



**NOAA**  
**FISHERIES**

# A Brief Overview of Section 508 Compliance

## Basic Concepts to Make Files Web Accessible

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# Presentation Purpose

## What purpose does this presentation serve?

- Be a complementary resource to existing resources.
- Help familiarize you with the Section 508 compliance process.
- Highlight important components of the process.
- Point you to some potentially helpful resources to meet your team needs.

## This presentation is:

- **Not** comprehensive.
- **Not** a detailed how-to guide.
- **Not** a replacement for any official DOC or Fisheries resources, including the NOAA Library trainings.

# Presentation Agenda

- **Overview of Section 508 Compliance**

- NOAA Central Library Accessibility Checklist
- Workflow and Accessibility Work
- Checking for Section 508 Compliance

- **Important Components of Section 508 Compliance**

- Tagged Content
- Reading Order
- Headings
- Tables
- Alternative Text (Alt Text)
- Bookmarks
- Color Contrast
- File Properties

- **Conclusion**

- Key Takeaways
- Additional Resources
- Q & A

# Overview of Section 508 Compliance

# Overview of Section 508 Compliance

*“Section 508 is an amendment to the U.S. Workforce Rehabilitation Act of 1973--a federal law that mandates all federal agencies make their electronic and information technology (such as publications, presentations, software and websites) accessible to people with disabilities.”*

[Source:  
<https://libguides.library.noaa.gov/Section508> ]

- Enables access to websites, tools, and technologies for people with disabilities.
- Takes into account various disabilities:
  - Auditory
  - Cognitive
  - Neurological
  - Physical
  - Speech
  - Visual
- Want to learn more? Visit:  
[Section508.gov](https://www.section508.gov)

# NOAA Central Library Accessibility Checklist

## NOAA Central Library Accessibility Checklist: PDF Documents

[https://libguides.library.noaa.gov/ld.php?content\\_id=61618926](https://libguides.library.noaa.gov/ld.php?content_id=61618926)

### NOAA Central Library Accessibility Checklist: PDF Documents

This document is intended to serve as a guide for creating accessible PDF documents. The checklist is divided by element type (headings, lists and tables, images, etc.). At the end of this document is a list of references and additional resources.

**Note:** If your document was created in MS Word using the accessibility guidelines and then was converted to PDF, a large portion of the following requirements are already met. The primary focus then should be on PDF tagging, bookmarks and links.

#### General Document Requirements

Element	Pass	Fail	Not Applicable
File name is concise and free of spaces or special characters.			
Document properties for Title and Language are added.			
Track changes have been accepted and/or turned off. All comments have been removed/resolved.			
If there is a Table of Contents (TOC), it was created using the TOC Command.			
Page numbering codes are used (as opposed to manually entering page numbers).			
Footnotes have been created via the Insert Footnote tool.			
Links contain descriptive text informing the user of the context and content of the linked page. Avoid linking terms such as "Click Here" or "Website."			
All hyperlinks are working and linking to their intended destination.			
All information that is conveyed through the use of color is also available without color.			
All color for images, text, etc. avoids red-green contrast when possible. (For colorblind viewers).			

#### Headings & Fonts

Element	Pass	Fail	Not Applicable
The document uses recommended font styles (Arial, Veranda, Times New Roman, Georgia, Calibri).			
Text is easy to read against the background of the document (Recommended color contrast ratio of 4.5:1).			
The document has been formatted using the style elements for Headings and is presented hierarchically (i.e., Heading 1 to Heading 2 leading into body text).			

# Workflow and Accessibility Work

- **Common software programs with accessibility tools:**

- Microsoft Word
- Adobe InDesign
- R
- Adobe Acrobat

- **Example workflows:**

- R > PDF
- R > InDesign > PDF
- R > Word > PDF
- R > image (JPEG, PNG, etc.)

- **Plan Ahead**

- Discuss an accessibility plan with your team early in the process.
- Build time into the end of the process (e.g., 2 weeks).
- As each workflow varies, so does each team's 508 process.

- **If PDF if your final format:**

- Accessibility work needs to be completed using Adobe Acrobat accessibility checker as a final step.

# Checking for Section 508 Compliance

- An accessibility checker can be helpful in spotting some things.
- Screen readers (NVDA, JAWs, etc.)
- Self-check



# Important Components of Section 508 Compliance

# Important Components of Section 508 Compliance

- Tagged Content
- Reading Order
- Headings
- Tables
- Alternative Text (Alt Text)
- Bookmarks
- Color Contrast
- File Properties

# Tagged Content

- **Screen reader** — Ensure that a screen reader can correctly recognize the content in your document.
- **Software features** — Use the appropriate features available to you in each software program in the workflow.
  - List features
  - Table features
  - Header features

# Reading Order

- **Reading order** is the order in which the content of your document will be read by a screen reader.
- **Logical** — The order should be logical.
- **Screen reader** — A logical reading order allows a person using a screen reader to hear the document being read in the correct order.

