch
 - **Editor** sends **Author** a link to publication
 - **VIS** manages print

DISTRIBUTION

The Forest Service is moving to electronic publishing. Thus, most publications are made available only electronically. If funding is provided by the author's unit, or the publication's primary stakeholders prefer it, hard copies may be printed. A publication's suitability for printing is determined by the Technical Publications Team, and, as appropriate, in conjunction with the author or project leader.

PERMISSIONS

To reproduce **copyrighted tables or illustrations**, obtain written permission of the copyright owner, usually the publisher.

Written permission is also needed for using **personal correspondence** or **unpublished communications** to support data or assertions in the report (an e-mail is sufficient).

ERRATA

The author or project leader should bring errors in published material to the attention of the Technical Publications Team lead as soon as possible, ideally within a short time after publication. The team lead will determine the appropriate action, based on the egregiousness of the error and other factors.

¹ VIS = Visual Information Specialist

PREPARING MANUSCRIPTS

Southern Research Station style is based on U.S. Department of Agriculture Forest Service, Government Publishing Office (GPO), and congressional rules and regulations, as well as the publishing experience and practice of the station's Technical Publications Team. Compatible references for style questions not explicitly addressed by these guidelines include the [GPO Style Manual](#) and the [American Heritage Dictionary of the English Language](#). When in doubt, authors also are encouraged to direct their questions to a member of the Technical Publications Team.

The [Forest Service Handbook 1609.11](#) contains more details on basic requirements of manuscript preparation, with specific instructions for preparing manuscripts to be published by the Washington Office or the Department of Agriculture. [The Forest Service Manual 1600](#) also contains guidance and information on publishing, digital services, and related activities.

PARTS OF A MANUSCRIPT

	TITLE	Written in title case (first letter capitalized in all words except for articles and prepositions with fewer than four letters).
	AUTHORS	Author names are written as they will appear on the cover of the finished publication. Author affiliations include name, professional title, institution, address. Examples: Bert R. Mead is a Research Forester, Forestry Sciences Laboratory, Anchorage, AK 99503. Michael Howell, Resource Forester, U.S. Department of Agriculture, Forest Service, Southern Research Station, Forest Inventory and Analysis Research Work Unit, 4700 Old Kingston Pike, Knoxville, TN 37919.
	ABSTRACT	This section is approximately 200 words and includes the report's purpose, methods and scope, results, conclusions, and implications (not recommendations). Do not include citations in the abstract.
	KEYWORDS	Include 5–7 words in order of importance. Select terms that will help in retrieving the publication. Keywords can include words used in the title.
OPTIONAL	KEY MESSAGES	Include 3–5 bullet points that highlight the most salient points (what was done, how it was done, and why it is important).
	GRAPHICAL ABSTRACT	This conveys the most important aspect or conclusion of the report.
	EXECUTIVE SUMMARY	This section highlights the unifying themes of the report and explains the value provided by different perspectives or contributions. This section is for reports with multiple chapters, especially if written by different authors.
	PREFACE	This section provides the author's rationale for writing the paper. It is not necessary in most reports and is used only in major works or papers that are part of a series. The same preface is used in each report within the series. A preface also might be used in a very long report 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	This statement is for authors to acknowledge contributions by other Government agencies and external cooperators (Forest Service Manual 1631.44). A manuscript to be published in cooperation with another Government agency must have the approval from the cooperating agency before it is submitted.

ACKNOWLEDGMENTS

This section thanks technicians, cooperators, reviewers (if they have given consent to be named), sources of special materials, artists, editors, publication specialists, and others who have gone above and beyond in helping with the research or the report. Do not phrase an acknowledgment to imply endorsement. Do not acknowledge the authors of the report. The acknowledgment is simply worded: avoid aggrandizement and flowery language.

IN-TEXT CITATIONS

- Assertions not supported by data must have literature citations.
- There is a citation for every reference (including text, tables, and figures).
- There is a reference (including text, tables, and figures) for every citation.
- Use lowercase letters to distinguish references that have the same author(s)/year (e.g., Miller and Wear 2001a).
- Make sure that “et al.” follows the name of the first author for in-text citations with more than two authors. In the Literature Cited/References section when a citation has more than four authors “et al.” replaces the fourth and subsequent author names. See examples starting on page 20.

LITERATURE CITED

REFERENCES

Whether to title this section of the manuscript **Literature Cited** or **References** is determined by its content:

- **Literature Cited** contains only sources cited from published literature (which includes most websites); it also includes unpublished sources such as manuscripts in preparation and unpublished dissertations/theses.
- If there are personal communications and correspondence, the section title changes to **References**. Note that electronic communications (including phone conversations, e-mail, and text messages) are considered personal communications.

APPENDIX

This section is for explanations and elaborations not essential to the text (but helpful to the reader), and texts from other documents, laws, etc., used to substantiate the report. It is also appropriate for lists of common and scientific names of species, other long lists, questionnaires, forms, how-to explanations, additional figures, and multitudinous tables.

- Each appendix should have its own Literature Cited/References section, separate from the one in the main text.
- If there is more than one appendix, use Arabic numerals to identify each, i.e., Appendix 4 (not Appendix IV). Appendix tables and figures are numbered consecutively and separately from those within the text. When referring to appendix tables and figures within the main text, use table A1.1, table A2.1, figure A1.1, figure A2.1, etc.
- Footnotes start with 1 in each appendix.
- In the main text, appendix is not capitalized unless it begins a sentence or used with a title; if used parenthetically, it is abbreviated (app. 3).

GLOSSARY

Add this section at the end of the text (after citations and any appendices but before an index) so that readers can find it easily. Arrange terms in alphabetical order, each with its definition. Subentries are indented, and the term being defined is in bold italic. Capitalize only proper nouns. 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

TABLE DATA

- These data should stand alone with sufficient sourcing and explanation to be fully understood.
- The word “table” is not capitalized in the text, unless it begins a sentence. It is not abbreviated when used parenthetically (e.g., table 2).
- Do not repeat material from a table in a figure and vice versa. Choose the best format to display the information once.
- Save tables as a separate file from the main text (Microsoft Word .doc file, using INSERT TABLE function; or Excel .xlsx file with each table on a separate worksheet).
- Number tables in the order mentioned in the text with Arabic numerals.
- Do not leave empty cells in a table; each cell must have data or en dash (–) with an explanatory footnote below table.

TABLE TITLE

This fully identifies the what, where, and when of the data in the table. The title is not necessarily a complete sentence and does not end with a period. Additional explanations are put in table footnotes, not added to the title. Tables titles are in sentence case (only first words and proper nouns are capitalized). Table number is bold and followed by an em dash (—) and no period.

TABLE FOOTNOTES

These are lowercase and italic. When the note is applied to numbers use a letter (e.g., 12^a). When the note is applied to a letter/words, use a number (e.g., tree canopy¹). (Screen readers do not differentiate superscripts, so using letters with numbers and numbers with letters will help screen reader users know the superscript character is for a note.)

TABLE NOTES

- Add explanatory **notes** below the ending table line and above any footnotes (e.g., NA = not available, – = negligible, or – = not applicable [or whatever is meant by the dash]). Add a period at the end of the note. Separate unlettered notes with a semicolon.
- **Source notes** are formatted like footnotes, with a period at the end of the note, e.g., Source: USDA Forest Service (1990). Source notes follow footnotes (in alpha order, if citations are included).

UNITS OF MEASURE

- These are centered above the data columns they pertain to and do not belong in the table headings. Units are spelled out and italicized. If all the entries are ≤ 1 , make the unit of measure singular; otherwise, make it plural.
- If space permits, spell out English units of measure. Always abbreviate metric units of measure.
- Use a slash or negative superscript numeral with metric units of measure (e.g., kg⁻¹, cm/day).
- If a number in the data column is <1 , place a zero before the decimal point (e.g., 0.89).

APPENDIX TABLES

These need not be mentioned in the text; if they are mentioned, they can be out of numerical order.

EXAMPLE TABLE

Table 1—Grand mean and range of plantation attributes by time period

Plantation attribute	2013		2023	
	Mean (SD)	Range	Mean (SD)	Range
Basal area (m ² ha ⁻¹)	22.3 (4.0)	13.2–26.2	12.6 (2.3)	8.6–15.0
Density (trees ha ⁻¹)	667 (153)	341–828	191 (69)	111–331
QMD (cm)	20.9 (1.2)	18.9–22.7	29.9 (2.6)	24.3–32.0
SDI	197 (27)	139–224	96 (18)	70–122

Mean values for the eight plantations were used to compute these statistics.

2013 was before the first commercial thinning, which occurred in 2014 (approximately 5 years after Hurricane Michael, which impacted Ichauway in October 2018).

The 2013 values include trees at least 2.5 cm diameter at breast height (d.b.h.) and the 2023 values include trees at least 12.7 cm d.b.h.

SD = standard deviation; QMD = quadratic mean diameter; SDI = stand density index.

Parts of a table

Units of measure go **below** the table heading, not within it. These two cells have been merged to apply to two columns.

A table title is part of the report body, not part of the table—do not put it in a table row.

Headings are sentence case (cap only 1st letter of each heading).

Units row

Spanner row

Do not use spaces or tabs to position text inside cells because they must all be removed during page layout. Do not worry about how cells look in Microsoft Word (i.e., the Word file is not the page layout file). During page layout, the VIS will make these spacing adjustments.

Table 1—Four Western States with some interesting plants and animals, 2017

				Trivia about plants and animals	
Region	Total area	Timber area	Net volume of timber	Key species	Useful factoids about each of these species ^a
	--- Thousand acres ---		Million ft ³		
A neighboring pair of Southwestern States:					
Arizona	81,699	32,057	22,799	Arizona trout	Found only in Arizona.
				Saguaro cactus	The saguaro's white blossom is the official State flower.
New Mexico	72,413 ^b	22,877 ^b	34,814	Yucca	The leaves of the yucca can be used to make rope, baskets, and sandals.
				Smokey Bear	In 1950, the little cub was found trapped in a tree when his home in Lincoln National Forest was destroyed by fire.
Subtotal	154,112	54,934	57,613		
A couple of States in the Pacific Northwest:					
Oregon	91,432	29,787	94,301	Hazelnut	Oregon is the only State with an official State nut.
Washington	72,532	—	72,011	Apple	Washington produces more apples than any other State.
				Green darner	The Washington State insect is a species of dragonfly named for its resemblance to a darning needle.
Subtotal	166,964	29,787	166,312		
Total	321,076		223,925		

Footnotes are lowercase and italic. A letter is used when the note applies to numbers and numbers are used when the note applies to letters (words), but do not mix lettered and numbered footnotes in the same table (choose the most prevalent combination and apply it throughout the table).

Each of these entries aligns with its subject in the same table row—do not type all of these into one cell because their alignment will be lost.

Cell borders (shown here in red) will not appear in the final layout, but it's okay to leave borders turned on when you submit your tables.

Table footnotes are part of the report body—do not put them into table cells.

— = no data.
Note: Data represented here are estimates using varying protocols and methodologies and may not add to totals because of rounding.
^a Good for making small talk at parties.
^b If counted while sober.
Source: Oswalt et al. (2014).

Additional text explaining your methods or other details goes into a table footnote; do not put it in the table title.

