PACIFIC FLYWAY MANAGEMENT PLAN STYLE GUIDE

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This style guide provides information for the development and revision of Pacific Flyway Council management plans. More specifically, the style guide provides guidance on how to identify management issues, goals, and actions, and how to present this information so that Council management plans have a format that is consistent and useful for readers.

The Pacific Flyway Council develops management plans to coordinate cooperative management of migratory birds among State and Federal agencies to protect and conserve these birds in North America. The U.S. Fish and Wildlife Service (Service) encourages development of cooperative flyway management plans and participates in plan development, but is not a signatory on these plans. However, the Service has a long standing practice of giving considerable deference to harvest strategies developed in cooperative flyway management plans.

Management plans serve multiple purposes. They identify common goals and objectives, establish priority of management actions and responsibility for them, coordinate collection and analysis of biological data, foster collaborative efforts across geo-political boundaries, document agreements on harvest strategies, and emphasize research needed to improve conservation and management.

Subcommittees of the Pacific Flyway technical committees are generally responsible for developing and updating management plans, but these plans are not official until adopted by the relevant subcommittee, technical committee and flyway council(s). The relevant subcommittee is responsible for ensuring management plans follow the style guide prior to adoption.

History of Pacific Flyway Management Plans

The history of the development of cooperative Pacific Flyway management plans was described in Hawkins et al. (1984), and is summarized here.

The Pacific Flyway Study Committee had its origins in 1948, with a goal to coordinate waterfowl surveys and management programs throughout the Pacific Flyway. Flyway councils were formed in 1952, and since that time, new waterfowl survey information eventually permitted development and use of population-oriented harvest management strategies. In 1954, the Pacific Flyway Study Committee prepared the *Pacific Flyway Waterfowl Management Plan* for the Council and the Service, which was revised in 1959 as the *Pacific Flyway Waterfowl Management Guide*. The guide called for maintaining widely distributed populations of waterfowl at levels that could be enjoyed and used by both hunters and non-hunters.

The first Pacific Flyway Council management plan was devoted to the dusky Canada goose in 1973; brant, Aleutian Canada geese, and Mexican ducks also were subjects of early planning efforts. However, in November 1978, at a meeting sponsored by the Service and held at the

Salishan Lodge south of Lincoln City, Oregon, the Pacific Flyway Council committed to develop a series of species, subspecies, or population oriented management plans. Biologists from state, provincial, and federal wildlife and land-management agencies, university students and faculty, and others gathered in what would result in a series of workshops to develop over 20 management plans on Pacific Flyway geese, swans, and cranes.

Reference.—Hawkins, A. S., R. C. Hanson, H. K. Nelson, and H. M. Reeves, editors. 1984. Flyways: Pioneering Waterfowl Management in North America. U.S. Fish and Wildlife Service, Washington, D.C. 517pp.

Purpose of Pacific Flyway Council Management Plans

Pacific Flyway Council management plans typically focus on populations, which are the primary unit of management, but may be species or subspecies specific (see Appendix A). Management plans identify issues, goals, and actions for the cooperative management of migratory birds among state, provincial, and federal agencies to protect and conserve these birds in North America. Management plans are not intended as an exhaustive compendium of information available, research needed, and management actions.

Plans include summaries of historical data and information from recent surveys and research that help identify: (1) the current state of the resource (i.e., population), (2) desired future condition of the resource (i.e., population goals and objectives), (3) immediate management issues managers face, and (4) management actions necessary and assignment of responsibilities to achieve the desired future condition, including harvest strategies and monitoring to evaluate population status and management progress. Population sustainability is the first consideration, followed by equitable recreational and subsistence harvest opportunities; in some cases, plans call for population reduction.

Management plans generally have a 5-year planning horizon, with revisions as necessary to provide current guidance on coordinated management. Management strategies are recommendations and do not commit agencies to specific actions or schedules. Fiscal, legislative, and priority constraints influence the level and timing of management activities. Management plans should be coordinated with other existing flyway and national management plans whenever possible. Management of some migratory bird populations require coordinated action by more than one flyway (e.g., Rocky Mountain Population of Sandhill Cranes, Eastern Population of Tundra Swans). These populations are addressed through plans developed and endorsed by all affected flyway councils.

Planning Guidance

The planning process should focus on the primary biological management issues managers face in the 5-year planning horizon. The objectives and recommended management actions (including monitoring and research) should be tied to biological management issues. The planning process should clearly articulate the current state of the resource, the desired future state of the resource, and steps necessary to get to the desired future state. Determining whether or not the desired future state of the resource is achieved is a function of monitoring and annual review. The most difficult and challenging aspect of plan writing is often identifying goals and objectives, and prioritizing recommended management actions, which depend on reaching

consensus about the present and desired future conditions. The planning process is ongoing in that subcommittees continuously assess the current state of the resource, the desired future state of the resource, and steps necessary to get to the desired future state. It is a process to guide management and research in an orderly and efficient progression to achieve a specific purpose.

Development and Revision Process

Subcommittees of the Study Committee and Nongame Migratory Bird Technical Committee develop and update management plans, and are responsible for assuring that content and format standards are met. Once a subcommittee has developed an acceptable draft plan or plan revision, the document is forwarded to the Study Committee or Nongame Technical Committee for review. After any necessary revisions and editing, the respective technical committee adopts a formal recommendation approving the plan and forwards it to Council for review. At this stage, draft plans must be complete.