# Headings

- **Headings and their hierarchy level** should be able to be correctly recognized by your software and screen readers.
- **Content navigation** — When headings are recognizable by screen readers, it allows the user to easily know the topic of the content they are listening to.
- **TOC** — Heading levels should match the table of contents.
- **People using assistive technologies** such as screen readers can use headings to help themselves to quickly navigate a document from heading to heading.

# Tables

## Table formatting priorities:

- Keep as simple as possible.
- Add column headers.
- Avoid blank table cells.
- Add table caption.
- For tables that span multiple pages:
  - Repeat headers on each page.
  - Do NOT allow cells to span multiple pages.

## Examples to follow:

- Headers
- Blank cells
- Merged cells

## Additional suggestions for improved accessibility:

- Avoid merged cells when possible.
- Add both column and row headers.
- Add scope to headers when both are used.

# Table Example — Headers

**Key takeaway:** Every table needs column headers.  
*Optional:* Row headers can also be added for additional accessibility.

Table Header Cell

Table Data Cell

↓

→

Scope Set to Column

Scope Set to Row

Column Headers Only

Country	Population (millions)	Area (mi <sup>2</sup> )
Canada	38.01	3,855,000
Mexico	128.9	761,600
Colombia	50.9	441,200
Brazil	212.6	3,288,000

Both Column and Row Headers

Country ↓	↓ Population (millions)	↓ Area (mi <sup>2</sup> )
Canada →	38.01	3,855,000
Mexico →	128.9	761,600
Colombia →	50.9	441,200
Brazil →	212.6	3,288,000

# Table Example — Blank Cells

**Key takeaway:** There should be no blank cells in tables.

Table Header Cell

Table Data Cell

↓

→

Scope Set to Column

Scope Set to Row

Not Accessible

	Population (millions)	Area (mi <sup>2</sup> )
Canada	38.01	3,855,000
Mexico	128.9	761,600
Colombia	50.9	
Brazil	212.6	3,288,000

Accessible

Country	Population (millions)	Area (mi <sup>2</sup> )
Canada	38.01	3,855,000
Mexico	128.9	761,600
Colombia	50.9	N/A
Brazil	212.6	3,288,000



# Table Example — Merged Cells

**Key takeaway:** Avoid merged cells where possible. *If needed, format correctly.*

## Not Accessible

Country	Population (millions)	Area (mi <sup>2</sup> )
North America		
• Canada	38.01	3,855,000
• Mexico	128.9	761,600
South America		
• Colombia	50.9	441,200
• Brazil	212.6	3,288,000

Table Header Cell

Table Data Cell

↓ Scope Set to Column  
→ Scope Set to Row

## Accessible

Continent	Country	Population (millions)	Area (mi <sup>2</sup> )
North America	Canada	38.01	3,855,000
	Mexico	128.9	761,600
South America	Colombia	50.9	441,200
	Brazil	212.6	3,288,000

# Alternative Text (Alt Text)

## What is alt text?

- Describes the content of an image and can be read by a screen reader.
- Required for all images (photos, graphs, infographics, logos, etc.).

## Suggestions for writing alt text?

- Keep alt text as concise as possible.
- Convey important information. Communicate highlights (if known).
- Ideally, whomever provides/develops the image should write the alt text.