Ordering of footnotes

1. Definitions of terms or other information
2. Superscripted entries
3. Sources.

LISTS

LIST INFORMATION

- A **list** is a single column of data in the text, usually preceded by an introductory sentence ending with a colon. It is not labeled as a table.
- Items are listed by number if order is important or with bullets if the order of items is not a factor.
- When building lists, make sure all items are written in parallel sentence structure. Avoid mixing phrases with complete sentences. Also, ensure that verb tense is consistent throughout 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 add an "and" at the end of the penultimate item.

PHOTOGRAPHS

PHOTO FILES

Photographs must be submitted as .jpg, .png, or .tif files and must be at least 2,000 pixels wide at 300 dpi. They do not need to be numbered as figures unless they are referred to in the text. All photos showing people engaged in field activities need to show them wearing the appropriate personal protective equipment (e.g., hard hats) as described in the [Forest Service Handbook](#).

PERMISSIONS

- **Written permission** is required for all photos that are not in the public domain. Public domain includes those taken by Federal employees on Government time. A signed [Standard Photo Release Form](#) is needed for any photo taken by a non-Federal employee.
- Photographs that show recognizable minors must be accompanied by a [Standard Photo Release Form](#) signed by a parent or legal guardian; photographs showing other recognizable individuals also may require a signed release form.

CAPTIONS

ALT TEXT

CREDITS

- All photos need a **caption** that describes the context within the image to include who, what, where, and when, **alt text** which describes the photo for the visually impaired, and a **credit line** at the end. If all photos were taken by the author(s), credit lines are not needed; instead place a note below the author statement at the beginning of the manuscript.
- If the photographer is a Forest Service employee the credit line should reflect this, e.g., (USDA Forest Service photo by Dominic Cumberland).
- If the photographer is not a Forest Service employee but the image is either donated, released, or legally licensed for use by the Forest Service, the credit line should use a courtesy caption, such as (Courtesy photo by John Smith) or (Courtesy photo by istockphotos.com/Andrew Jordan).

Photo caption and alt text example:



CAPTION: Firefighters with the Blue Ridge Hotshots climb a steep mountain with arduous lava rocks to battle the Dixie Fire in Lassen National Forest, CA. (USDA Forest Service photo by Cecilio Recardo)

ALT. TEXT: A photo of two firefighters standing in a large boulder field at the edge of a conifer forest.

RASTER VERSUS VECTOR IMAGES

RASTER IMAGES



- **Raster (or bitmap) images** are produced when scanning or photographing an object. Raster images are compiled using pixels, or tiny dots, containing unique color and tonal information that come together to create the image.
- Because raster images are pixel based, they are resolution dependent. This means that the more pixels there are in the image, the larger it can be printed.
- Common raster formats are **.jpg**, **.tiff**, and **.png**.

VECTOR GRAPHICS



- **Vector graphics** are made of paths, defined by a start and end point—sometimes with other points, curves, and angles along the way—used to create simple drawings or complex diagrams.
- Vector images are not resolution dependent. They are drawn by the computer and do not have a finite number of pixels. They can be resized to any dimension and not lose clarity.
- Common vector formats are **.ai**, **.eps**, and **.svg**.

FIGURES

FIGURE FILES

Figures can be maps, diagrams, illustrations, or graphs and should be at least 2,000 pixels wide at 300 dpi.

- Submit figures in their native format

Figures generated in:

Excel
SigmaPlot
Illustrator
Photoshop
ArcGIS Pro
R (or R studio)

Save as:

.xls or .xlsx
.eps, .tiff, .jpg, .xls or .xlsx
.ai (fonts embedded)
.psd, .tiff, .png, .jpg
.eps (fonts embedded)
.svg

Note that .jpg, .tif, and .png files are acceptable, but cannot be edited during layout.

CONCEPT

Do not repeat material from a table in a figure and vice versa. Choose the best format to display the information once.

DESIGN

- Overall design (including type, line weight, and other visual keys) should be consistent across all figures; e.g., if a solid line represents timber volume in one graph, then use the same solid line for timber volume in all other graphs.
- Color alone cannot be used to convey information. Use simple symbols for data points as well as patterns to distinguish different categories of data.
- Axis labels should be descriptive (not simply units) and show units in parentheses; e.g., Area harvested (ha).
- Use 3D graphs only when data need to be presented on three axes to be meaningful. Three-dimensional pie charts misrepresent data. Do not use 3D in graphs having only X and Y axes.
- If one figure has multiple charts or graphs and they require explanation in the caption, denote by letters, e.g., (a), (b), (c), in the upper left corner of each, preferably outside of the graph.

OTHER

- 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.
- **Do not embed figures directly in the main text.** Place them in a separate document, with captions and alt text, for editing purposes only. **A separate file folder that includes native figure files will be needed for layout.**

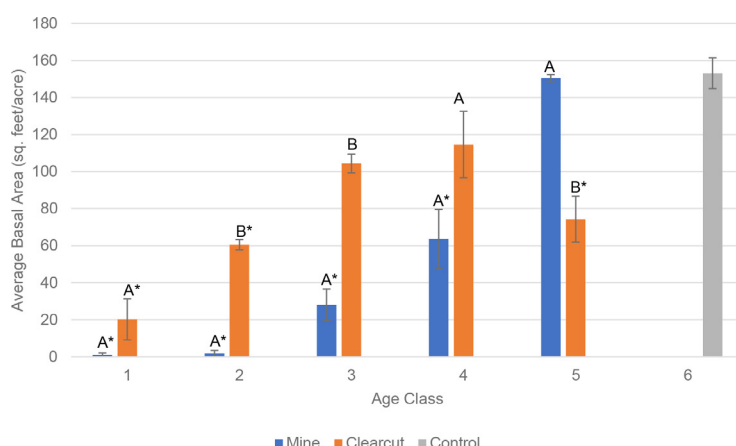
CAPTIONS

Figure captions have Arabic numerals, followed by an em dash (—), and a period at the end of the description. Figures are numbered consecutively, in the order they appear in the main text. The caption should describe all variables represented in the figure and define all other symbols (e.g., error bars and what error term they represent).

ALT TEXT

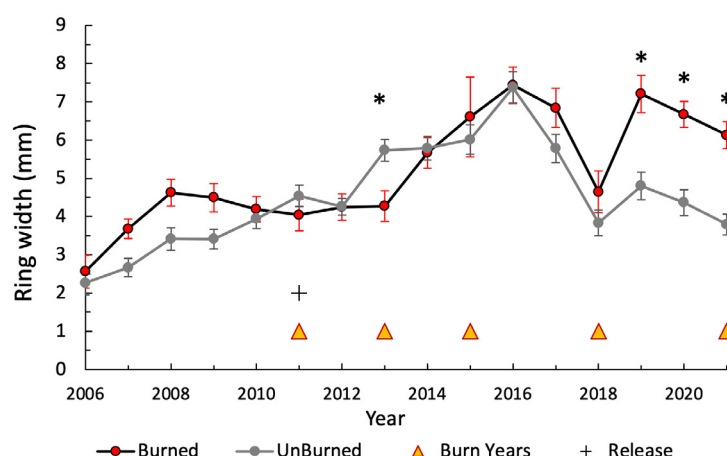
Alt text, a brief description for visually impaired readers, should be concise (one or two clear sentences). Do not repeat the caption. Instead, explain the type of figure (bar chart, line graph, etc.) and its key findings, focusing on conveying the main message that someone who cannot see the figure would miss.

Figure caption and alt text examples



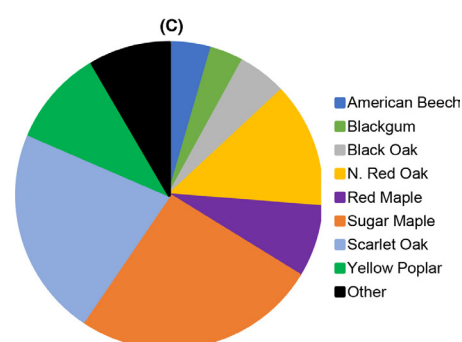
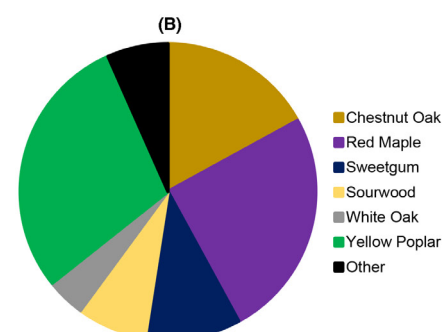
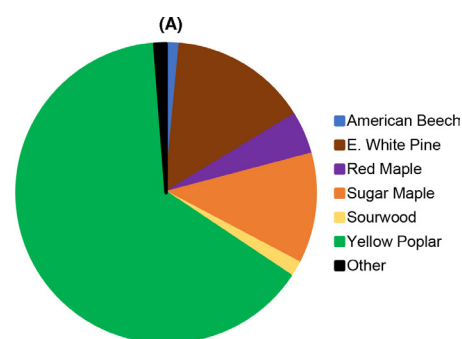
CAPTION: Average basal area by age class and disturbance type. Error bars indicate one standard error from the average. Different letters indicate statistically significant differences between disturbance types at $P < 0.05$. Asterisk indicates significant difference from the control at $P < 0.05$.

ALT TEXT: Grouped bar graph, grouped by disturbance type (mine, clearcut, control). Clearcut areas generally had greater basal area than mine areas except for age class 5.



CAPTION: Mean ring width for shortleaf pine tree cores taken from burned and unburned management units by year. *indicates years with significant treatment differences. Error bars represent one standard error from the mean.

ALT TEXT: Line-and-symbol graph with two lines that follow each other closely until 2018, with both increasing from 2006 through 2016, then decreasing through 2018. After 2018, the line representing burn units increases sharply before leveling off, and the line for unburned units stays mostly level. The symbol representing unburned units in 2013 is significantly higher than that for burned units; 2013 is indicated as a burn year.



CAPTION: Species composition by basal area on (a) ≥ 30 -year-old surface-mined sites, (b) ≥ 30 -year-old clearcut sites, and (c) control sites.

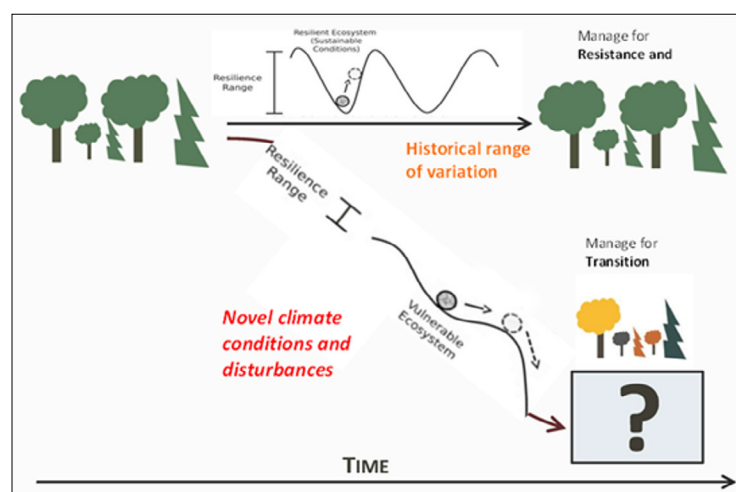
ALT TEXT: Three-panel figure of pie charts showing that surface-mined sites had >50 percent yellow-poplar. Clearcut sites had predominantly red maple and yellow-poplar. Control sites had mostly sugar maple, scarlet oak, and northern red oak.