The Study Committee and Nongame Migratory bird Technical Committee usually prepare management plans during the fall and winter (November through April). Completed plans are submitted to the Council for review during the spring meeting, and the Council usually votes on adoption of plans at the subsequent summer-fall meeting. Multi-flyway plans require concurrent review and approval.

Once a management plan is adopted by the Council, a signature page is added showing endorsement by the current Council chair and the management plan becomes an official document. A final version of the management plan should be provided to the Service's Flyway Representative in digital format (Microsoft Word). It is expected that plans are correctly prepared and formatted and ready for distribution when adopted by the Council. The Flyway Representative maintains a repository of all management plans. The Flyway Representative is not responsible for plan production or formatting, but will assist with such activities upon request. The cover of the Management plan will be prepared by the Pacific Flyway Representative.

Each Pacific Flyway Council management plan is assigned a Keeper of the Plan, a subcommittee member who is responsible for updating appendices or other data in the management plan and maintaining a digital copy of the management plan in Microsoft Word file format. The Keeper of the Plan is identified in a standalone document regarding Pacific Flyway chair rotation and management plans. The keeper of each management plan should be prepared to provide updated appendices and other data at each subcommittee meeting.

Components and Contents

First level headings typically include: Acknowledgements, Table of Contents, Preface, Introduction, Goal and Objectives, Status, Management Issues, Recommended Management Strategies, Harvest Strategy (if applicable), Annual Review, and Literature Cited, but may deviate to meet specific needs.

Correct sequence for management plan components is:

- Cover page
- Signature page

- Acknowledgments
- Table of contents
- List of figures
- List of tables
- List of appendices
- Preface
- Introduction
- Goal and objectives
- Status
- Management issues
- Management actions
- Harvest strategy
- Annual review
- Literature cited
- Appendices

Contents of each management plan component are as follows.

Cover Page (front).—See Appendix B for an example of a cover page. The cover page will be prepared by the U.S. Fish and Wildlife Service's Pacific Flyway Representative following the Council's standardized template. The subcommittee should provide a high quality (≥300 dpi) digital image of the species for which the management plan addresses. The image should be 5 by 7 inches or larger in portrait orientation. A close-up image of the species is preferred that shows the glimmer in the eye (eye catch light). Photo credit should be provided on the inside cover (see cover page back).

Cover Page (back).—See Appendix C for an example of a cover page back. Provide cover photo credit if applicable, inquiry contact information, and suggested citation.

Cover photograph: <Species>, © <date if available> <Photographer name>

This management plan is one of a series of cooperatively developed plans for managing various populations of migratory birds in the Pacific Flyway. Inquiries about this plan may be directed to member States of the Pacific Flyway Council or to the Pacific Flyway Representative, U.S. Fish and Wildlife Service, Division of Migratory Bird Management, 1211 SE Cardinal Court, Suite 100, Vancouver, Washington 98683-9684. Information regarding the Pacific Flyway Council and management plans can be found on the Internet at PacificFlyway.gov.

Suggested citation: Pacific Flyway Council (or Pacific Flyway Council and Central Flyway Council). <year>. Management plan for the <species, subspecies, or population>. Pacific Flyway Council, care of U.S. Fish and Wildlife Service, Division of Migratory Bird Management, Vancouver, Washington. <x>pp.

Signature Page.—See Appendix D for an example signature page. Center justify all text except the signature lines. Place the title on up to three lines in bold, upper case, where each line is separated by one blank line. Title should be Pacific Flyway management plan for the <species,

subspecies, or population>, and be consistent with the populations identified in Appendix A. Leave four blank lines before "Prepared for the" and one blank line after, followed by "Pacific Flyway Council", "Central Flyway Council" (if appropriate), "U.S. Fish and Wildlife Service," "Canadian Wildlife Service" and "Direccion General de Conservacion Ecologica de Recursos Naturales," each on a separate line. Leave two blank lines before "by the" and one blank line after, followed by the name of the subcommittee, "of the", and "Pacific Flyway Study Committee", each on a separate line. If appropriate, leave one blank line before "and the" and one blank line after, followed by the "Central Flyway Waterfowl (or Webless Migratory Game Bird) Technical Committee" on one line. Leave four blank lines before the date (month and year) of the plan or revision. List each revision date in chronological order and on a separate line preceded by "Revised" following the original plan date. Leave five blanks lines after the current revision date. Left justify "Approved by:" followed by a tab equal to about two spaces and a tab with underline text to 4.25 inches from the left margin, a 0.25 inch tab, and another tab with underline text to the right margin. On the next line type "Chairperson, Pacific Flyway Council" and "Date" such that each begins at the beginning of an underline above. If appropriate, leave three blank lines and repeat the signature lines for the Chairman of the Central Flyway Council.

Acknowledgements.—Identify the subcommittee that prepared the management plan and the members of the subcommittee during the most recent review. Special recognition could be given to contributions outside of the subcommittee. Individuals on the subcommittee should not be singled out for special credit. These are joint and cooperative efforts. Identifying individuals can be subjective and may exclude important contributions by others. All subcommittee members are expected to contribute to these plans during verbal discussion and written submissions, so best to leave recognition to the subcommittee, or any special contributions from outside the subcommittee as appropriate.

