WCAG 2.1 A and AA Requirements

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| **Name of Product** | **Mendeley Reference Manager** |
| **Date Last Updated** | **May 20, 2022** |
| Completed by | Jay Nemchik (Digital Accessibility Team, Dayton) |
| **Document Description** | This document rates Mendeley Reference Manager according to the W3C WCAG 2.1 A and AA requirements. |
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| **Testing Tools and Methods** | **Hands-on keyboard operation Firebug/Code inspection Firefox Web Developer Toolbar (removing style sheets) JAWS 18 on Mozilla Firefox 63 and MS IE 11 on Windows 10 NVDA screen reader v2019.2.1 Wave Extension**  **Color Contrast Analyzer W3C WAI Pages** Elsevier Accessibility Checklist: <http://romeo.elsevier.com/accessibility_checklist/> |
| **Document Sections** | The review document below includes all WCAG 2 A and AA checkpoints and is organized into 6 logical sections:   * Visuals * Keyboard * Headings and Structure * Labeling * Multimedia * Usability |
| **Pages Covered** | Header, Navigation, References Pane, Add Entry Manually, Article Panel. |
| **Note from W3C on Conformance** | <https://www.w3.org/TR/UNDERSTANDING-WCAG20/conformance.html> **“If there is no content to which a success criterion applies, the success criterion is satisfied.” This VPAT shows such criterion as: "Supports (N/A)"** |
| **Notes/Terminology** | **“AT” stands for Assistive Technology such as screen readers, voice input, etc.** |

| **WCAG 2.1 Success Criterion** | **Level** | **Evaluation** |
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| 1.1.1: Non-text Content | A | Partially supports |
| 1.2.1: Audio-only and Video-only (Prerecorded) | A | Supports (N/A) |
| 1.2.2: Captions (Prerecorded) | A | Supports (N/A) |
| 1.2.3: Audio Description or Full Text Alternative | A | Supports (N/A) |
| 1.2.4: Captions (Live) | AA | Supports (N/A) |
| 1.2.5: Audio Description | AA | Supports (N/A) |
| 1.3.1: Info and Relationships | A | Partially supports |
| 1.3.2: Meaningful Sequence | A | Partially supports |
| 1.3.3: Sensory Characteristics | A | Supports |
| 1.3.4 Orientation (2.1) | AA | Supports |
| 1.3.5 Identify Input Purpose (2.1) | AA | Supports (N/A) |
| 1.4.1: Use of Color | A | Partially supports |
| 1.4.2: Audio Control | A | Supports (N/A) |
| 1.4.3: Contrast (Minimum) | AA | Partially supports |
| 1.4.4: Resize text | AA | Supports |
| 1.4.5: Images of Text | AA | Supports |
| 1.4.10 Reflow (2.1) | AA | Supports |
| 1.4.11 Non-Text Contrast (2.1) | AA | Partially supports |
| 1.4.12 Text Spacing (2.1) | AA | Supports |
| 1.4.13 Content on Hover or Focus (2.1) | AA | Does not support |
| 2.1.1: Keyboard | A | Partially supports |
| 2.1.2: No Keyboard Trap | A | Does not support |
| 2.1.4 Character Key Shortcuts (2.1) | A | Supports (N/A) |
| 2.2.1: Timing Adjustable | A | Supports (N/A) |
| 2.2.2: Pause, Stop, Hide | A | Supports (N/A) |
| 2.3.1: Three Flashes or Below Threshold | A | Supports (N/A) |
| 2.4.1: Bypass Blocks | A | Partially supports |
| 2.4.2: Page Titled | A | Supports |
| 2.4.3: Focus Order | A | Partially supports |
| 2.4.4: Link Purpose (In Context) | A | Partially supports |
| 2.4.5: Multiple Ways | AA | Supports |
| 2.4.6: Headings and Labels | AA | Supports |
| 2.4.7: Focus Visible | AA | Partially supports |
| 2.5.1 Pointer Gestures (2.1) | A | Supports (N/A) |
| 2.5.2 Pointer Cancellation (2.1) | A | Supports (N/A) |
| 2.5.3 Label in Name (2.1) | A | Partially supports |
| 2.5.4 Motion Actuation (2.1) | A | Supports (N/A) |
| 3.1.1: Language of Page | A | Supports |
| 3.1.2: Language of Parts | AA | Supports |
| 3.2.1: On Focus | A | Supports |
| 3.2.2: On Input | A | Supports |
| 3.2.3: Consistent Navigation | AA | Supports |
| 3.2.4: Consistent Identification | AA | Supports |
| 3.3.1: Error Identification | A | Supports |
| 3.3.2: Labels or Instructions | A | Partially supports |
| 3.3.3: Error Suggestion | AA | Supports |
| 3.3.4: Error Prevention (Legal, Financial, Data) | AA | Supports |
| 4.1.1: Parsing | A | Partially supports |
| 4.1.2: Name, Role, Value | A | Partially supports |
| 4.1.3 Status Messages (2.1) | AA | Supports (N/A) |

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| **Visuals** | | |
| **WCAG 2.1**  **Checkpoint** | **Supporting Features** | **Remarks** |
| [1.1.1: Non-Text Content](http://www.w3.org/TR/WCAG20/#text-equiv-all) (A) Provide text alternatives for non-text content (e.g. images) | Partially supports | Most images and icons have appropriate text equivalents.  **Exceptions:**  References Pane: The unread icon does not have alternative text.  Article Panel: The Add Tags icon does not have alternative text.  Add Entry Manually: The close button does not have alternative text. |
