



Creating Accessible Documents

Quick Reference:

Document structure

Set Language

Headers & Footers

Use supplied Styles

Formatting

Conforms to Reclamation Visual Identity

No auto-hyphenation

Color and Contrast

Text is readable

Color is used in conjunction with text for identification

Images

Alt Text for all images

Tables

No merged or blank cells

Headers are identified

Text wrap off

Hyperlinks

Text provides enough meaning on its own

Document Structure

Use application provided styles from within your word processing software to define titles, headings, emphasized text, etc. This provides proper formatting information to assistive technology. Do not use manual selected font size and weights to convey this information.

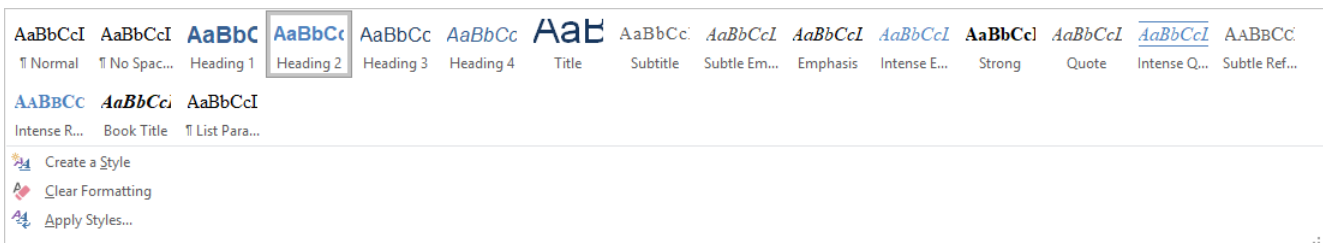


Figure 1 Style menu drop-down expanded.

Example:

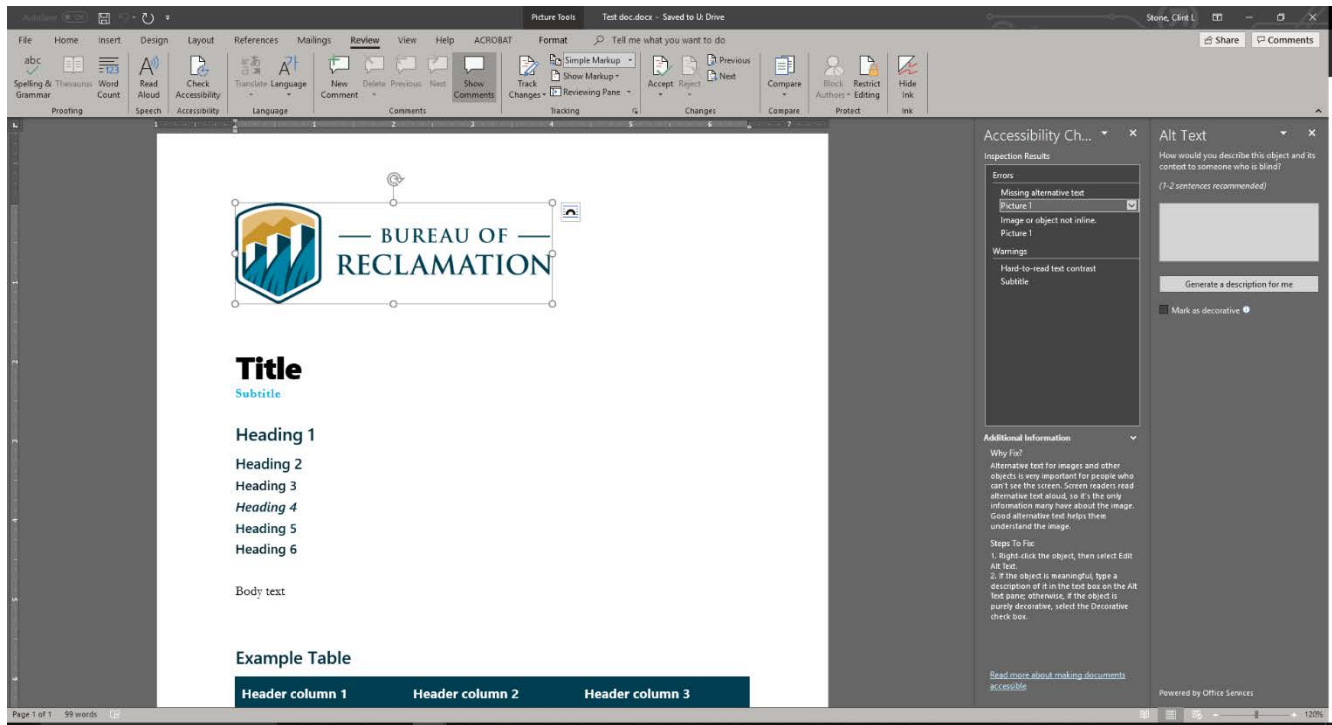
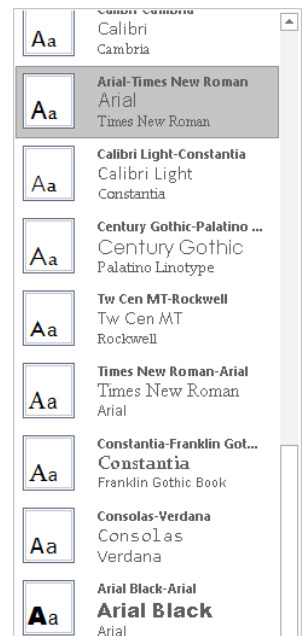