For example: This plan was prepared by the Dusky Canada Goose Subcommittee of the Pacific Flyway Study Committee. During the most recent revision, those members of the Subcommittee who contributed to this revised plan include: list members by name (first, middle initial, last) and affiliation. Do not list city and state of contributor.

Table of Contents.—List only first- and second-level headings in the table of contents.

Preface.—This section should provide the reader with general information about the Pacific Flyway Council and their management plans, and also any other information the reader may need to understand about the context of the current plan. See Appendix E for suggested text about Pacific Flyway management plans that should be included in the Preface section. The Preface section should generally be limited to 1 page.

Introduction.—Provide the reader with general information describing the species, subspecies, or population and management issues. The introduction may include general taxonomic, distribution, and population size and status information. The Introduction section should generally be limited to 1 page.

Goal and Objectives.—Provide a goal and explicit and measurable objectives. The goal is an overarching statement about the desired future state of the species or population. Lacking a more

specific population goal, plans should generally be consistent in the goal with objectives specific to the population. For example, The goal is to maintain a sustainable population, meet the needs for consumptive and non-consumptive uses, and minimize depredation and nuisance concerns. Within the goal context, there should be specific, measureable objectives established to reach the goal. The objectives vary by population. Objectives should, when possible, include quantitative targets (e.g., 60,000 birds) and means of measuring progress (e.g. 3-year average of the Midwinter Waterfowl Survey). An objective may be to maintain the population at a specified level incorporating competing needs for consumptive and non-consumptive uses (which should cover population viability) and concerns for depredation and nuisance control. The goal and objectives should be specific to the population and management issues, and not to the purpose of the management plan (e.g., coordination, management).

Status.—This section identifies the current state of the resource. Provide information about the population of interest, recreational use, and past management and research. This section should not be exhaustive of all information available. Refer to literature reviews for general life history information that is not directly related to management issues. Second-level headings should not be used unless necessary to help with understanding and readability. Second level headings may include Description or Taxonomy, Distribution, Habitat, Life History, Public Uses, Management and Research, and Population Demographics.

Management Issues.—Identify the primary biological management issues or challenges in the effective management of the population of interest consistent with the goal and objectives. This section identifies the issues that currently prevent us from being where we want the status of the resource to be to be, the desired future condition. Issues do not include recommended management strategies (see below), but each issue should be addressed by one or more of the subsequent recommended management strategies. Be sure management issues are presented in hierarchical order so readers can clearly understand the relative importance of each concern.

Management Actions.—Identify the management strategies necessary to effectively manage the population of interest relative to the management issues, goals, and objectives. This section should list only the immediate management actions considered necessary to achieve the desired future state of the resource (considering a 5-year planning horizon). Recommendations should be prioritized or presented hierarchically. Subcommittees should strive to identify priorities so that 1/3 are high, 1/3 are medium, and 1/3 are low (i.e. not everything is the highest priority). This section is not a repeat of the management issues. Instead, it is a series of brief statements about what needs to be done to achieve the desired future state of the resource (i.e. the goal and objectives). Each strategy should address a specific issue identified in the previous Management Issues section. Strategies should identify lead and participating agencies, priority, and a proposed timeframe for completion.

Harvest Strategy.—Include a Harvest Strategy section if there is recreational or subsistence harvest for the managed population. This section should clearly identify the monitoring metric(s) by which the status of the resource is evaluated and threshold levels that alternative harvest management regulations may be prescribed. This could be as general as: consider liberalization of current (describe) regulations if the 3-year average breeding population index is 10% above the population objective, and consider restrictions when the 3-year average breeding

population index is 15% below the population objective. Details about each regulatory option may be beneficial in identifying equitable harvest restrictions and liberalizations.

Annual Review.—Identify when the subcommittee will review progress towards meeting the goal and objectives of the plan, and recommend revisions. See Appendix F for suggested text about plan review that should be included in the Annual Review section. The Annual Review section should generally be limited to 1 page.

Literature Cited.—List only literature referenced in the management plan.