| [1.3.3: Sensory Characteristics](http://www.w3.org/TR/WCAG20/#content-structure-separation-understanding) (A) Do not rely on sensory characteristics of components such as shape, size, visual location, orientation, or sound | Supports | There are no instructions or areas of content which rely solely on sensory characteristics. |
| [1.4.1: Use of Color](http://www.w3.org/TR/WCAG20/#visual-audio-contrast-without-color) (A) Color is not used as the only visual means of conveying info | Partially supports | Color is not used as the only means of conveying information in most areas.  **Exceptions:**  Add Entry Manually: Error text is depicted with only a red color. |
| [1.4.3: Color Contrast (Minimum)](http://www.w3.org/TR/WCAG20/#visual-audio-contrast-contrast) (AA) Text has enough contrast with the background (4.5:1 for small text and 3:1 for large text) | Partially supports | Text has enough contrast with its corresponding background in most areas.  **Exceptions:**  Navigation: New Collection and New Group text does not have enough contrast at 2.54:1.  Article Panel: The publication details light gray text does not have enough contrast at 1.96:1.  Add Entry Manually: The "Enter identifiers and look up for metadata" text does not have enough contrast at 4.35:1. |
| [1.4.4: Resize Text](http://www.w3.org/TR/WCAG20/#visual-audio-contrast-scale) (AA)  Text can be enlarged up to 200% without loss of functionality. | Supports | Text can be enlarged to 200% and content remains functional. |
| [1.4.5: Images of Text](http://www.w3.org/TR/WCAG20/#visual-audio-contrast-text-presentation) (AA) Text is used rather than images of text, except where the presentation of text is essential, such as logos | Supports | No images of text are used other than for Logos or essential presentation. |
| [1.4.10 Reflow](https://www.w3.org/TR/WCAG21/#reflow) (AA) Content can be presented without loss of information or functionality, and without requiring scrolling in two dimensions for:  Vertical scrolling content at a width equivalent to 320 CSS pixels;  Horizontal scrolling content at a height equivalent to 256 CSS pixels. | Supports | Mendeley Reference Manager uses a responsive view that properly scrolls in only one direction once width reaches low CSS pixels. |
| [1.4.11 Non-Text Contrast (AA](https://www.w3.org/TR/WCAG21/#non-text-contrast)) User interact components and graphical objects have a contrast ratio of at least 3:1 against adjacent color(s). | Partially supports | Many non-text UI components and graphical objects have at least a 3:1 contrast ratio.  **Exceptions:**  References Pane: The green checkmark for successful downloads does not have enough contrast at 1.92:1. The green unread icon does not have enough contrast at 2.38:1. The unfavorited gray start outline does not have enough contrast at 1.88:1. The colored in yellow start does not have enough contrast at 1.61:1. |
| [1.4.12 Text Spacing (AA)](https://www.w3.org/TR/WCAG21/#text-spacing)  In content implemented using markup languages that support the following text style properties, no loss of content or functionality occurs by setting all the following and by changing no other style property:  Line height (line spacing) to at least 1.5 times the font size;  Spacing following paragraphs to at least 2 times the font size;  Letter spacing (tracking) to at least 0.12 times the font size;  Word spacing to at least 0.16 times the font size. | Supports | The site allows users to adjust the text spacing without causing loss of content or functionality. |
| [1.4.13 Content on Hover or Focus (AA)](https://www.w3.org/TR/WCAG21/#content-on-hover-or-focus)  Where receiving and then removing pointer hover or keyboard focus triggers additional content to become visible and then hidden, the following are true:   * Dismissable * Hoverable * Persistent | Does not support | There is content that appears on hover and focus throughout the application, but it is not hoverable or dismissable.  For example, the sync tooltip in the header and All files downloaded icon in the table are not hoverable or dismissable. |
| [2.3.1: Three Flashes or Below Threshold](http://www.w3.org/TR/WCAG20/#seizure-does-not-violate) (A) No more than three flashes in a 1-second period, or the flashes are below the defined thresholds | Supports (N/A) | No flashing content exists. |
| **Keyboard** | | |
| **WCAG 2.1**  **Checkpoint** | **Supporting Features** | **Remarks** |
| [1.3.2: Meaningful Sequence](http://www.w3.org/TR/WCAG20/#content-structure-separation-sequence) (A)  The correct reading sequence can be programmatically determined | Partially supports | The correct reading sequence is usually logical with the DOM order matching the visual order.  **Exceptions:**  References Pane: The search field input and associated buttons can still be reached by screen reader when they are not visible. The entire table section has been given aria-hidden="true", causing it to be unable to be read by screen readers. |