Figure 2 Open Test document in Microsoft Word showing the Accessibility Checker, Alt Text and Navigation panels.

Formatting

Fonts

Following the Visual Identity guidelines will help you meet this standard. You can access Word’s fonts selections on the “Design” tab, click the “Fonts” drop-down to select “Arial-Times New Roman,” see image to the right. For more information on Reclamation Visual Identity you can visit the Typography and Typefaces page at <https://intra.usbr.gov/vip/II-typography.html>. Note the VI typography has changed with the new logo rollout and the primary fonts for Reclamation are the Segoe UI and Garamond font families. These will have to be manually added and saved as a Custom Font package. Arial and Times New Roman may still be used but are alternate fonts.



Headers & Footers

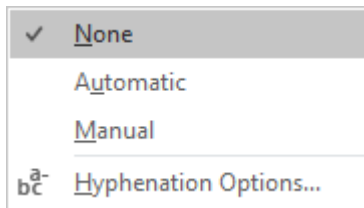
Keep important information such as titles in the main body of the document. The content of headers and footers are ignored by most screen readers and assistive technology as most of the information placed there is duplicative.

Set Natural Language

Assistive technology such as screen readers convert text to speech based on the natural language set for the text of the document. Problems occur when the language has not been set or has been set to the wrong language.

Remove Hyphenation

Screen readers read the words as they appear in a document. Hyphenated words can be read as separate words depending on the screen reader. To avoid misread wording, turn off Automatic Hyphenation within your word processing software. You can access this option in the “layout” tab.



Color and Contrast

Color and contrast use are vital to accessibility. People who have low-vision or color-blindness have difficulty reading documents when text color does not strongly contrast with the background color.

Over 5% of men have partial color blindness either having difficulty distinguishing red from green, or distinguishing blue from yellow. Choosing poor color combinations can make reading a struggle.

Readers with macular degeneration, glaucoma or other eye diseases may have great difficulty reading text which is small or which does not contrast strongly with the background. Problems with colored text also arise when printing on a black and white printer. Not having enough contrast between the foreground and background colors may make the words difficult to read. When producing documents ensure that the text and background have a sufficiently high level of contrast. Documents with low contrast can be difficult, if not impossible to read for people with low vision.