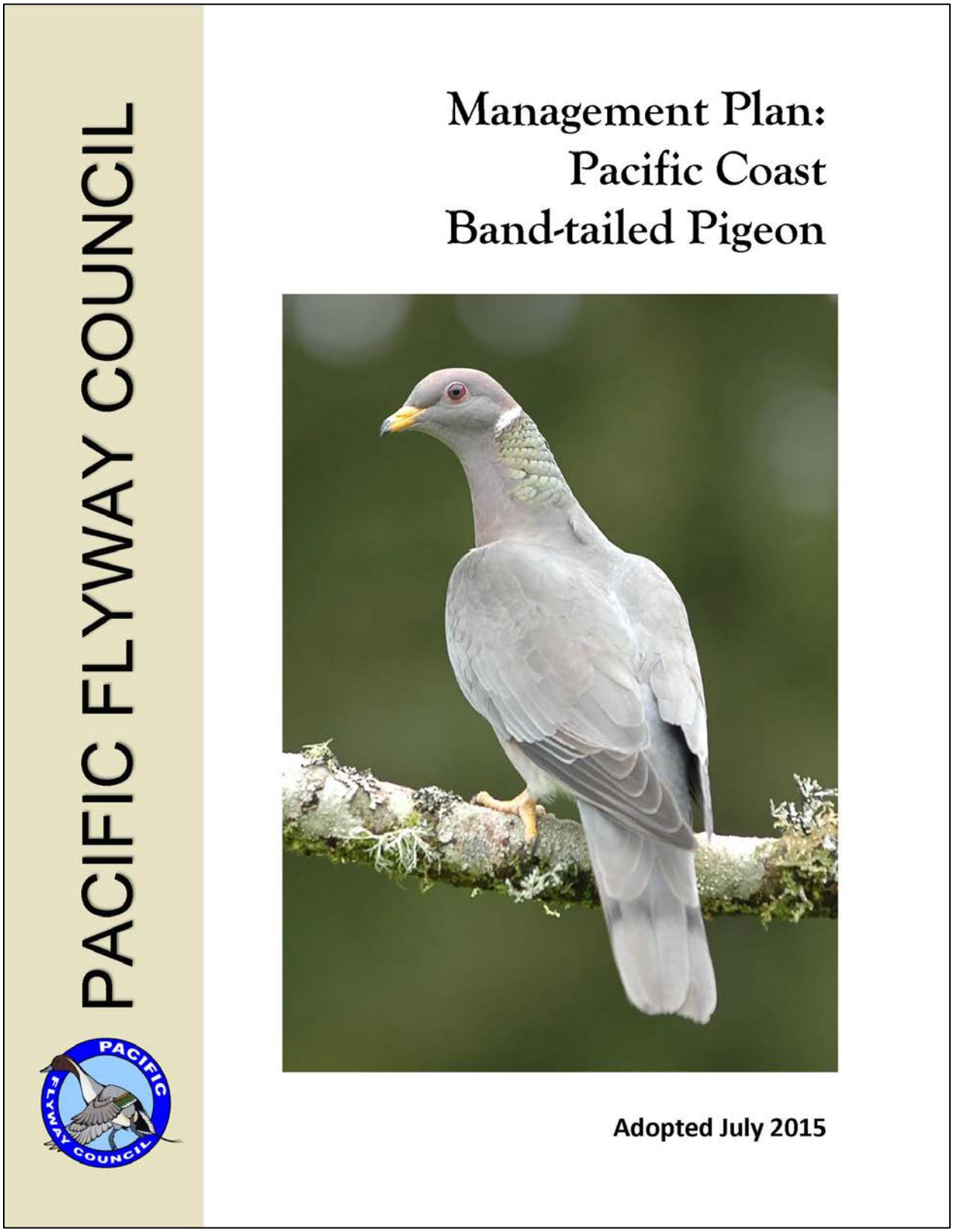
See appendix G for specific details on management plan formatting, and appendix H for management plan writing style guidelines.

Appendix A. Species, subspecies, and populations addressed by Pacific Flyway Council management plans. These species, subspecies, and population names were identified during Study Committee review of Pacific Flyway Council management plans and development of the Pacific Flyway Council website in 2003 to increase consistency and usability. Existing management plans that do not currently comply with these names should be corrected when revised.

1. **Trumpeter Swan (*Cygnus buccinator*)**
   a. Pacific Coast Population of Trumpeter Swans
   b. Rocky Mountain Population of Trumpeter Swans
2. **Tundra Swan (*Cygnus columbianus*)**
   a. Western Population of Tundra Swans
   b. Eastern Population of Tundra Swans
3. **Canada Goose (*Branta Canadensis and B. hutchinsii*)**
   a. Pacific Population of Western Canada Geese (*B. c. moffitti*)
   b. Rocky Mountain Population of Western Canada Geese (*B. c. moffitti*)
   c. Dusky Canada Goose (*B. c. occidentalis*)
   d. Vancouver Canada Goose (*B. c. fulva*)
   e. Pacific Population of Lesser and Taverner's Canada Geese (*B. c. parvipes* and *B. h. taverneri*)
   f. Aleutian Canada Goose (*B. h. leucopareia*)
   g. Cackling Canada Goose (*B. h. minima*)
4. **Greater White-fronted Goose (*Anser albifrons*)**
   a. Pacific Population of Greater White-fronted Geese (*A. a. frontalis*)
   b. Midcontinent Population of Greater White-fronted Geese (*A. a. frontalis*)
   c. Tule Greater White-fronted Goose (*A. a. gambelli*)
5. **Emperor Goose (*Chen canagica*)**
   a. Emperor Goose
6. **Brant (*Branta bernicla*)**
   a. Black (Pacific) Brant (*B. b. nigricans*)
7. **Snow Goose (*Chen caerulescens*)**
   a. Wrangel Island Population of Lesser Snow Geese (*C. c. caerulescens*)
   b. Western Arctic Population of Lesser Snow Geese (*C. c. caerulescens*)
8. **Ross's Goose (*Chen rossii*)**
   a. Ross's Goose
9. **Sandhill Crane (*Grus canadensis*)**
   a. Pacific Coast Population of Lesser Sandhill Cranes (*G. c. canadensis*)
   b. Central Valley Population of Greater Sandhill Cranes (*G. c. tabida*)
   c. Rocky Mountain Population of Greater Sandhill Cranes (*G. c tabida*)
   d. Lower Colorado River Valley Population of Greater Sandhill Cranes (*G. c. tabida*)
10. **Band-tailed Pigeon (*Columba fasciata*)**
    a. Pacific Coast Band-tailed Pigeon (*C. f. monilis*)
    b. Interior Band-tailed Pigeon (*C. f. fasciata*)
11. **Mourning Dove (*Zenaida macroura*)**
    a. Western Management Unit Population of Mourning Doves (*Z. m. marginella*)
12. **White-winged Dove (*Zenaida asiatica*)**