HOW TO THINK ABOUT FIGURE ALT TEXT

- **What is it?** ex: Bar Chart
- **What is the range?** ex: Showing timber volume from 2020 to 2024
- **What is the most important info?** Is it a trend? a high? a low?
Or is the data set small enough to include each value?
ex: Timber volume increasing every year

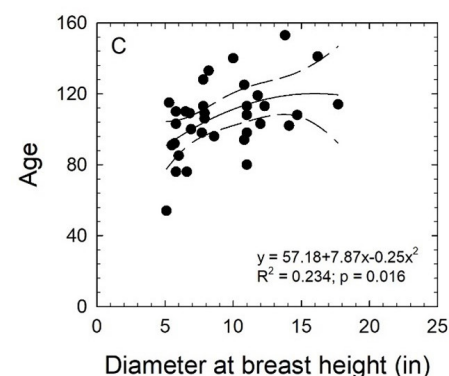
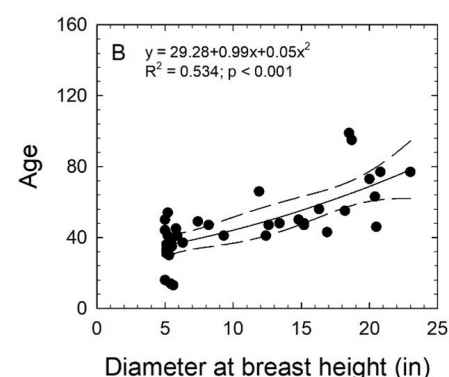
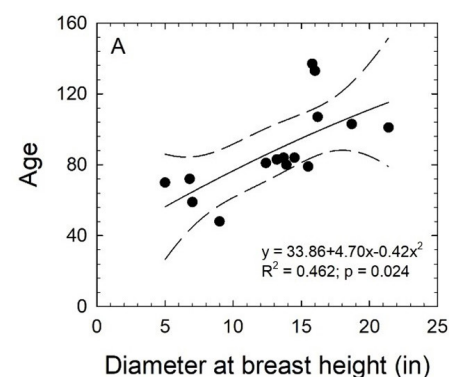
Alt text: A bar graph showing timber volume increasing from 2020 to 2024.

Figure caption and alt text examples



CAPTION: Hypothetical responses of current forests to climate change-driven disturbances. The resistance or recovery capacity of current forests leads to the maintenance of current forest conditions when climate change is within the historical range of variation, but the forest will transition to a new alternate state in response to novel climate change (modified from <https://www.adaptivesilviculture.org/silviculture-climate-adaptation>).

ALT TEXT: Diagram with graphics, line plots, text, and arrows. At the top a forest is depicted as resilient to the historical range of climate variation over time. Also depicted is the effect of novel climate conditions and disturbances outside of the historical range of climate variation. The new state of the forest is unknown under climate change uncertainty.



CAPTION: Relationship between diameter at breast height and tree age for (A) shortleaf pine, (B) loblolly pine, and (C) post oak.

ALT TEXT: Three-panel figure of scatterplots. Each plot shows a positive relationship between diameter at breast height and age, although most loblolly pine are relatively young (even for large trees) and most post oak are relatively old (even for small trees).



CAPTION: Study location and site locations for the Chinese privet project located within (above) the Congaree National Park with (below) sites located in the floodplain forest of the Congaree River in South Carolina.

ALT TEXT: Topographic map showing the irregular outline of the Congaree National Park and inset with a closer view of the spatial relationship between the locations of plots within the study block sites along a portion of the Congaree River.

WRITING AND STYLE GUIDELINES

ACRONYMS AND ABBREVIATIONS

- Spell out State names in the text in most cases. Two-letter postal codes are used instead when the State is included in an address, or follows a city name or other capitalized geographic term, e.g., Knoxville, TN; Pisgah National Forest, NC; or Buffalo National River, AR.
- Use **acronyms** with restraint, bearing in mind all intended readerships, and whether an acronym is in common use and by whom; effective communication supersedes convention.
- At first mention in the abstract, main text, and appendix, provide the complete term followed by the acronym or abbreviation in parentheses. The acronym should then be used throughout the rest of the report, although it can be spelled out when it occurs at the beginning of a sentence.
- When used with a number, **units of measure** may be abbreviated or spelled out in the text, but be consistent throughout:

Correct:

6 m wide and 2 km long

6 meters wide and 2 kilometers long

Incorrect:

6 m wide and 2 kilometers long

- Abbreviations for units of measure are the same whether the number is singular or plural.
- In the text, when no numerical quantity is given, units of measure are not abbreviated (e.g., hectare, not ha).
- County, fort, mount, point, and port are not abbreviated; Saint (St.) and Sainte (Ste.) are.
- The guide used for most abbreviations is the [GPO Style Manual](#).
- See [Abbreviations for Commonly Used Terms](#).

APOSTROPHES

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

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's interface

don't's

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

Correct:

authors guide

Incorrect:

author's guide

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

When in doubt, first check the [GPO Style Manual](#). Other good resources on capitalization include the *Chicago Manual of Style*, the *American Heritage College Dictionary*, and the *Microsoft Manual of Style*. Do not 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

Whenever possible, capitalization of geographic names follows the U.S. Board on Geographic Names (BGN) [Geographic Names Information System \(GNIS\)](#) naming convention. Terms such as watershed and basin are not capitalized even with a name (Columbia River basin) unless they are part of a BGN place name (e.g., Great Basin).

Correct:

adaptive management area (AMA); threatened and endangered species (TES)

Incorrect capitalization rationales:

"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 CAPITALIZATION FOR FREQUENTLY USED WORDS

Alaska Native	Native American
Alaska Native corporations	Neotropical
Arctic Ocean	North Atlantic Ocean, South Atlantic Ocean
arctic (adjective)	Pacific coast
Cascade Range (not mountains)	Pacific Rim
Chernozem soils (and all the others)	ponderosa pine
Chief (of the Forest Service)	program manager
Clean Air Act of 1970, the act	record of decision
Congress	regional forester; <i>but</i>
congressional	Regional Forester, Southern Region
Earth (the planet); <i>but</i>	southeast Alaska
earth (soft part of land)	Southeast Asia
east coast (U.S.)	South Pacific Ocean, North Pacific Ocean
east side, west side	State
eastern North Carolina	Washington State
Executive order; <i>but</i>	State of Alaska
Executive Order 34	State government
Far East	statewide
Federal	station, station director, Southern Research
Federal and State ownership	Station director; <i>but</i>
Federal Government (U.S.)	Station Director Toral Patel-Weyand
Federally	the Sun
forest land	U.S. government
Geographic Information System	Federal Government (U.S.)
interior Alaska	the Government
Internet (worldwide network)	Federal and State governments
intranet (single-organization network)	Washington Office
Mylar	Web, Web page, but website
Nation	World Wide Web
nationwide	western Europe (political entity); <i>but</i>
National Forest System	western North America (location)
Tongass National Forest	Western United States (region)
national forest (without name), the forest	the West
National Park Service	
Rainier National Park	
national park (without name), the park	

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 European American.

BIASED	ALTERNATIVES
chairman	chair, chairperson, moderator
man	one, person, individual, people, human beings, human society, humankind
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
European	Euro-American ¹ , nonindigenous people, early settlers
Indian/Eskimo	Native American or First Nations (in Canada)/Inuit
minority	ethnic, racial, visible, or linguistic minority
third and second world	fat country/lean country, global south/global north

Note: inclusive language is evolving and we make every attempt to edit manuscripts to reflect current understanding and recommendations.

¹This leaves out the other settlers of the west (African-Americans, Chinese, Latino, etc.) so consider the context.

LATIN

- et al., e.g., i.e., and other Latin terms may be used if used consistently throughout.
- Avoid “etc.” because it usually doesn’t give the reader any useful information, but it may be used to avoid heavy repetition.
- Latin terms common in English may be used (*American Heritage College Dictionary* is a good source for checking these), such as ad hoc, a priori, et al., ca., in situ, i.e., e.g., [sic], etc.
- See also [Quotations](#) and [Scientific Nomenclature](#).

MATHEMATICAL EQUATIONS

- Use MS Word EQUATION function (inside INSERT menu) for mathematical equations.
- Equations are meant to be read in sentence structure (i.e., subject, verb) with the various signs (=, +, <, etc.) replacing words.
- Usually the sentence introducing an equation ends with a colon, but sometimes a comma works better.
- Each equation is displayed on its own line.
- Equations are either centered or indented a consistent amount from the left margin.
- After the equation, there is usually a list of “where” components to explain what each term in the equation means. A component previously defined is not repeated.
- Variables in equations are italicized.
- Number only the equations referred to later in the report. The number is in parentheses and aligned right.
- If an equation is too long for one line, break it before an operational sign. Second and subsequent lines should align to the right of the equal sign.
- The order for signs of aggregation, beginning with the inside set of parentheses, is { [()] }. This is the opposite of the order in text, which is ([]).
- The slant line is preferred to the horizontal fraction symbol. Operational signs (such as /, x, +, -, and =) have one space before and after them.
- **Example equation:**

$$TEF = BAF / (0.005454d^2n) \quad (1)$$

where

TEF = tree expansion factor

BAF = basal area factor of prism or single gauge

d = diameter at breast height

n = number of sample plots

- The following math symbols are acceptable within the text: >, <, ≥, ≤, and ±.
- Normally, such symbols are printed next to a number, but in equations, operators are set off by a space on either side.
Correct: n = 7
Incorrect: n=7
- Spell out “percent”, i.e., do not use %, except in tight places in a table.

NUMBERS

- 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).
- If zero does not precede a unit of measurement or is not some type of input, spell it out too.
Correct:
zero probability
significantly different from zero at the 1-percent level
0 megabytes
Incorrect:
0 offset
from zero to 2 cm
- Use a zero in front of a decimal point in the text (e.g., 0.78), except for customary expressions (e.g., .30 caliber).
- Units for numbers less than 1 are singular (e.g., 0.5 inch, 0.8 mile).
- 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, i.e., 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
step 6
chapter 3

- Spell out numbers at the start of a sentence. 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” are usually spelled out. 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

- For ranges of numbers

Correct:

figures 31 through 76
pages 112–124 (pages use an en dash)
1995–97; *but* 1999–2000, 2000–2001, and 1914–2013; also 2001–02, and 2000–10 (years use an en dash)
from 1995 through 1997

Incorrect:

figures 31–76
figures 31 to 76 (ambiguous; is 76 included?)
pages 112 to 124
2000–01 or 2000–1
from 1995–97 (“from” must be followed with “through” or “to”, depending on the meaning)

UNITS OF MEASURE

- Use numerals with units of measure (e.g., 12 m, 6 years, \$240); otherwise, spell out the number (five plots, two experiments, eight trees) unless the number is 10 or above (e.g., 10 replications, 150 moths) or the number is in a series with numbers 10 or above (e.g., 2 moths, 11 mayflies, and 23 snails).
- Units of measure include height, length, area, weight, volume, points, picas, bits, bytes, time, and price.