Contrast examples:



Ensure sufficient contrast exists between your text and document background. Rules state it should be a 4.5:1 contrast ratio. To check your color contrast you can use WebAIM's Color Contrast Checker available at <https://webaim.org/resources/contrastchecker/>

Stick with solid colors and avoid patterns. Don't overlay images with text.

This allows greater access to your information for people using Screen magnification and those with cognitive disabilities.

Use color to enhance information, not as the only means to convey that information. For example, in this table of school assignments, the only indication that an assignment is missing or late is a background color. This is inaccessible to someone who is blind and may be confusing or inaccessible to someone who is colorblind or that overrides page colors.

Assignment
What I did this summer vacation
My favorite movie
My favorite animal
What I had for dinner last night

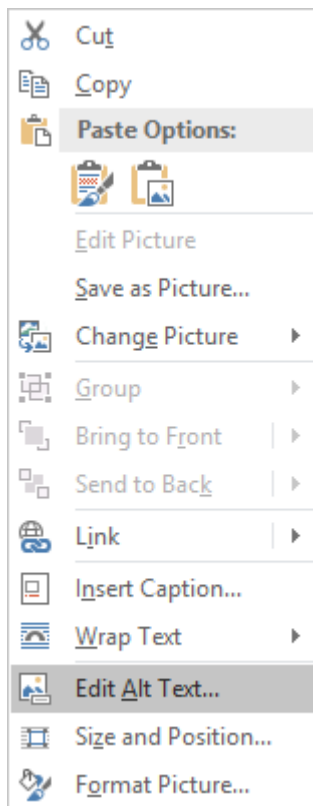
Figure 5 Example table with color used incorrectly.

One way to address this is to add a second column for the status of the assignment (missing, complete, or late). You can still use color to reinforce information, if color is not the only way this status is presented. In fact, the color highlights make the information more accessible to users who can see the color difference.

Assignment	Status
What I did this summer vacation	Missing
My favorite movie	Complete
My favorite animal	Late
What I had for dinner last night	Complete

Figure 6 Example table with corrections to make color use accessible.

Images



Not all users can see the images. Disabled readers may be using assistive technology like screen readers or other text to speech software which reads the page out loud, and this software will read the Alt Text instead of the image. There are other situations when the Alt Text is used too, e.g. if a user has images turned off - e.g. because they use a very slow internet connection – still happens occasionally! - then they will see the Alt Text instead of the image. Alternative text helps convey the visual information of an image to the user in text form.

These descriptions should be narrative in nature and explain the reason the image or graph has been included, explain why it is important to the reader or what point the author is trying to highlight. Remember that Alt Text and Captions are different, and Alt Text should not duplicate the Caption.

A good starting place is how would you describe the image to someone over the phone or what point the graph or chart is trying to highlight.

If the image does not convey any useful information, leave the Alt Text blank - e.g. Background images should generally have no Alt Text, other decorative images should only have Alt Text if they form a crucial part of the content, message, and purpose of the document – these images should be marked as decorative.

To add Alt Text to an image, right click on the image and click Edit Alt Text from the drop menu, this will open the Alt Text panel in Word.

Usually, there's no need to include words like "image", "icon", or "picture" in the alt text. People who can see will know this already, and screen readers announce the presence of an image. In some situations, it may be important to distinguish between paintings, photographs, or illustrations, etc., but it's best to avoid the more generic use of the terms.

NOTE: This section refers to all visual imagery: pictures; illustrations; graphs and charts.

Tables

Tables are meant to display tabular information, so avoid using tables to create visual layout. Data tables are used to organize data with a logical relationship in grids.

Titles and captions should be presented outside of the table to preserve accessibility. Merging cells or leaving data cells blank pose problems to screen readers and overall comprehension to the visually impaired. Text wrap should also be avoided within table cells as screen readers have trouble with the formatting.

Accessible tables need markup that indicates header cells and data cells and defines their relationship. In Word, you need to select either Header Row and/or First Column within the Table Style Options to apply the correct table formatting. Assistive technologies use this information to provide context to users. Construct tables that read logically from left to right, top to bottom and include clear and concise column and/or row headers.