a. Western White-winged Dove (*Z. a.* mearnsi)

Appendix B. Example management plan cover page front.



Appendix C. Example management plan cover page back**.**

Cover photograph: Tundra swan, © 2016 David Z. Jones.

This management plan is one of a series of cooperatively developed plans for managing various populations of migratory birds in the Pacific Flyway. Inquiries about this plan may be directed to member States of the Pacific Flyway Council or to the Pacific Flyway Representative, U.S. Fish and Wildlife Service, Division of Migratory Bird Management, 1211 SE Cardinal Court, Suite 100, Vancouver, Washington 98683-9684. Information regarding the Pacific Flyway Council and management plans can be found on the Internet at PacificFlyway.gov.

Suggested citation: Pacific Flyway Council. 2016. Management plan for the western population of tundra swans. Pacific Flyway Council, care of U.S. Fish and Wildlife Service, Division of Migratory Bird Management, Vancouver, Washington. 75 pp.

Appendix D. Example management plan signature page.

MANAGEMENT PLAN

FOR THE

WESTERN POPULATION OF TUNDRA SWANS

Prepared for the

Pacific Flyway Council
U.S. Fish and Wildlife Service
Canadian Wildlife Service
Direccion General de Conservacion Ecologica de Recursos Naturales

by the

Western Tundra Swan Subcommittee
of the
Pacific Flyway Study Committee

January 2015
Revised January 2016

Approved by _____ _____
Chairperson, Pacific Flyway Council Date

Appendix E. Suggested text to be included in each management plan Preface section. The purpose of the preface is to provide the reader with general information about the Pacific Flyway Council and its management plans and additional information necessary to understand the context of the plan.

The Pacific Flyway Council is an administrative body that forges cooperation among public wildlife agencies for the purpose of protecting and conserving migratory birds in western North America. The Council is composed of the director or an appointee from the public wildlife agency in each state, province, and territory in the western United States, Canada, and Mexico. Migratory birds use four major migratory routes (Pacific, Central, Mississippi, and Atlantic flyways) in North America. Because of the unique biological characteristics and relative number of hunters in these regions, state and federal wildlife agencies adopted the flyway structure for administering migratory bird resources within the United States. Each flyway has its own Council.

Management plans are developed by Council technical committees and include biologists from state, federal, and provincial wildlife and land-management agencies, universities, and others. Management plans typically focus on populations, which are the primary unit of management, but may be specific to species or subspecies. Management plans identify issues, goals, and actions for the cooperative management of migratory birds among State and Federal agencies to protect and conserve these birds in North America. Management of some migratory birds requires coordinated action by more than one flyway. Plans identify common goals and objectives, establish priority of management actions and responsibility for them, coordinate collection and analysis of biological data, foster collaborative efforts across geo-political boundaries, document agreements on harvest strategies, and emphasize research needed to improve conservation and management. Population sustainability is the first consideration, followed by equitable recreational and subsistence harvest opportunities. Management plans generally have a 5-year planning horizon, with revisions as necessary to provide current guidance on coordinated management. Management strategies are recommendations and do not commit agencies to specific actions or schedules. Fiscal, legislative, and priority constraints influence the level and timing of management activities.

Management plans are not intended as an exhaustive compendium of information available, research needed, and management actions. Plans include summaries of historical data and information from recent surveys and research that help identify: (1) the current state of the resource (i.e., population and associated habitat), (2) desired future condition of the resource (i.e., population goals and objectives), (3) immediate management issues managers face, and (4) management actions necessary and assignment of responsibilities to achieve the desired future condition, including harvest strategies and monitoring to evaluate population status and management progress.

The first management plan for the <population> was adopted <month and year> (could also list revisions). This document is the <number> revision of that plan. It was developed by the <Subcommittee> of the Pacific Flyway Study Committee.

Appendix F. Suggested text to be included in each management plan's Annual Review section.

The <subcommittee> shall meet annually, or as needed, to review progress towards achieving the goal and objectives of this plan, and to recommend actions and revisions. The Subcommittee shall report to the Pacific Flyway Council through the Pacific Flyway Study Committee on accomplishments and shortcomings of the cooperative management efforts. The Subcommittee shall be composed of representatives from the Canadian Wildlife Service, U.S. Fish and Wildlife Service, and state and provincial agencies responsible for management of the <population>, including <list agencies (and Service regions if applicable) on the subcommittee>. It is the responsibility of those subcommittee members to assure that the objectives and procedures of this plan are integrated and coordinated with those plans and activities of the various wildlife and land management agencies and local planning systems within their agency's purview. Chairmanship will be appointed biennially and rotated among member agencies (except for Canadian agencies). The Subcommittee will exercise its prerogative to invite to attend and participate as an ex officio member at meetings any individual, group, agency, or representative whose expertise, counsel, or managerial capacity is required for the coordination and implementation of management programs.