Correct:

17 m
4 bits
3.5-inch disk
4 minutes in duration
35mm camera, 50mm lens (no space in photography)
2 by 4 (for lumber; not 2 x 4)
100 °C

- Spell out “percent” instead of using the “%” symbol.
- 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 $\text{kg}/\text{ha}/\text{year}$).
- For English units, use commas to separate groups of three digits on the left of the decimal point and print solid on the right (15,798,428.65).
- For metric units, in numbers of two to four digits, run the numerals together (e.g., 8429); for more than four digits, use blank spaces to separate groups of three (e.g., 15 798 428.659 38). Show other measures (i.e., nonmetric numbers) in the report 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

- Avoid mixing measurement systems, but for references to earlier work done using a different system, give the original unit of measure and add the conversion in parentheses, e.g., 6 ft (1.8 m).

PRODUCTS

Avoid using commercial names of equipment, pesticides, and other products unless it is necessary for the work to be reproduceable or understood by the target audience. For all products, include the manufacturer and location of the manufacturer in parentheses, e.g., Chopper® GEN 2 (BASF Corporation, Florham Park, NJ).

QUOTATIONS

- Copy quotations exactly as they appear in the original, including spelling and punctuation.
- Quotes of more than three lines (blockquotes) 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.

REFERENCES TO THE FOREST SERVICE

At the first mention of the Forest Service in the text (or chapter for multichapter publications), write it as “U.S. Department of Agriculture, Forest Service”, and use “Forest Service” thereafter.

SCIENTIFIC NOMENCLATURE

- When giving scientific names for species, do so at the first mention in the abstract and main text (or each new chapter for multichapter publications). For scientific names of plants, the [NRCS PLANTS database](#) is the preferred reference.
- Complete binomials (taxonomic 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 taxonomic 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 name.
- 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 (e.g., *Eucalyptus* and eucalyptus, *Armillaria* and armillaria), be very clear about which one 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.

- Use the multiplication sign “x” to denote hybrids and not the letter “x” or “X”. Examples from USDA plants of a named hybrid “[Quercus x ashei Trell.](#) [\[incana x laevis\]](#)”, and an unnamed hybrid “[Quercus alba x virginiana \[unnamed hybrid\]](#)”

UNIT MODIFIERS

- Unit modifiers are words combined to make an adjective. Normally, these are hyphenated when immediately preceding the word being modified:
 - drought-stricken area
 - water-holding capacity
 - land-use change
 - U.S.-owned property
 - a 4-percent increase
- Generally, however, do not hyphenate these phrases when they come *after* the word being modified:
 - the area is drought stricken
 - an increase of 4 percent
- Do not hyphenate a two-word unit modifier when the first word is an adverb ending in *ly*:
 - recently completed project
 - privately owned forest land
- Do not hyphenate where meaning is clear and readability is not aided:
 - bituminous coal industry
 - per capita expenditure
- These are just a few examples; for complete compounding rules and examples, consult the [GPO Style Guide](#) chapters 6 and 7.

VEGETATION CLASSES

Virgules (forward slashes) are used to separate trees from shrubs from herbs in vegetation classification. Hyphens are used to separate multiples within each category.

Correct:

tree/shrub/herb-herb
subalpine fir-Engelmann spruce/grass-sedge meadow
lodgepole/bitterbrush/fescue-pumice

VERB TENSE

- In general, the new work in the report is in past tense (we **did** this, we **found** that), and findings already in the literature are in present tense (trees **grow** taller when . . .). Use judgement, however, to avoid awkward wording. For example, Smith (1990) **reported** that trees **grow** taller when . . . (not Smith **reports**).
- Abstract: Mostly past tense because it is about the 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 it explains about what was done and what was found.

- Discussion: A combination of past and present tense.
- Use present tense to introduce tables and figures.

Correct:

Table 2 **includes** the factors that....

Figure 6 **shows** the site in 1967.

CONFUSING AND MISUSED WORDS

- **and/or** is a legal term, and although used informally as well as in legal writing, it should not be used in scientific writing. Use “x or y, or both.” Often “or” will suffice.
- **while** is a time-based conjunction, used to denote events happening simultaneously. To denote a contrast between pieces of information, use **though** or **although**. To add another piece of information, use **and**.

Correct:

The survey showed that while the old-growth forest coverage declined, a second-growth forest was coming along...

Though the database is an inward-facing tool, the bibliography provides an indexed...

Growth averaged 721 million cubic feet per year, and removals averaged 349 million cubic feet per year...

Incorrect:

While the database is an inward-facing tool, the bibliography provides an indexed...

Growth averaged 721 million cubic feet per year, while removals averaged 349 million cubic feet per year...

- **between** versus **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 as a group.

Correct:

between-tract variation (two tracts) was distributed among five plots
switch between the programs installed on your computer (more than two)
relations between China, and Korea and Japan continue to be unstable

- **comprise** versus **composed**. **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** is plural. In science, **datum** is and **data** are.

- **percent** versus **percentage**. **Percent** is spelled out and used only with a number. (The % symbol is not used.) When used alone, the noun is **percentage**. Using phrases like “percent cover” 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

- **since** versus **because**. **Since** refers to passage of time; **because** gives a reason—they are not interchangeable.

- **using** cannot modify a verb (show how something was done), but can be changed into a prepositional phrase by inserting “by” after the verb 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...

ABBREVIATIONS FOR COMMONLY USED TERMS

COMMON TERM	ABBREVIATION
Agricultural Bulletin	Agric. Bull.
Agriculture Handbook	Agric. Handb.
Circular	Circ.
Forestry Paper	For. Pap.
General Technical Report	Gen. Tech. Rep.
Information Report	Inf. Rep.
Miscellaneous Publication	Misc. Publ.
Proceedings	Proc.
Research Paper	Res. Pap.
Research Note	Res. Note
Resource Bulletin	Resour. Bull.
Special Publication	Spec. Publ.
Station Paper	Stn. Pap.
Technical Bulletin	Tech. Bull.
no date	[N.d.]
editor	ed.
editors	eds.
compilers	comps.
technical coordinator	tech. coord.
coordinators	coords.
second edition	2 ^d ed.
third edition	3 ^d ed.
fourth edition	4 th ed.
volume	vol.

IN-TEXT REFERENCES

- Refer to literature in the text citing the author's last name and the year of publication:
...may result in increased peak flows (Brown 2010).
Later experiments by Miller (2011) showed...
- When giving more than one reference as support for a statement, list references alphabetically by senior author.
- In a text reference with three or more authors, replace all author names after the senior author's with "et al." Do not punctuate between the author's name and the year except when the year is given as "in press."
- In the Literature Cited (or References) section, up to four authors are named. For a work by more than four authors, drop all names after the third, and replace the rest with the notation "[et al.]."
- Show text references giving page numbers as: (Smith 1989: 14).
- 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.

Examples:

(Adams 1980; Endres and Thompson, in press; Petersen 1974)
(Adams 1980, Endres and Thompson 1988, Petersen 1988)
(Barnes and Clark, N.d.)
(Jones 1980, 1981)
(Jones 1980, 1981, 1993a; Jones et al. 1971; Miles and Anderson 1979)
[Pan et al. 1996, in press; Parton 1996; Ryan et al. in press (a), in press (b)]
(Remington 1982a,b)
(Vose and Swank 1993, Vose et al. 1995)
(USDA Forest Service 2001)
—*but* full citation in Literature Cited/References section should be U.S. Department of Agriculture, Forest Service [USDA Forest Service] (USDA NRCS 2020)
—*but* full citation in Literature Cited/References section should be U.S. Department of Agriculture, Natural Resources Conservation Service [USDA NRCS] (Virginia DOF 2011)
—*but* full citation in Literature Cited/References section should be Virginia Department of Forestry [Virginia DOF]

ALPHABETIZING REFERENCES

- 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 et al. (1975) in the text followed by a, b, or c; 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.

LITERATURE CITATION EXAMPLES

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LITERATURE CITATION EXAMPLES

Literature citation examples are listed alphabetically by product type (abstract, book, brochure, etc.) and the bulleted lists following the citation provide explanations and the in-text citation format.

ABSTRACT

Lo, Y.-H.; Lin, Y.-C.; Blanco, J.A.; Yu, C.-H.; Guan, B.T. 2012. Moving from ecological conservation to restoration: an example from central Taiwan, Asia [Abstract]. In: Blanco J.A.; Lo, Y.-H., eds. Forest ecosystems: much more than just trees. [Croatia]: InTech: 339–354.

- “Abstract” is a “medium designator.” It goes in brackets at the end of the title and before the period. Other medium designators include “Brochure,” “Leaflet,” “Map,” “Poster,” and “Note.”
- Country where publication took place is known and supplied (it apparently is not on the cover or title page so it is in brackets).
- An en dash is used between page ranges.
- In-text citation: Lo et al. 2012.

BOOK

Nelson, J.P. 2015. Meta-analysis: statistical methods. In: Johnston, R.; Rolfe, J.; Rosenberger, R.; Brouwer, R., eds. Benefit transfer of environmental and resource values: a handbook for researchers and practitioners. New York: Springer: 329–356. Chapter 15.

- Item is in a book with an editor.
- Title and subtitle are separated by a colon. No capital letter after the colon unless the first word is a proper noun or begins a question.
- Major cities and capitals that are internationally known (e.g., New York, London, Berlin) do not need to be followed by a state or country. When the city is Washington, add “DC” (no periods).
- Inclusive page numbers are given because only part of the book is being cited. Inclusive page numbers follow a colon and a space. An en dash is used between page ranges.
- A chapter in a book is being cited. The chapter number goes at the end of the citation, but it is not required if page numbers are given.
- See also [Edition](#) and [Multipart Work](#).
- In-text citation: Nelson 2015.

Bormann, B.T.; Martin, J.R.; Wagner, F.H. [et al.]. 1999. Adaptive management. In: Johnson, N.C.; Mark, A.J.; Sexton, W.T.; Szaro, R., eds. Ecological stewardship: a common reference for ecosystem management. Oxford, United Kingdom: Elsevier Sciences Ltd.: 505–534.

- Item is in a book with multiple authors, in this case more than five, so use the first three only and add “et al.”
- In-text citation: Bormann et al. 1999.

Charnley, S.; Sheridan, T.E.; Nabhan, G.P., eds. 2014. Stitching the West back together. Chicago: University of Chicago Press. 352 p.

- Entire book is being cited, so total page count is needed.
- “Eds.,” “tech. eds.,” “tech. coords.” and “comps.” are shown after the authors’ names and are separated from the names by a comma. These terms are always abbreviated and lowercase.
- In-text citation: Charnley et al. 2014.

Office of Management and Budget [OMB]. 2015. Memorandum for executive departments and agencies on incorporating ecosystem services into Federal decision making. M-16-01. Washington, DC: Council on Environmental Quality, and Office of Science and Technology Policy.

- “DC,” without periods, is a postal code.
- In-text citation: OMB 2015.

Scherer, M.D. 1984. The ichthyoplankton of Cape Cod Bay, Massachusetts. In: Davis, J.D., ed. Lecture notes on coastal and estuarine studies: observations on the ecology and biology of western Cape Cod Bay, Massachusetts. Berlin, West Germany; New York: Springer-Verlag: 51–190.

- Use the country given on the published document; do not try to update based on current geography or politics.
- In-text citation: Scherer 1984.

BROCHURE

Watts, A.; Hummel, S.; Lake, F. 2014. Weaving knowledge: how traditional and scientific knowledge can contribute to management of good beargrass harvesting sites for basketry [Brochure]. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station.

- “Brochure” is a medium designator. Punctuation for the end of the title goes after the closing bracket.
- In-text citation: Watts et al. 2014.