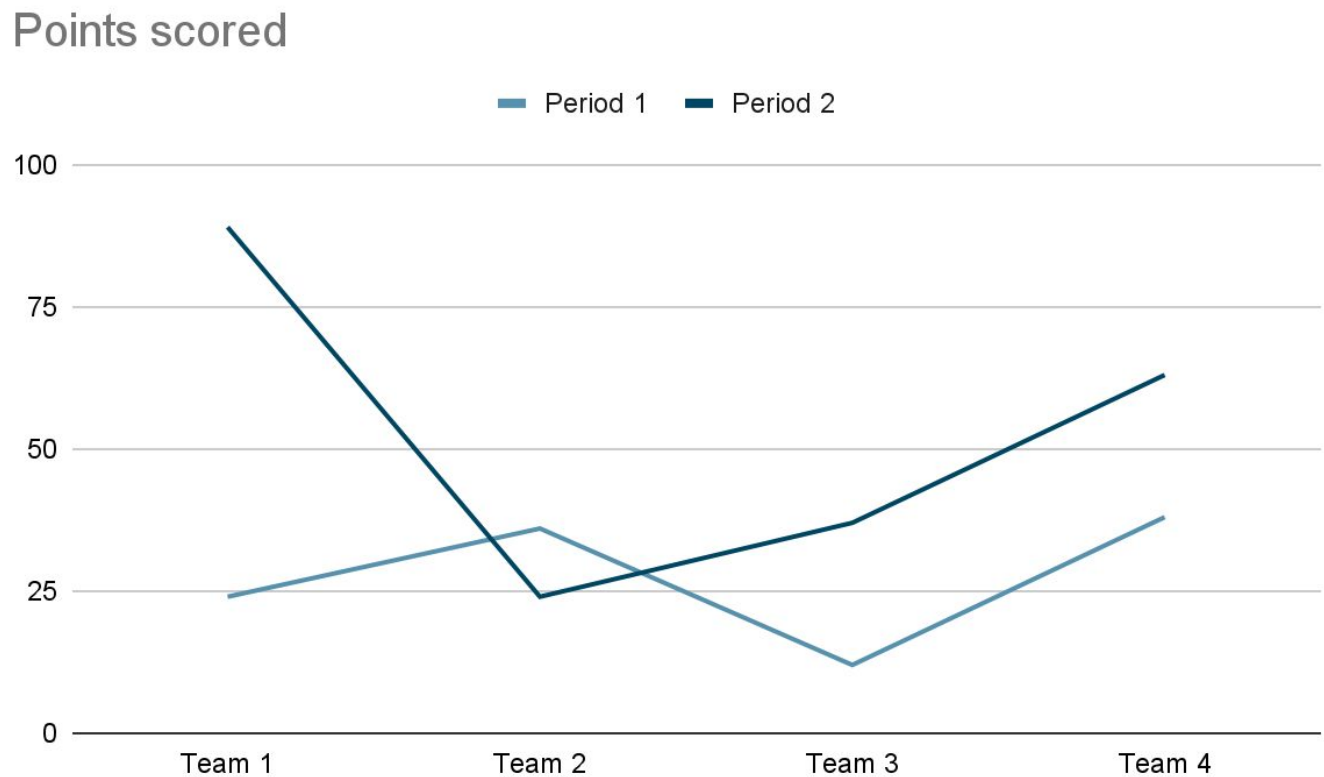
## How to handle complex images?

- Graphs, charts, and infographics are usually complex images.
- Consider adding contact information.

Example:

- “For more information, contact NOAA Fisheries Office of Science and Technology at (301) 427-8100 or visit <https://www.fisheries.noaa.gov/contact/office-science-and-technology>”

# Alt Text — Complex Image Example



**Example alt text:**  
Line graph showing points scored for 4 teams during 2 periods. For more information, contact Office Name; (123) 555-1234; url goes here

**Figure 1.** Figure caption goes here.

# Bookmarks

- **20+ pages** — Include bookmarks for documents over 20 pages.
- **Bookmarks match TOC** — Have your bookmarks match your table of contents if one is present, and make sure they are nested at the same levels.

# Color Contrast

- **High enough contrast** — Ensure that content in your documents has adequate color contrast so that it can be seen/read by people with visual impairments such as color blindness.
- **Manually check** — To manually check color contrast, create a version of your document in black and white.

## Not Accessible



## Accessible



# File Properties

- **Title**
- **Author(s)** — format written as “Affiliation/Author”
  - 1 author example: “NOAA Fisheries/John Smith”
  - 2+ authors example: “NOAA Fisheries/John Smith, NOAA Fisheries/Sarah Johnson”
- **Subject** — can be the same as the title
- **Window view** — Set to Document Title
- **Language**

# Conclusion

# Key Takeaways

## Overall Process

- Section 508 compliance takes place during multiple stages in a workflow.
- Discuss your accessibility plan with your team early on in your document's workflow.
- Accessibility checkers, screen readers, and manual checks are all important tools you can use to ensure accessibility.
- Use the appropriate features available to you in each software program to ensure your document is properly tagged.

## Important Components

- Ensure a logical reading order.
- Assign headings to your document.
- Ensure proper table formatting.
- Add alt text to images/figures.
- Include bookmarks for documents over 20 pages.
- Ensure adequate color contrast in your document.
- Ensure your file properties are properly filled out.



# Additional Resources

- NOAA Central Library Section 508 Compliance Quick Start Guide  
<https://libguides.library.noaa.gov/Section508/QuickStart>
- Alternative text for complex images  
<https://www.w3.org/WAI/tutorials/images/complex/>
- NOAA Central Library Accessibility Checklist: PDF Documents  
[https://libguides.library.noaa.gov/ld.php?content\\_id=61618926](https://libguides.library.noaa.gov/ld.php?content_id=61618926)
- Section508.gov  
<https://www.section508.gov/>

# Q & A

**Any questions about this presentation? Please contact:**

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