Appendix G. Specific details on management plant formatting.

General.—Prepare the management plan for 8.5 by 11-inch paper with 1 inch margin on all sides. Type single spaced including the title page, text, literature cited, figure legends, and tables. Left-justify only (flush left); do not use right or full justification. Use regular face type, 12 point, Times New Roman font throughout. Leave one blank line between paragraphs rather than indent each new paragraph.

Text Breaks.—Avoid "orphaned" or "widowed" lines (single lines of a paragraph stranded at the top or bottom of a page). When a paragraph cannot fit on one page, carry over at least two lines to the next page, leaving at least two lines on the page on which it originated. Many word processors can be programmed in initial document setup to avoid these stray lines. Likewise, be sure that all headings and subheadings are immediately followed by at least two lines of the remaining text.

Page Numbers.—Number text pages in Arabic numerals (e.g., "1"). Page numbering must be continuous, beginning with the Introduction section (page 1 is counted but not numbered) through the Literature Cited or Appendices section. Number pre-text pages beginning with the Title and Signature Page (page i is counted but not numbered) to before the Introduction section with lower case Roman numerals (e.g., "i"). Place numerals 1/2 inch from the bottom of the page and centered.

Headings and Sections.—Three levels of headings may be used. First-level headings are in upper-case letters, center justified, and in bold face type. Second-level headings are left justified, in bold face type, and only the first letter of each word (except articles and prepositions) is upper case. Third-level headings also have the first letter of each word upper case, but are in italic face type, and followed by a period and an em-dash (approximately two hyphens). Leave one blank line after first-level headings only. Second-level headings, however, may be preceded by a six-point space. Each section generally begins on a new page, but may be continuous, separated by the preceding text by two blank lines.

Cover Page (front).—The cover page will be prepared by the Pacific Flyway Representative following the Council's standardized template.

Cover Page (back).—At the bottom of the page, type photo credit, inquiry contact, and suggested citation in regular typeface, 12 point, Times New Roman font, separated by one blank line.

Signature Page.—Center justify all text except the signature lines. Signature Page.—Center justify all text except the signature lines. Place the title on up to three lines in bold, upper case, where each line is separated by one blank line. Titles should be Management plan: <species, subspecies, or population>, and be consistent with the populations identified in Appendix B. Leave four blank lines before "Prepared for the" and one blank line after, followed by "Pacific Flyway Council", "Central Flyway Council" (if appropriate), "U.S. Fish and Wildlife Service," "Canadian Wildlife Service" and "Direccion General de Conservacion Ecologica de Recursos Naturales," each on a separate line. Leave two blank lines before "by the" and one blank line after, followed by the name of the subcommittee, "of the", and "Pacific Flyway Study

Committee", each on a separate line. If appropriate, leave one blank line before "and the" and one blank line after, followed by the "Central Flyway Waterfowl (or Webless Migratory Game Bird) Technical Committee" on one line. Leave four blank lines before the date of the revision (e.g., January 2, 2015) proceeded by dates of previous versions (including the original plan) and five blanks lines after. Left justify "Approved by:" followed by about a two space tab and then an underline to 4.25 inches from the left margin, a 0.25 inch tab, and another underline to the right margin. On the next line type "Chairman, Pacific Flyway Council" and "Date" such that each begins at the beginning of an underline above. If appropriate, leave three blank lines and repeat the signature lines for the Chairman of the Central Flyway Council.

Acknowledgments.—Use standard formatting.

Table of Contents.—List only first- and second-level headings in the table of contents. Headings must appear in the contents exactly as they appear in the main body of text. That is, they must use the same wording, spelling, capitalization, punctuation (if any), typeface, and font. If you have one appendix, use only the word Appendix in the table of contents. If you have more than one appendix, use the word Appendices. The table of contents lists the appendix or appendices first-level heading and the corresponding page number of your appendix heading insert page.

Follow the first-level heading with "Page" aligned at the right margin. List headings left justified, and indent second-level headings. Page numbers follow headings, separated by a dotted leader (i.e., periods). Page numbers are aligned along the right margin. Use a left-aligned tab with a dotted leader at the right margin instead of inserting periods manually for alignment.

List of Figures, Tables, and Appendices.—Avoid unnecessary use of figures, tables, and appendices. Reference existing documents if possible rather than reprint figures, tables, and appendices. If two or more figures appear in the main body of text, consider developing a list of figures after the table of contents. This list is the aggregate of all figure legends, each legend preceded by the figure number, but not the word "figure". Each legend should appear in the list exactly as it appears in the text (same wording, spelling, punctuation, and point size). Figure numbers in the list of figures should appear exactly as in the text. In the lists, both figure numbering and associated page numbering should appear in order. Similarly, a list of tables should be included if two or more tables appear in the main body of text. If two or more appendices are included in the plan, then consider adding a list of appendices.