U.S. Department of Agriculture, Forest Service [USDA Forest Service]. 2016. Forest Inventory and Analysis [Brochure]. Portland, OR: Pacific Northwest Research Station.

- Because the author is a corporate name, it does not have to be repeated as the publisher. Only the agency name goes there.
- In-text citation: USDA Forest Service 2016.

CONSTITUTIONS

- US Const. Art I, §4.
- US Const, Amend XIV, §2.
- Ariz Const, Art VII, §5.
- Public Law 585. 79th Cong. § (1 August 1946, 12, 14).

COURT DECISIONS

Bridges v. California, 314 US 252 (1941).

United States v. Dennis, 183 F2d 201, 203 (2d Cir 1950).

- Order of elements for court decisions, constitutions, and public laws are from *Chicago Manual of Style* and are arranged as follows:
 Case name
 Volume or reporter
 Name of reporter
 Opening page of decision
 Cited page number(s) court and date

EDITION

Council of Science Editors [CSE]. 2014. Scientific style and format: the CSE manual for authors, editors, and publishers. 8th ed. Chicago: University of Chicago Press. 840 p.

- Edition numbers go after the title. If something is merely revised and not shown as a new edition, the abbreviation “Rev.” would go in the same location. If it were both a new edition and revised it would be 8th ed., rev.
- Edition numbers are given as numerals.
- “The” in publisher’s name is omitted (full name is The University of Chicago Press).
- In-text citation: CSE 2014.

GOVERNMENT DOCUMENT

Busing, R.; Rimar, K.; Stolte, K.W.; Stohlgren, T.J. 1999. Vegetation pilot field methods guide: vegetation diversity and structure of down woody debris fuel loading. In: Forest health monitoring. Research Triangle Park, NC: [U.S. Department of Agriculture, Forest Service, Southern Research Station], National Forest Health Monitoring Program.

- The department and agency names were not on the original document, so are added in brackets.
- Pages are not known.
- In-text citation: Busing et al. 1999.

City of Cordova. 1991. Report: 1991 overall economic development plan. Cordova, AK: Department of Planning. 43 p.

- This is called a “report” in the title, but it’s a published document so the citation is done like a government paper (as opposed to a true report, which usually is not published).
- In-text citation: City of Cordova 1991.

Copstead, R. 1997. An annotated bibliography. 9777 1816-SDTDC. San Dimas, CA: U.S. Department of Agriculture, Forest Service, San Dimas Technology Development Center, Technology and Development Program. 154 p.

- Publication number follows the title.
- In-text citation: Copstead 1997.

Crisafulli, C.J.; Hawkins, C.P. 1998. Ecosystem recovery following a catastrophic disturbance: lessons learned from Mount St. Helens. In: Mac, M.J.; Opler, P.A.; Puckett Haecker, C.E.; Doran, P.D., eds. Status and trends of the nation’s biological resources. Reston, VA: U.S. Department of the Interior, Geological Survey: 23–26, 35.

- Inclusive pages are not consecutive.
- In-text citation: Crisafulli et al. 1998.

Forest Ecosystem Management Assessment Team [FEMAT]. 1993. Forest ecosystem management: an ecological, economic, and social assessment. Portland, OR: U.S. Department of Agriculture; U.S. Department of the Interior [and others]. [Irregular pagination].

- The correct name is Department of **the** Interior.
- Two publishers in the same city (separated by semicolon)
- In-text citation: FEMAT 1993.

Franklin, J.F.; Dyrness, T.C. 1973. Natural vegetation of Oregon and Washington. Gen. Tech. Rep. PNW-8. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station. 417 p.

- In-text citation: Franklin and Dyrness 1973.

Hagle, S.K.; Byler, J.W.; Jeheber-Matthews, S. [et al.]. 1992. Root disease in the Coeur d’Alene River basin: an assessment. Missoula, MT: U.S. Department of Agriculture, Forest Service, Northern Region. 23 p.

- For five or more authors of a paper, use three names and “et al.”.
- Use the names of Forest Service regions, not numbers. If only the number is given on the original document, put the name in brackets after it: Region 1 [Northern Region].
- In-text citation: Hagle et al. 1992.

Huff, M.H.; Brown, M. 1998. Four years of bird count monitoring in late-successional conifer forests and riparian areas from Pacific Northwest national forests, interim results. Sandy, OR: [U.S. Department of Agriculture, Forest Service], Mount Hood National Forest. 142 p.

- The department and agency were not shown on the cover or title page of the published item. We know this information (or should) so have supplied it in the citation in brackets.
- Punctuation always goes outside the brackets.
- In-text citation: Huff and Brown 1998.

Kissinger, E. 1995. Kuiu Island/Rocky Pass blowdown stands [GIS polygon map]. Petersburg, AK: U.S. Department of Agriculture, Forest Service, Alaska Region, Tongass National Forest, Stikine Area.

- A medium designator is given in brackets. Items handled similarly include leaflets, brochures, and abstracts.
- Punctuation is outside the closing bracket.
- In-text citation: Kissinger 1995.

Morrison, D.J.; Wallis, G.W.; Weir, L.C. 1988. Control of Armillaria and Phellinus root diseases: 20-year results from the Skimikin stump removal experiment. Inf. Rep. BC-X-302. Victoria, BC: Canadian Forest Service, Pacific Forestry Centre. 16 p.

- All series' names (for example Inf. Rep. BC-X-302, Res. Pap. PNW-344, FSH 2409.11 etc.) are abbreviated. Canadian provinces have two-letter postal codes. Do not add "Canada"; it's unnecessary. Province codes are as follows: BC, AB, SK, MB, ON, PQ, NB, NS, NF, NT, and YT.
- Follow spellings used on original documents.
- In-text citation: Morrison et al. 1988.

Nelson-Dean, J.; Druliner, P., eds. 1999. Central Cascades Adaptive Management Area: winter 1999. Eugene, OR: [U.S. Department of Agriculture, Forest Service], Willamette National Forest. 13 p.

- Missing information supplied by author is shown within a set of brackets.
- In-text citation: Nelson-Dean and Druliner 1999.

Seidel, K.W. 1985. Growth response of suppressed true fir and mountain hemlock after release. Res. Pap. PNW-344. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station. 22 p.

- Series identifier is abbreviated.
- The Pacific Northwest Research Station's name changed in 1986. Be sure to give the publisher's name as it appears on the published document because that's how the item will be recorded in a retrieval system.
- In-text citation: Seidel 1985.

Sohnngen, B.L.; Haynes, R.W. 1994. The "great" price spike of '93: an analysis of lumber and stumpage prices in the Pacific Northwest. Res. Pap. PNW-476. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 20 p. <https://doi.org/10.2737/PNW-RP-476>.

- Publication has a digital object identifier (DOI) so it is included here as a full-length, activated URL (clickable link, shown by blue, underlined text), followed by a period.
- In-text citation: Sohnngen and Haynes 1994.

U.S. Department of Agriculture, Forest Service [USDA Forest Service]. 1985. National forest log scaling handbook. FSH 2409.11 Amend. 6. Washington, DC.

U.S. Department of Agriculture, Forest Service [USDA Forest Service]. 1991. National forest cubic scaling handbook. FSH 2401.11 Amend. 2409.11a-91-1. Washington, DC.

- Sections of Forest Service manuals and handbooks can be included in the Literature Cited section.
- Author and publisher are the same (called a corporate author), so nothing needs to be added after the location of the publisher.
- In-text citations: USDA Forest Service 1985 and USDA Forest Service 1991, respectively.

U.S. Department of Agriculture, Forest Service; U.S. Department of the Interior, Bureau of Land Management [USDA and USDI]. 1994. Record of decision for amendments to Forest Service and Bureau of Land Management planning documents within the range of the northern spotted owl. [Place of publication unknown]. 74 p. [plus attachment A: standards and guidelines].

- Two corporate co-authors.
- Place unknown and supplementary information in brackets.
- In-text citation: USDA and USDI 1994.

Vance, N.C.; Borsting, M.; Pilz, D. [In press].

Species information guide to special forest products in the Pacific Northwest. Gen. Tech. Rep. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station.

- An "In press" station publication.
- A station publication is considered in press when the Designated Responsible Official signs the manuscript approval form. Before that, the manuscript is "in preparation" and belongs in a References section.
- Just the abbreviation for the series is shown. Numbers are not assigned until late in the preparation process, so are not immediately available.
- In-text citation: Vance et al., in press.

Warren, D.D. 1995–1997. Production, prices, employment, and trade in Northwest forest industries. Resour. Bull. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. Quarterly.

- For several issues of the same publication (recurring publication), give the range of years for the date and show frequency of publication at the end.
- Were the range of years across a change in century, they would be 1998–2003 (to show the change in century) or 2000–2001 (to avoid multiple zeroes together).
- In-text citation: Warren 1995–1997.

JOURNAL

St. Clair, J.B.; Howe, G.T.; Kling, J.G. 2020. The 1912 Douglas-fir heredity study: long-term effects of climatic transfer distance on growth and survival. *Journal of Forestry*. 118: 1–13. <https://doi.org/10.1093/jofore/fvz064>.

- Journal names are spelled out and followed by a period.
- Journal uses only a volume number.
- DOI is included as a full-length, activated URL (clickable link, shown by blue, underlined text), followed by a period.
- In-text citation: St. Clair et al. 2020.

Tiedemann, A.R.; Klemmedson, J.O.; Bull, E.L. 2000. Solution of forest health problems with prescribed fire: Are forest productivity and wildlife at risk? *Forest Ecology and Management*. 127: 1–18.

- When a subtitle is phrased as a question, the first word of the subtitle (after the colon) is capitalized. If the first word does not begin a question and it is not a proper noun, it begins with a lowercase letter.
- In-text citation: Tiedemann et al. 2000.

Carey, A.B.; Calhoun, J.M.; Dick, B. [et al.]. 1999. Reverse technology transfer: obtaining feedback from managers. *Western Journal of Applied Forestry*. 14(3): 153–163.

- Journal names are spelled out, including prepositions and articles.
- Journal uses issue numbers.
- In-text citation: Carey et al. 1999.

Griffiths, R.P.; Homann, P.S.; Riley, R. 1998. Denitrification enzyme activity of Douglas-fir and red alder forest soils of the Pacific Northwest. *Soil Biology and Biochemistry*. 30(8/9): 1147–1157.

- Journal has a double issue number.
- In-text citation: Griffiths et al. 1998.

Parrish, D.L.; Behnke, R.J.; Gephard, S.R. [et al.]. 1998. Why aren't there more Atlantic salmon (*Salmo salar*)? *Canadian Journal of Fisheries and Aquatic Sciences*. 55(S1): 281–287.

- Five or more authors for the paper: use three names and “et al.”.
- Title of the paper is a question. Use the question mark as shown; do not add a period.
- Rather than having an issue number, the item is called a supplement. That information goes where the issue number normally would.
- In-text citation: Parrish et al. 1998.

Torgersen, T.R. 2001. Defoliators in eastern Oregon and Washington. *Northwest Science*. 75(SI): 11–20.

- Special issues are treated the same as supplements.
- In-text citation: Torgersen 2001.

Stonedahl, G.J.; Lattin, J.D.; Razafimahatratra, V. 1997. Review of the *Eurychiloptera* complex of genera, including the description of a new genus from Mexico (Heteroptera: Miridae: Deraeocorinae). *Novitates*. New York: American Museum of Natural History. May(3198): 1–33.