Header column 1	Header column 2	Header column 3
Row 1 data for column 1	Row 1 data for column 2	Row 1 data for column 3
Row 2 data for column 1	Row 2 data for column 2	Row 2 data for column 3
Row 3 data for column 1	Row 3 data for column 2	Row 3 data for column 3
Row 4 data for column 1	Row 4 data for column 2	Row 4 data for column 3

Table 1 Example table with column headers, the column headers are associated with each data cell in the column below them.

Add tables to your document from the Insert ribbon, Insert Table button. Choose your desired table layout from the drop menu. Once created, highlight your table and click the Design Ribbon. A list of Table Style Options and Table Styles are now available. If you want to add color and style to your table, there are many options available in the Table Styles.

Hyperlinks

Screen Readers and Links

Screen readers generally inform users that a piece of text (or a graphic) is a link

Most screen readers say "link" before each link. *For example, a "products" link would be read as "link products" by JAWS.*

Links do not need to include "link" in the link text, because all users already know that the link is a link. This is more of an issue with graphics used as links. The alt text for a graphic does not need to say "link" or "link to." Otherwise, JAWS users will hear "link graphic link to Products," which is redundant.

Screen reader users often navigate from link to link, skipping the text in between

Tabbing from link to link is a way of skimming web content, especially if users are trying to find a specific section of a web site.

Links should make sense out of context. Phrases such as "click here," "more," "click for details," and so on are ambiguous when read out of context. At the same time, it would be overkill to ensure that every detail about a link destination is discernible by listening to the link context. Users wouldn't want

to hear "Products page on which a list of all of our products are presented, including software products and training products, with a list of prices and availability by region (this page uses the same navigation template as the page you are now on)." Perhaps a better alternative would be a link that simply says "Products."

Place the distinguishing information of links at the beginning of a link. Don't put extra information first, *for example, don't say "Link opens in a new window: Products." Instead, say "Products (opens in a new window)" (or something along those lines)*. This is especially important in this example if several links open in a new window. With the explanatory information first instead of the main information, screen reader users would have to listen to the phrase "link opens in a new window" repeatedly. They will have a harder time distinguishing between different links, or at least it will take them longer.

Screen reader users sometimes obtain an alphabetically-organized list of links

Screen readers allow users to view the list all links present on the page, using a keyboard shortcut. This is especially useful if they are searching for a specific link.

Use link words and phrases that are unambiguous and that can be intuitively organized regardless of order (the screen reader might sort them in order of appearance or alphabetically). *For example, the phrase "contact us" is a common one that users may want to access*. If the link says, "you can contact us," or "how to contact us," or some other phrase that is less intuitive, users may have a more difficult time finding the link.

Use clear and concise language for all links. Linked text should inform the reader exactly where the link will take them when clicked - e.g., [Upper Colorado Region website](#). If providing the URL, place it after the linked text - e.g. [Upper Colorado Region website at www.usbr.gov/uc/](#).

Additional Information and related links

www.Section508.gov provides resources for understanding and implementing Section 508.

For information on Section 508, making Microsoft Office Accessible documents, Verifying PDF Accessibility and other Accessibility information, please visit the Bureau of Reclamation's Creating Accessible Documents page. The direct link to the page is www.usbr.gov/main/accessibility.html.

WebAIM - Web Accessibility In Mind - has provided comprehensive web accessibility solutions since 1999, a non-profit organization based at the Center for Persons with Disabilities at Utah State University hosts an online Color Contrast Checker at <https://webaim.org/resources/contrastchecker/>. Also, on their site are a number of training resources and articles covering a wide variety of accessibility topics.

W3C Web Accessibility Initiative at <https://www.w3.org/WAI/> host the Standards and Guidelines known as WCAG, quick link at <https://www.w3.org/WAI/standards-guidelines/wcag/>.