Format for lists of figures, tables, and appendices are the same as that for table of contents, except that the figure, table, or appendix number must precede the legend. Use a hanging indent and tab such that the legends are left aligned about two to three spaces after the figure or table number or appendix letter.

Preface.—Use standard format.

Introduction.—The title of the management plan is typed with single spaced lines at the top of the page exactly as it appears on the signature page. Leave three blank lines between the title and the first-level heading.

Goal and Objectives.—Objectives should be listed after the line “Objective:” or “Objectives:”. Each objective should begin with an Arabic numeral (e.g., “1.”). Use a hanging indent and tab such that the objectives are left aligned about two to three spaces after the objective letter.

Status.—Use standard format.

Management Issues.—Follow standard format. Issues may be presented in the form of Arabic numbered paragraphs. If this format is used, each issue should begin with an Arabic numeral (e.g., “1”) followed by a period. Use a hanging indent and tab such that the issues are left aligned about two to three spaces after the issue number.

Recommended Management Strategies.—Follow standard format. Each recommended management strategy is typically followed by “Priority:”, “Responsibility:”, and “Schedule:”, each on a separate line. Use a hanging indent and tab such that the recommendations are left aligned about two to three spaces after the recommendation number.

Harvest Strategy.—Use standard format. Strategies could be in bullet or numbered format.

Annual Review.—Use standard format.

Literature Cited.—Use a hanging indent and leave one blank line between each entry. Verify all entries against original sources, especially journal titles, volume and page numbers, accents, diacritical marks, and spelling in languages other than English. Cite references in alphabetical order by first author's surname and then his/her first name and initial. References by a single author precede multi-authored works by same first author, regardless of date. Listings with multiple authors are done by first author's name (surname and then initials), second author's name, etc. List works by the same author(s) in chronological order, beginning with earliest date of publication. If the author has two works in the same year, place in order by first citation in text; these works should be lettered consecutively (e.g. 1991a, 1991b). "In press" citations must have been accepted for publication, with the name of journal or publisher included. Do not write author names in uppercase. Give names of all authors (i.e., do not use a blank line for multiple citations by the same author.) Use “normal” case (e.g. Hendricks, D. P.). Insert a period and space after each initial of an author's name, and note that a comma always precedes the "and" in a list of authors' names. Journal titles should be written in full and not abbreviated. Book titles should be capitalized. Show issue number or month only if pagination is not consecutive throughout the volume.

Appendices.—Insert a numbered page, with the word APPENDIX or APPENDICES centered about one-third of the way down from the top margin, after the last page of the literature cited and before the first page of actual appendix material. Each appendix must start on a new page. Appendices should be identified by letter (Appendix A, Appendix B, and so on).

Appendix H. Management plan writing style guidelines.

Management plans should generally follow the current writing style guidelines for the Journal of Wildlife Management. General guidelines are presented here for quick reference.

Style.—Management plans should follow standards for scientific writing as provided in the style manual published for the Council of Biology Editors (Council of Biology Editors. 1994. Scientific Style and Format: the CBE Manual for Authors, Editors, and Publishers, Sixth edition, Cambridge University Press, New York, New York). For spelling, see Webster's Third New International Dictionary, unabridged.

Do not hyphenate words at ends of lines. Avoid footnotes in the text. Use italic type instead of underlining words to be italicized. Only the following Latin terms should be italicized: *in vivo*, *in vitro*, *in utero*, *in situ*, *ad libitum*, *a priori*, *a posteriori*. All other Latin terms (except scientific names) should be left unitalicized. Use real superscripts and subscripts, not raised (or lowered) numbers or letters. Write in the active voice and use U.S. English and conventions, not British spelling (e.g., "behavior" not "behaviour"), throughout, except for British literature citations. Minimize use of nonstandard abbreviations or acronyms that must be memorized by the reader in order to follow the plan. Use a comma after the next-to-last item in a series of at least three items. Do not hyphenate prefixes, suffixes, or combining forms unless necessary to avoid confusion. Closing quotation marks are always placed after periods and commas, but may be placed either before or after other punctuation.

Scientific Names.—Do not use scientific names in the title or for names of domesticated animals or cultivated plants. Give the scientific name in parentheses at the first mention of a vernacular name in text. Scientific and English names of birds should follow the current AOU Check-list of North American Birds (7th edition, 1998; and supplements published in Auk) or an authoritative source for other regions. Do not give subspecific identification unless it is pertinent and has been critically determined. When both the English and scientific names are given as a paragraph heading, put the scientific name first.

Citations.—Avoid unnecessary referencing; in general there are few points that cannot be supported by three or fewer appropriate references. The sequence of references named consecutively in text is by date. Use, for example, Able (1989) or (Able 1989) for one author, Able and Baker (1989) or (Able and Baker 1989) for two authors, and Able et al. (1989) or (Able et al. 1989) for three or more authors. Show page numbers for quotations, paraphrases, and for citations in books or bulletins unless reference is to the entire publication. Cite unpublished reports only if essential; put them parenthetically in the text. Cite documents that are cataloged in major libraries, including theses and dissertations, as published literature. This includes symposia proceedings and U.S. Government reports that have been widely distributed. However, cite such references as unpublished information if they are not easily available (management plans are considered published). Cite unpublished information in the following forms: (J. G. Jones, National Park Service, personal communication), (D. F. Brown, Arizona Game and Fish Department, unpublished data), (D. E. Smith, Annual Waterfowl Report, Colorado Division of Wildlife, Denver, 1995).