- Because the journal is not widely known, the location of the publisher and the publisher are given.
- The issue number is quite large, which is unusual but doesn't change how the citation is done.
- The journal uses the month rather than a volume number.
- In-text citation: Stonedahl et al. 1997.

Nauman, R.S.; Olson, D.H.; Ellenburg, L.L.; Hansen, B.P. 1999. *Plethodon dunni* (Dunn's salamander): reproduction [Note]. *Herpetological Review*. 30(2): 89.

- If four authors, “et al.” is not used after the third author to designate only one additional author; instead, all four authors names are included.
- “Note” is a medium designator.
- In-text citation: Nauman et al. 1999.

Hood, E.; Gooseff, M.N.; Johnson, S.L. 2006. Changes in the character of stream water dissolved organic carbon during flushing in three small watersheds, Oregon. *Journal of Geophysical Research*. 111: G01007. <https://doi.org/10.1029/2005JG000082>.

- G01007 is the document number assigned by the journal to the document (in lieu of page numbers for electronic documents).
- Publication has a digital object identifier (DOI) so it is included here as a full-length, activated URL (clickable link, shown by blue, underlined text), followed by a period.
- In-text citation: Hood et al. 2006.

LANGUAGE OTHER THAN ENGLISH

Diacritical marks are often called accents or glyphs. Diacritical marks may appear above or below a letter, or in some other position such as within the letter or between two letters.

Le Clec'h, S.; Oszwald, J.; Jégou, N., et al. 2013. Cartographie le carbone stocké dans la végétation: perspectives pour la spatialisation d'un service écosystémique. *Bois et Forêts Tropiques*. 316 (2): 35–47.

Thurrow, F. 1966. Beiträge zur Biologie und Bestandskunde des Atlantischen Lachses (*Salmo salar* L.) in der Ostsee. *Berichte der Deutschen Wissenschaftlichen Kommission für Meeresforschung*. 18(3/4): 223–379.

Ruiz, B.I., ed. 2002. Manual de reforestación para América tropical [Reforestation manual for tropical America]. Gen. Tech. Rep. IITF-18. San Juan, PR: U.S. Department of Agriculture, Forest Service, International Institute of Tropical Forestry. 206 p.

- These items were published in French, German, and Spanish, respectively, and the authors citing them used those versions.
- Follow the rules of the original language for capitalization and spelling. Not using diacritical marks is a misspelling of the word.
- If a translation of the title is available, add the English translation in brackets.
- Do not translate journal names.
- In-text citations: Le Clec'h et al. 2013, Thurow 1966, Ruiz 2002, respectively.

Sasaki, R. 1978. The results of recovery of tagged fish and several biological informations of masu salmon, *Onchorhynchus masou* (Brevoort), migrating to the Shakotan waters. In: Materials of the research council for Masu salmon in the Sea of Japan. [Place of publication unknown]: [Publisher unknown]. In Japanese.

- The original document is in a language that does not use the Roman alphabet, so a note is placed at the end of the citation saying what language the original is in. Brackets are not needed.
- The translation sounds as if a nonnative English speaker provided it. It is fine as is, and “[sic]” does not need to be added. In a few cases, “[sic]” will be necessary for clarity or to let the reader know a dreaded typo hasn't been committed. “Sic” (in brackets but not in italics and not capitalized) should be used cautiously.
- In-text citation: Sasaki 1978.

LAWS

- **Alaska Native Claim Settlement Act [ANSCA] of 1971;** 85 Stat. 688; 43 U.S.C. 1601 et seq.
- **Clean Air Act of 1970;** 42 U.S.C. s/s 7401 et seq.
- **Clean Air Act of 1970, as amended August 1977;** 42 U.S.C. s/s 7401 et seq.
- **Clean Water Act of 1977;** 33 U.S.C. s/s 1251 et seq.
- **Endangered Species Act of 1973 [ESA];** 16 U.S.C. 1531-1536, 1538-1540.
- **Forest and Rangeland Renewable Resources Planning Act of 1974 [RPA];** 16 U.S.C. 1601 (note).
- **Healthy Forests Restoration Act of 2003;** 16 U.S.C. 6501 et seq.
- **National Environmental Policy Act of 1969 [NEPA];** 42 U.S.C. 4321 et seq.
- **National Forest Management Act of 1976 [NFMA];** Act of October 22, 1976; 16 U.S.C. 1600.
- **Occupational Safety and Health Act of 1970 [OSHA];** 29 U.S.C. 651 et seq.
- **Wilderness Act of 1964;** 16 U.S.C. 1121 (note), 1131-1136.
- In-text citations: ANSCA 1971, Clean Air Act 1970, ESA 1973, RPA 1974, etc.

LETTER

Robertson, F.D. 2017 (4 June). Letter to regional foresters and station directors. Ecosystem management of national forests and grasslands. On file with: Forestry Sciences Laboratory, 2770 Sherwood Lane, Suite 2A, Juneau, AK 99802-1628.

- Permission to use this letter is not needed because it is in the public domain. If the letter were from someone other than a government employee or from a government employee not acting in their official capacity, permission would be needed from the writer. That documentation is included with the manuscript submission package.
- In-text citation: Robertson 2017.

MANUSCRIPT IN PREPARATION OR SUBMITTED

Birdsey, R.A.; Alig, R.; Adams, D. [N.d.]. Mitigation options in the forest sector to reduce emissions and enhance sinks of greenhouse gases. Manuscript in preparation. On file with: R. Alig, Pacific Northwest Research Station, 3200 SW Jefferson Way, Corvallis, OR 97331.

- Manuscript is a work in progress, so it has no date ([N.d.]).
- Manuscript has not been accepted by an outlet.
- Location is given where the document can be reviewed; here, it is the address of the second author.
- Permission is needed to use unpublished material. That permission must be in writing and the documentation included with the manuscript as part of the submission package.
- In-text citation: Birdsey et al., n.d.

Miller, R. [N.d.]. Manuscript in preparation. On file with: Rick Miller, Eastern Oregon Agricultural Research Center, SR-1, 4.51, Highway 205, Burns, OR 97720.

- Document does not yet have a title.
- In-text citation: Miller, n.d.

MANUSCRIPT IN PRESS

Forman, R.T.T. [In press]. Road ecology, density and effect zone: state-of-the-science—effects of forest roads on water and sediment routing. Bulletin of the Ecological Society of America.

- Item is “in press” until it's published; do not use both “in press” and a year of publication.
- Title contains two subtitles. A colon and a dash (in that order) are used to separate them.
- Journal name can be given only after a paper is accepted for publication. Until it is accepted, it is “in preparation” and belongs in a References section (rather than a Literature Cited section).
- In-text citation: Forman, in press.

MAP

Author(s). Year. Name of map [type of map]. Place of publication: Publisher.

Jefferson, T., cartog. 1776. World map [Political]. Washington, DC: National Geographic Society.

- The map shows an author or a cartographer.
- Take the title directly from the map; they can be cryptic.
- Type of map (medium designator) goes in brackets at the end of the title.
- In-text citation: Jefferson 1776.

National Geographic Society. 1999. World map [Political]. Washington, DC.

- Publisher is shown as author, so the name is not repeated after place of publication.
- In-text citation: National Geographic Society 1999.

Wells, F.G.; Peck, D.L. 1961. Geologic map of Oregon west of the 121st meridian [1:500,000]. Misc. Geol. Investig. Map I-325. [Place of publication unknown]: U.S. Department of the Interior, Geological Survey.

- If a scale is included, it goes in the same location as a medium designator. If both are included, show as [1:500,000] [Geologic].
- In-text citation: Wells and Peck 1961.

MISSING INFORMATION

- Information is missing if it is not given on the cover or title page of the original document.
- Missing information is accounted for in brackets.
- Normal punctuation is used after the closing bracket, e.g.:

[N.d].
[Place of publication unknown]:
[Publisher unknown] (Period or colon follows, depending on whether page numbers are total or inclusive, respectively.)
[Volume and issue unknown]:
[Pages unknown]. (Include on draft for editor's information.)

MULTIPART WORK

- "Multipart work" means that several related documents were published in a relatively short time, each with its own title and publication number.
- Sometimes the parts will be identified by a number—Roman or Arabic—or a letter (Part A), but they can take several different forms as shown in the examples.
- Frequently there is a title for the whole group and a technical coordinator or technical editor overseeing the whole undertaking.
- Items like this also can be published in volumes, so there is some overlap. See [Volumes and Parts](#).

Wisdom, M.J.; Holthausen, R.S.; Wales, B.C. [et al.]. 2000. Source habitats for terrestrial vertebrates of focus in the interior Columbia basin: broad-scale trends and management implications. Gen. Tech. Rep. PNW-485. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station; U.S. Department of the Interior, Bureau of Land Management. 3 vol. (Quigley, T.M., tech. ed.; Interior Columbia Basin Ecosystem Management Project: scientific assessment).

- Citing the entire vertebrate habitat assessment (three volumes), which was issued under one GTR number.
- Who the overseer is, their title, and the series title are included in parentheses. This may be useful information for a reader interested in the subject at hand.
- Two publishers in the same location are separated by a semicolon.
- Inside the parentheses, a semicolon separates "tech. ed." from the title.
- Only proper nouns are capped, which looks odd for the title given in parentheses in this example, but it is correct. Final period to end the citation is outside the closing parenthesis.
- In-text citation: Wisdom et al. 2000.

Lee, D.C.; Sedell, J.R.; Rieman, B.E. [et al.]. 1997. BROADSCALE assessment of aquatic species and habitats. In: Quigley, T.M.; Arbelbide, S.J., tech. eds. An assessment of ecosystem components in the interior Columbia basin and portions of the Klamath and Great Basins. Gen. Tech. Rep. PNW-405. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station; U.S. Department of the Interior, Bureau of Land Management: 1057–1496. Chap. 4. Vol. 3. (Quigley, T.M., tech. ed.; the Interior Columbia Basin Ecosystem Management Project: scientific assessment).

- Citing one chapter from a multichapter volume.
- Inclusive page numbers follow a colon and space.
- Both chapter and volume numbers given. The words chapter and volume may be spelled out or abbreviated (be consistent throughout).
- In-text citation: Lee et al. 1997.

Iverson, G.C.; René, B. 1997. Conceptual approaches for maintaining well-distributed, viable wildlife populations: a resource assessment. In: Julin, K.R., comp. Assessments of wildlife viability, old-growth timber volume estimates, forested wetlands, and slope stability. Gen. Tech. Rep. PNW-392. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station: 1–23. (Shaw, C.G., III, tech. coord.; Conservation and resource assessments for the Tongass land management plan revision).

- Paper within one of the Tongass documents.

- Designations such as “Jr.,” “Sr.,” “III,” and “IV” are placed after the initials and separated from them with a comma.
- Inclusive page numbers given for the article being cited.
- In-text citation: Iverson and René 1997.

Curtis, R.O. 1992. Levels-of-growing-stock cooperative study in Douglas-fir: report No. 11—Stampede Creek: a 20-year progress report. Res. Pap. PNW-442. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 47 p.

- Paper is part of a series as indicated in the title by “report No. 11.”
- Title has three subtitles; a colon, dash, and colon are used, in that order, to separate them.
- The title of the group of papers is incorporated into the title for each paper, and there also is no designated coordinator of the effort, so nothing is added in parentheses at the end.
- In-text citation: Curtis 1992.