| [2.1.1: Keyboard](http://www.w3.org/TR/WCAG20/#keyboard-operation-keyboard-operable) (A)  All functionality is available from a keyboard, except for tasks such as drawing | Partially supports | Most content is keyboard operable.  **Exceptions**:  References Pane: The search button cannot be reached by keyboard.  Article Pane: The tabs at the top cannot be reached by keyboard. |
| [2.1.2: No Keyboard Trap](http://www.w3.org/TR/WCAG20/#keyboard-operation-trapping) (A)  The user can use the keyboard to move through page elements and is not trapped on a particular element | Does not support | There is a keyboard trap within the Add Entry Manually modal. When shift-tabbing backwards out of the modal, the user cannot tab anywhere on the page anymore and is stuck. |
| [2.1.4 Character Key Shortcuts (A)](https://www.w3.org/TR/WCAG21/#character-key-shortcuts)  If a keyboard shortcut is implemented in content using only letter (including upper- and lower-case letters), punctuation, number, or symbol characters, then at least one of the following is true:   * Turn off * Remap * Active only on focus | Supports (N/A) | The site does not use any character key shortcuts. |
| [2.4.3: Focus Order](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-focus-order) (A)  Users can tab through the elements of a page in a logical order | Partially supports | Tab order is logical on the site in most areas.  **Exceptions:** Navigation: The navigation options should have a separate tab stop for each link.  References Pane: In the Filters popup, the list of authors should have separate tab stops.  Article Panel: The panel should be treated like a modal and manage/trap focus appropriately.  Add Entry Manually: The container should be treated like a modal and manage/trap focus appropriately |
| [2.4.7: Focus Visible](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-focus-visible) (AA)  The page element with the current keyboard focus has a visible focus indicator | Partially supports | Most elements have a visible focus indicator. Some elements still use the browser default.  **Exceptions:**  References Pane: The checkboxes have too faint of a visible focus indicator.  Article Panel: The checkbox has too faint of a visible focus indicator. |
| [3.2.1: On Focus](http://www.w3.org/TR/WCAG20/#consistent-behavior-receive-focus) (A)  When a UI component receives focus, this does not trigger unexpected actions. | Supports | Focusable elements do not cause unexpected actions when receiving focus. |
| **Headers and Structure** | | |
| **WCAG 2.1**  **Checkpoint** | **Supporting Features** | **Remarks** |
| [1.3.1: Information and Relationships](http://www.w3.org/TR/WCAG20/#content-structure-separation-programmatic) (A)  Info, structure, and relationships can be programmatically determined | Partially supports | Good use of heading in some places to help distinguish content. Lists are typically used to group related links or text. Landmarks are sometimes used in good places.  **Exceptions:** Navigation: There should be a heading preceding the navigation options.  References Pane: There needs to be a heading preceding the references pane content. The references table is made using div elements, which have no semantic relationships.  Article Panel: The headings in the panel skip straight to h4s. |
| [2.4.1: Bypass Blocks](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-skip) (A)  Users can bypass repeated blocks of content. | Partially supports | Headings and landmarks exist, which allow users using Assistive Technology to jump to the different areas of content quickly.  **Exceptions:**  There is no skip to main content link on the site. |
| [2.4.6: Headings and Labels](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-descriptive) (AA)  Headings and labels are clear and consistent. | Supports | Headings and labels used are clear and descriptive. |
| [3.1.1: Language of Page](http://www.w3.org/TR/WCAG20/#meaning-doc-lang-id) (A)  The language of the page is specified | Supports | The language is defined as lang="en" on all pages. |
| [3.1.2: Language of Parts](http://www.w3.org/TR/WCAG20/#meaning-other-lang-id) (AA)  Specify the language of text passages that are in a different language than the default language of the page. | Supports (N/A) | There are no passages of text that differ from the page default. |
| [4.1.1: Parsing](http://www.w3.org/TR/WCAG20/#ensure-compat-parses) (A)  Use valid, error-free HTML | Partially supports | HTML and CSS passes concerning these 4 specific criteria:  (i) elements have complete start and end tags,  (ii) elements are nested according to their specifications  (iii) elements do not contain duplicate attributes (iv) any IDs are unique, except where the specifications allow these features.  **Exceptions:**  References Pane: In the Filter by popup, the Authors and Tags tabs have a button and span that share the same ID.  Note: There are other general HTML validation errors outside the scope of this criterion. |