Web Citations.— For statistical software freely available online, note the software name, website, and website access date parenthetically the first time you mention the software in the text, for example, (R Version 1.5, www.website.com, accessed 25 Apr 2009).

Professional site:
Council of Biology Editors [CBE]. 1999. CBE homepage. <http://www.council scienceeditors.org>. Accessed 7 Oct 1999.

Article in an electronic journal (ejournal):
Browning, T. 1997. Embedded visuals: student design in Web spaces. Kairos: A Journal for Teachers of Writing in Webbed Environments 3(1). <http://english.ttu.edu /kairos/ 2.1/features/browning/bridge.html>. Accessed 21 Oct 1997.

Government publications:
National Oceanic and Atmospheric Administration [NOAA]. 2005. National Weather Service internet services team. Monthly precipitation for Reno, Nevada. <http://www.wrh.noaa.gov/rev/ hydrology/monthly_precip.php>. Accessed 23 Aug 2005.

Numerals.—Spell out numbers less than 10, except for measurements, such as 5 km (but nine blackbirds). Hours, minutes and seconds are considered units of measurements. In numbers greater than 999, separate the hundreds and thousands places using a comma, e.g., 22,432 ducks. A naked decimal point should be preceded by a zero, e.g., 0.97, not .97. Percentages should be rounded to the nearest whole number (57%, not 57.3%; < 1%, not 0.3 or 0.8%), unless there is some compelling reason not to do so. Do not show percentages based on small samples ($n < 26$). Do not use slant lines in expressions of units; instead, use exponential form (e.g., use kJ g-1, not kJ/g). Use an en dash (not a hyphen) between numbers to indicate a range (e.g., 25–75 birds, not 25-75 birds).

Measurement Units.—Use Systeme Internationale d'Unites (SI) units and symbols. Use English units (or another type of scientific unit) in parentheses following a converted metric unit only in cases that may misrepresent (1) the statistical precision of the original measurement or (2) the correct interpretation of the results. However, these non-SI units are permitted:

area—hectare (ha) in lieu of $10^4 m^2$,
energy—calorie (cal) in lieu of Joule (J),
temperature—Celsius (C, without degree symbol) in lieu of Kelvin (K),
time—minute (min), hour, (hr), day, etc., in lieu of seconds (sec), and
volume—liter (L) in lieu of dm^3.

Time and Dates.—Use 24-hour clock and retain the colon, e.g., 18:30 or 07:00. Times should be reported as standard time together with appropriate time zone. Use the European system of calendar notation (e.g., 28 August 1996). Use 1989–1991, not 1989–91. Do not abbreviate seconds, minutes, hours, day, week, month, or year. Names of months may be abbreviated in figures or long tables.

Mathematics and Statistics.—Insert a space on both sides of symbols used as conjunctions (e.g., $P > 0.05$), but close the space when used as adjectives (e.g., >20 observations). Where possible,

report exact probabilities. Round probabilities to no more than two decimal places, but use three decimal places when stating $P < 0.001$).

The following statistical symbols are in italics typeface:

- n (sample size)
- P (probability)
- t_a (t-test where subscript a = degrees of freedom, specify whether using independent or paired t-test and whether two-tailed or one-tailed)
- $F_{a,b}$ (F-ratio, where subscripts a,b = appropriate among and within group degrees of freedom)
- U (Mann-Whitney U-test)
- r (simple correlation coefficient; Pearson r)
- rs (Spearman rank order correlation)
- R (multiple regression coefficient)
- G (G-test)

The following statistical information is set in regular typeface, not italics:

- SD (standard deviation)
- SE (standard error)
- c^2_a (chi-square, where subscript a = degrees of freedom)
- CV (coefficient of variation)
- df (degrees of freedom)
- ns (nonsignificant)

Tables and Illustrations.—Each must be self-explanatory and referenced in text. Preparation for portrait orientation is preferred over landscape. Avoid repeating information among tables, figures, and text.

Start each table on a separate page and continue long tables onto two or more pages. Single space throughout, omit vertical lines, and leave margins of at least 1 inch (3 cm). Avoid unusual abbreviations. Identify footnotes by Roman letters, or asterisks for probabilities. Percentages shown for cursory comparison should have only one or two significant digits. Avoid pasting unformatted spreadsheet data. Use three rules across the entire table: below the title, below the column headings, and at the bottom. Type each as a single continuous line. Use rules that straddle subheadings within the column heading. Type legends above the table in regular typeface, 12 point, Times New Roman font, single spaced, left justified, leaving one blank line between the legend and the table. Legend margins should be the same as the body of the text, although table margins may be less than but not greater these margins. Spacing of column entries in tables should be accomplished with aligned tab settings, not with typed spaces.

Place illustrations in text near the first place of reference. Type illustration captions below the illustration in regular typeface, 12 point, Times New Roman font, single-spaced, left justified, leaving one blank line between the caption and illustration.