NEWSLETTER

Ottmar, R.D. 1998. Photo series developed for major natural fuel types of the United States. In: The Fuels Profile: a newsletter of the Great Basin fuels committee. [Ogden, UT]: U.S. Department of Agriculture, Forest Service, [Intermountain Region]. 1(1): 1, 4–5.

- The Forest Service region’s location and name are not given so are supplied in brackets.
- Inclusive page numbers are not consecutive.
- In-text citation: Ottmar 1998.

NEWSPAPER

Watts, W. 2017. Global atmospheric CO₂ levels hit record high. Guardian. 13 December; <https://www.theguardian.com/environment/2017/oct/30/global-atmospheric-co2-levels-hit-record-high>. [Date accessed: 21 December 2017].

- Article has a byline.
- “The” in name of newspaper is omitted (full name is The Guardian).
- The publication date (13 December 2017) is included (when available).
- Date accessed online and URL are included (when applicable).
- In-text citation: Watts 2017.

Oakland Tribune. 1923. Oakland hills’ forest mantle all hand made. 15 July.

- Were Oakland a less prominent city or one with a common name (e.g., Springfield), the author would be shown as Oakland [CA] Tribune. Do this for Canadian provinces too.
- Alphabetize under “Oakland.”

- Section, page, and column identification should occur after “15 July”; for older items, this kind of information may not be available. Do not go overboard in using “[Sect. unknown]: [Page unknown],” especially if the reason seems obvious (such as the age of the article).

- In-text citation: Oakland Tribune 1923.

Nesbitt, J. 2000. A changing policy: fight fire with fire. Portland Oregonian. August 11; Sect. A: A21 (col. 1–4).

- The article had a byline, but the same article would be cited as follows if it did not:

Portland Oregonian. 2017. Strange jumbo fish washes ashore in Cannon Beach. 2 November; Sect. A: A21 (col. 1–4). http://www.oregonlive.com/pacificnorthwestnews/index.ssf/2017/10/jumbo_sunfish_washes_ashore_in.html#incart_river_index.

- “Portland” is added before Oregonian because this is not a nationally distributed paper (e.g., Wall Street Journal).
- Alphabetize under Portland.
- If the article carried over to another page, the last part would read Sect. A: A21 (col. 1–4), A22 (col. 1).
- In-text citation: Nesbitt 2000 or Portland Oregonian 2017.

ONLINE MATERIAL

- General formats are given first followed by any examples.
- Always double check each URL to ensure that it still functions and leads to the intended material; never assume that it does. If a URL does not function as intended, replace it with one that does. Use the most recent URL.
- Include URLs on one line followed by a period.
- In-text citation: Last name(s) or corporate name and year.
- Enter the date accessed as **day month year**, e.g., [Date accessed: 15 December 2022]. Date accessed refers to the date the information was retrieved from the website. Because websites can change, unlike books in the library, this practice notes what version of the Web page was used. If the access date is not given, check the URL and use the current date; if the URL does not link to the intended material, replace it with one that does.
- Do not use all numbers for dates (i.e., spell out months); different cultures read the order differently.
- Journal articles that are only online have a digital object identifier (DOI) assigned. See [Online Journal](#).
- Provide a direct URL to the PDF, if available.

Online Database

Marshall, K., curator. 2000. Treegenes—forest trees [Database]. ACEDB version 4.7. <http://dendrome.ucdavis.edu/Treegenes/abouttreegenes.html>. [Date accessed: 22 August 2020].

- Author(s). Year. Title of database [Database or other medium designator in brackets]. Version number. [URL](#). [Date accessed: day month year].
- Author has a slightly different title, and one for which there is no abbreviation.
- Show date of access as [22 August 2020].
- In-text citation: Marshall 2000.

Online Reports/e-Books

Crimmins, A.; Balbus, J.; Gamble, J.L. [et al.], eds. 2016. The impacts of climate change on human health in the United States: a scientific assessment. Washington, DC: U.S. Global Change Research Program. 312 p. <http://dx.doi.org/10.7930/JOR49NQX>.

- For an entire report/e-book, use: **Author(s). Year.** Title of book. Publisher. [URL](#).
- In-text citation: Crimmins et al. 2016.

Chapter in an eBook

Poe, E.A. 2008. The masque of the red death. In: Gowans, A.L., ed. Classic short stories. Nova Science: 53–57. ProQuest ebrary.

- For a chapter in an e-book, include the chapter title and page numbers as well (if available).
- In-text citation: Poe 2008.

E-mail Message

Senter, M.J. 2000. More about citations for electronic refs. msenter@usda.gov. (10 July).

- Author. Year. Title of message from the subject box. E-mail address (date of message).
- Use only corporate (work) e-mail addresses. Publishing someone's personal e-mail address is equivalent to publishing their home address or phone number; do not do it. If the message you are citing was received from a personal mailbox, substitute "Personal e-mail" for the e-mail address.
- Permission is needed to use unpublished material. That permission must be in writing and the documentation included with the manuscript as part of the submission package.
- In-text citation: Senter 2000.

Online Journal

Mavrommati, G.; Borsuk, M.; Howarth, R.B. 2016. A novel deliberative multicriteria evaluation approach to ecosystem service valuation. Ecology and Society. 22(2): 39. <https://doi.org/10.5751/ES09105-220239>. [Date accessed: 1 November 2017].

- Author(s). Year. Title of paper. Name of online journal. Vol. No. (issue No.). [URL](#). [Date accessed: day month year].

- In-text citation: Mavrommati et al. 2016.

Edson, J.L.; Everett, R.L.; Wenny, D.L.; Henderson, D.M. 1998. Shoot culture 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: 13 June 2001].

- Published both on paper and online: Author(s). Year. Title. Location of publisher: Publisher. Pages. [URL](#). [Date accessed: day month year].
- In-text citation: Edson et al. 1998.

Online Video

Prendeville, H. 2019. Dry farming in the Pacific Northwest. Portland, OR: U.S. Department of Agriculture, Northwest Climate Hub, and Forest Service, Pacific Northwest Research Station. <https://www.fs.usda.gov/pnw/documents-and-media/dry-farming-pacific-northwest>. [Date accessed: 12 December 2019].

- Author(s). Year. Title. Location of publisher: Publisher. [URL](#). [Date accessed: day month year].
- In-text citation: Prendeville 2019.

SOFTWARE PROGRAM

Commercial

Intuit, Inc. ©2017. TurboTax Tax Return App. San Diego, CA.

- Author(s). Year. Title of program. Version number. Location of publisher: Publisher.
- If the publisher is also the author, omit the publisher at the end.
- The copyright date is used because no other date is given.
- No version number given.
- In-text citation: Intuit 2017.

Government

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

- Author(s) or agency name. Year. Title of program. Version number. Location of publisher: Publisher if not the same as the author. [URL](#). [Date accessed: day month year].
- The access date is added because it is different from the year shown on the software.
- In-text citation: USDA Forest Service 1999.

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

- A date is not shown for when the material was placed on the website, so the access date is added.
- No version number given.
- In-text citation: McGaughey, n.d.

WEB PAGE

U.S. Department of Agriculture, Forest Service [USDA Forest Service]. 2014. USDA Climate Hubs. <https://www.climatehubs.oce.usda.gov/>. [Date accessed: 21 May 2020].

- Name of owner. Year. Title of the page. [URL](#). [Date accessed: day month year].
- If author is not obvious, use the owner/creator of the site. Follow the link to home page or use the first part of the URL (<https://www.climatehubs.oce.usda.gov/> in this example) to find a corporate author. The name may also appear on the top line of your browser.
- Use year created or last updated. Use [N.d.] if a date cannot be found.
- Date last accessed is added because URLs can change or Web documents can be removed at any time.
- In-text citation: USDA Forest Service 2014.

ORAL PRESENTATION

Sillars, A.L. 2016. For better or worse: re-thinking the role of “misperception” and communication in close relationships and families. 17th annual B. Aubrey Fisher Memorial Lecture, University of Utah, Salt Lake City, UT 84112.

- Author(s). Year. Title. Name of conference/meeting/lecture. Location of conference/meeting/lecture.
- Presentations are not published (unless included as part of a proceedings), so there is no publication date or publisher. For that reason, the date and location of the meeting are included.
- In-text citation: Sillars 2016.

PATENT

Quigley, T.M.; Tiedemann, A.R.; Thomas, J.W., inventors. 1995 (April 25). Method and apparatus for controlling animals with electronic fencing. U.S. Patent 5,408,956.

- Author(s), inventors. Year (month day). Title if there is one. U.S. patent number.
- In-text citation: Quigley et al. 1995.

PERSONAL COMMUNICATION

Davidson, D. 2015. Personal communication. Soil scientist, Chugach National Forest, 3301 C Street, Suite 300, Anchorage, AK 99503, ddavidson@usda.gov.

- Include the person's title to establish credentials.
- See [E-mail Message](#).
- Permission is needed to use a personal communication. That permission must be in writing and the documentation included with the manuscript as part of the submission package.
- In-text citation: Davidson 2015.

POSTER

Eberhart, J.L.; Luoma, D.L.; Pilz, D.P. [et al.]. [N.d.]. Effects of harvest techniques on American matsutake (*Tricholoma magnivelare*) [Poster]. In: 9th International Congress of Mycology; 1999 August; Sydney, Australia.

- Author(s). Year. Title [Poster]. In: Name of conference/meeting; year and month of conference/meeting; Location of conference/meeting.
- Posters are not published, so there is no publication date or publisher. For that reason, the date and location of the meeting are included.
- In-text citation: Eberhart et al., n.d.

PROCEEDINGS

- Author(s). Year. Title. In: Editor(s), eds. Title of proceedings. Pub. no. if there is one. Location of publisher: Publisher: pages.
- Something will have to be added after the title of the proceedings if the title does not show that the document is a proceedings. Examples below illustrate this.
- **Include only the name and location of the publisher.** Do not include location of meeting and meeting dates.

- For posters presented at a meeting, see [Poster](#).

Snieszko, R.A.; Man, G.; Hipkins, V. [et al.] tech. coords. 2017. Gene conservation of tree species—banking on the future. Proceedings of a workshop. Gen. Tech. Rep. PNW-963. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 206 p.

- To cite an entire proceedings, include the title of the workshop/conference/meeting.
- Proceedings is published as a station GTR (the only series in which proceedings can be published).
- In-text citation: Snieszko et al. 2017.

Bates, J. 1998. Small mammal and bird inventories. In: Leavengood, S.; Swan, L., eds. Proceedings, western juniper forum '97. Gen. Tech. Rep. PNW-432. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station: 29–30.

- A full-length paper published in a proceedings.
- Page numbers are inclusive and preceded by a colon and space.
- In-text citation: Bates 1998.

Benda, L.; Johnson, A.; Reeves, G.; Krammer, M. 1998. A disturbance based framework for considering natural environments and forestry impacts in southeast Alaska [Abstract]. In: Proceedings: American Fisheries Society, Alaska Chapter. [Place of publication unknown]: American Fisheries Society: 117.

- An abstract published in a proceedings.
- The title of the larger work indicates it is a proceedings, so nothing else is added.
- In-text citation: Benda et al. 1998.

Froelich, H.A.; McNabb, D.H. 1984. Minimizing soil compaction in Pacific Northwest forests. In: Stone, E.L., ed. Forest soils and treatment impacts: Proceedings, 6th North American forest soils conference. Knoxville, TN: University of Tennessee, Department of Forestry, Fisheries, and Wildlife: 159–192.

- Paper is in a proceedings with an editor.
- The title of the larger work does not say this is a proceedings. An identifier is added after a colon at the end of the title. It does not matter what it is called; capitalize the first word of it and any proper nouns.
- Number of the proceedings (6th in this case) can be in Arabic numerals, whether it was written out or in Roman numerals on the original. That is because it is not part of the title, so it can be edited.
- Page numbers are inclusive and preceded by a colon and space.
- In-text citation: Froelich and McNabb 1984.

Ingham, E.R.; Thies, W.G.; Luoma, D.L. [et al.]. 1991. Bioresponse of nontarget organisms resulting from the use of chloropicrin to control laminated root rot. Part 2: Evaluation of bioresponses. In: Marsh, M., ed. Pesticides in natural systems: How can their effects be monitored? Proceedings of a conference. Seattle: U.S. Environmental Protection Agency, Air and Toxics Division, Region 10: 85–90.

- Paper is in a proceedings with an editor.
- Cited paper is one of two parts. A colon goes after “Part 2” and the next word is capped.
- A question mark occurs at the end of the proceedings’ title. A colon is not needed before the word “proceedings” because two punctuation marks are not used together. One punctuation mark is enough.
- Because the subtitle is a question, the first word is capitalized.
- The title of the larger work does not say it is a proceedings, so that was added (identifier).

- The region is shown as a number because EPA does not name their regions.
- In-text citation: Ingham et al. 1991.

Jacoby, G.C.; D’Arrigo, R.D.; Juday, G.P. 1997. Climate change and effects on tree growth as evidenced by tree-ring data from Alaska. In: Sustainable development of boreal forests: Proceedings of the 7th conference of the International Boreal Forest Research Association. Moscow, Russia: Federal Forest Service of Russia: 199–206.

- The title of the larger work includes a lot of information about the meeting (including the title of the conference), so nothing has to be added.
- “Russia” is shown because Moscow is the name of more than one city.
- In-text citation: Jacoby et al. 1997.

Kennedy, R.E.; Cohen, W.B.; Takao, G. 1998. A BRDF-related brightness gradient in AVIRIS imagery: lessons from an empirical compensation method. In: Green, R.O., ed. Summaries of the 7th JPL airborne Earth science workshop: AVIRIS workshop. JPL Publ. 97-21. Pasadena, CA: National Aeronautics and Space Administration, Jet Propulsion Laboratory, California Institute of Technology: 225–231. Vol. 1.

- The subtitle (“AVIRIS workshop”) of the larger work tells enough to know what this is. Nothing else is needed.
- The proceedings is in volumes; volume subtitle is shown after colon.
- In-text citation: Kennedy et al. 1998.

Lowell, E.C.; Funck, J.; Brunner, C. 2000. Small diameter trees in the Pacific Northwest: a resource for dimension lumber or cut-stock? In: Gazo, R., ed. Issues related to handling the influx of small-diameter timber in western North America: Proceedings of Forest Products Society annual meeting, Softwood Lumber Technical Interest Group. Madison, WI: Forest Products Society: 15–20.

- “Small diameter” is not hyphenated in the paper’s title, but it is in the proceedings’ title. Each is correct because titles are transcribed exactly as shown on the original document.
- Can include group name if part of the title.
- In-text citation: Lowell et al. 2000.

McGee, K.E. 1998. Effects of forest roads on surface and subsurface flow paths in southern southeast Alaska. In: 1998 fall meeting: American Geophysical Union. [Place of publication unknown]: [Publisher unknown]. Published as a supplement to Eos, Transactions of the American Geophysical Union. 79(45): F352.

- “Fall meeting” says enough for the reader to know that this is a proceedings.
- Because so much information is missing, a note is added to the end of the citation to help the reader find the item. This does not go in brackets.
- In-text citation: McGee 1998.

Moffett, J.L.; Besag, J. 1996. Spatial and probabilistic classification of forest structures using Landsat™ data. In: Spatial accuracy assessment in resources and environmental sciences: 2nd international symposium. Gen. Tech. Rep. RM-277. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station: 493–500.

- Symbols for “trademarked,” “copyrighted,” and “registered” must be used if they were included in the title of the document being cited. They are found under “Insert Symbol” in Microsoft Word.
- Subtitle of the greater work says that this is the result of a symposium.
- In-text citation: Moffett and Besag 1996.

PUBLISHER

Wenhua Li, W., ed. 2015. Contemporary ecology research in China. Higher Education Press, No. 4th de Wai Street, Xicheng District, Beijing 100120; Springer Publishing Company, 11 West 42nd Street, New York. 678 p.

- Semicolon separates information about two different publishers in two locations.
- In-text citation: Wenhua Li 2015.

Wright, P.J. 1996. Is there a conflict between sandeel fisheries and seabirds? A case study at Shetland. In: Greenstreet, S.P.R.; Tasker, M.L., eds. Aquatic predators and their prey: Royal Society of Edinburgh conference. Oxford, United Kingdom; Cambridge, MA: Blackwell Scientific Publications: 20: 154–164.

- Question mark separates the title from the subtitle. A colon is not added because two punctuation marks are not used together. One punctuation mark is enough.
- One publisher has two (or more) locations. The first one shown in the document is in England, so both it and the first U.S. location are given. Had the U.S. location been shown first, it would be the only one shown in the citation.
- In-text citation: Wright 1996.

RECURRING PUBLICATION

Western Wood Products Association. 1979–2017. Western Lumber Grading Rules. Portland, OR. Annual.

- Citing several issues of a document.
- The publisher is the same as the author (called a corporate author) so is not repeated after “Portland, OR.”
- Frequency of publication (here, annually) is shown at the end.
- In-text citation: Western Wood Products Association 1979–2017.

REPRINTED PUBLICATION

Eyre, F.H., ed. 1980 [reprinted 2017]. Forest cover types of the United States and Canada. Washington, DC: Society of American Foresters. 148 p.

- A book that has been reprinted (but not revised), and the new printing is the source. Usually this is the case for a book much older than 1949. Publishing information shown is for the reprinted source.
- In-text citation: Eyre 1980.

Hough, F.B. 1882. The elements of forestry. Cincinnati, OH: Robert Clarke and Co. 381 p. Reprinted 1999 by Vedams eBooks Ltd., New Delhi, India.

- A book that has been reprinted and both publishers are shown.
- In-text citation: Hough 1882.

REPORT OR DATA

- Is usually a less formal document than other printed materials.
- Is likely done for an agency by another agency or a contractor.
- Few copies are made and those are mostly for administrative use.
- Not found in a library retrieval system, but usually retrievable from a personal filing system or desk drawer.
- Order of parts is slightly different from other citations.
- Permission is needed to use unpublished data. That permission must be in writing and the documentation included with the manuscript as part of the submission package.

Garvey, T. 2014. Unpublished data and map from Chichagof Island blowdown study. On file with: U.S. Department of Agriculture, Forest Service, Chugach National Forest, Chatham Area Office, 204 Siginaka Way, Sitka, AK 99835.

- The item shows a date even though it is unpublished.
- In-text citation: Garvey 2014.

Gordon, J.C.; Gorman, B.T.; Wyatt, V. [et al.]. 1991. Report of the Copper River Science Commission. 28 p. Unpublished report. On file with: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station, Forestry Sciences Laboratory, 3200 SW Jefferson Way, Corvallis, OR 97331.

- In-text citation: Gordon et al. 1991.

Leukering, T.; Carter, M. 2017. Monitoring Montana’s birds: a plan for count-based monitoring. 16 p. Unpublished document. On file with: Colorado Bird Observatory, 13401 Piccadilly Road, Brighton, CO 80601.

- In-text citation: Leukering and Carter 2017.

Blatner, K.S.; Carroll, M.S.; Daniels, S.E.; Walker, G.B. [N.d.]. An evaluation of the application of collaborative learning to the Wenatchee fire recovery planning effort. [Pullman, WA]: [Washington State University]; final report; cooperative agreement PNW-94-0640. 33 p. On file with:

- No date on the report.
- For reports, the important information is where they are prepared, rather than the identity of a true publisher. Here, that information was supplied, so it is in brackets.
- What the item is (final report) is shown after the publisher and a semicolon.
- Do not use No. before the agreement number.
- If where it is kept on file is known, then add that information.
- In-text citation: Blatner et al., n.d.

Garman, S.L.; Cole, E.K. 1999. Vertebrate habitat relationships data bank (VHRDB). [Place of publication unknown]: [Publisher unknown]; final report; agreement H952-A1-0101-29. Submitted to: USGS Biological Resources Division, Forest and Rangeland Ecosystem Science Center, Corvallis, OR.

- The initials VHRDB are shown in parentheses because they are part of the title. If they had been added by the creator of the citation, they would be in brackets.
- Without the supplemental note showing where this was submitted, the reader would not be able to find the item.
- "USGS" is given without periods because that is how the name is shown on the original document.
- In-text citation: Garman and Cole 1999.

THESIS OR DISSERTATION

Roff, A. 2015. Floristics and structure: object-based, hyperspectral remote sensing of native vegetation. Sydney: University of New South Wales. 191 p. Ph.D. dissertation.

Brett, T.A. 1997. Habitat associations of woodpeckers at multiple scales in managed forests of the southern Oregon Cascades. Corvallis, OR: Oregon State University. 95 p. M.S. thesis.

- Degree notation goes at the end of the reference.
- In-text citations: Roff 2015 and Brett 1997, respectively.

VOLUMES AND PARTS

Bohan, D.; Dumbrell, A.; Woodward, G.; Jackson, M., eds. 2018. Ecological biomonitoring: In: Bohan, D.; Dumbrell, A., eds. *Advances in ecological research*. Cambridge, MA: Academic Press. Vol. 58. 318 p.

- Only one volume of at least a 58-volume work is being cited, and that volume has a title.

- In-text citation: Bohan et al. 2018.

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

- Citing all volumes of a multivolume work.
- No page numbers are given. Adding "[Page numbers unknown]" seems a useless endeavor because finding the item in a retrieval system usually is not contingent on size. The number of pages can be useful information for the reader, though, so they should be included whenever possible.
- In-text citation: Iverson et al. 1975.

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

- Unconventional page numbers already have a hyphen in them so "to" is used to separate them.
- The article being cited is in volume 2, and the different volumes do not have individual titles.
- See also [Proceedings](#).
- In-text citation: Zook 1980.

Burns, R.M.; Honkala, B.H., tech. coords. 1990. *Silvics of North America. 2: Hardwoods*. Agric. Handb. 654. Washington, DC: U.S. Department of Agriculture, Forest Service. 877 p.

- This item is part of a work in two volumes, both having the same agriculture handbook number.
- The volume number is shown on the document with an Arabic numeral.
- Volume number is part of the title, so it is not repeated at the end of the citation.
- In-text citation: Burns and Honkala 1990.

Tully, O.; Oceidigh, P. 1989. The ichthyoneuston of Galway Bay, (Ireland). I: The seasonal, diel and spatial distribution of larval, post-larval and juvenile fish. *Marine Biology* (Berlin). 101(1): 27–41.

- The part number is shown as part of the document title with a Roman numeral.
- Occasionally a journal name will give a location in parentheses. This usually occurs because a journal by the same name is published elsewhere, so location is included with the journal name.
- In-text citation: Tully and Oceidigh 1989.



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