| **Labeling** | | |
| **WCAG 2.1**  **Checkpoint** | **Supporting Features** | **Remarks** |
| [1.3.5 Identify Input Purpose (AA)](https://www.w3.org/TR/WCAG21/#identify-input-purpose) The purpose of each input field collecting information about the user can be programmatically determined when:  The input field serves a purpose identified in the Input Purposes for User Interface Components section; and the content is implemented using technologies with support for identifying the expected meaning for form input data. | Supports (N/A) | There are no pages in Mendeley Reference Manager that have personally identifying input fields. |
| [2.4.2: Page Titled](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-title) (A)  The page has a title describing its topic or purpose | Supports | The application is unique in the fact that all actions take place on one page and the page title of Mendeley Reference Manager is sufficient. |
| [2.4.4: Link Purpose (In Context)](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-refs) (A)  The purpose of each link can be determined from the link text or surrounding context. | Partially supports | Most links used have an identifiable purpose from the link text or surrounding context.  **Exceptions:**  References Pane: The All Files Downloaded link and Files Attached link does not have any link text. |
| [2.5.3 Label in Name](https://www.w3.org/TR/WCAG21/#label-in-name) (A)  For user interface components with labels that include text or images of text, the name contains the text that is presented visually. | Partially supports | Most interface components that have visible text contain that text consistently within the accessible name.  **Exceptions:**  Header: The profile button does not have the visible text matching the button label.  Article Panel: The Reference Type button does not have the visible text matching the button label. |
| [3.2.4: Consistent Identification](http://www.w3.org/TR/WCAG20/#consistent-behavior-consistent-functionality) (AA)  UI components used across the web site are identified consistently on every page. | Supports | UI components are consistent across the site. Many pages use the same exact components, resulting in a consistent experience. |
| [3.3.1: Error Identification](http://www.w3.org/TR/WCAG20/#minimize-error-identified) (A)  Input errors are clearly marked and described to the user. | Supports | Error identification happens and is presented well visually. Errors are connected to the appropriate input fields and use error symbols. |
| [3.3.2: Labels and Instructions](http://www.w3.org/TR/WCAG20/#minimize-error-cues) (A)  Items requiring user input are clearly labeled or have clear instructions. | Partially supports | Most input areas have clear labels which are programmatically assigned.  **Exceptions:**  References Pane: The Select All checkbox is not labelled. In the Filters popup, the Search in Authors input does not have a proper label, as a placeholder alone is insufficient. |
| [3.3.3: Error Suggestion](http://www.w3.org/TR/WCAG20/#minimize-error-suggestions) (AA)  When the user makes an input error, give suggestions for valid input. | Supports | The few errors that can be given have valid suggestions. For example, when adding an entry manually, the error message for a missing title states, "Enter a title between 1 and 500 characters". |
| [4.1.2: Name, Role, Value](http://www.w3.org/TR/WCAG20/#ensure-compat-rsv) (A)  For all UI components, the name, value, and role can be programmatically determined. | Partially supports | Some UI components communicate their state programmatically.  **Exceptions:**  Header: The menu dropdown's contents should have role="menuitem" instead of "listitem".  Navigation: The Add New dropdown's contents should have role="menuitem" instead of "listitem". The Navigation options should not be made using a tree. Collections More Actions drodpown's contents should have role="menuitem" instead of "listitem".  References Pane: The current implementation of the table sort labels does not communicate to AT. The row checkboxes have an unnecessary role="checkbox" and aria-checked in two places. In the Filters popup, the Remove Filter elements should not be a grid. The remove filter button needs to state which name is being removed.  Article Panel: The entire panel needs role="dialog", aria-modal="true" and a proper label. The multiple text input edit buttons do not have a role and are missing a description of what activating the element will do. The Reference Type button needs a role and proper ARIA to describe it as a select menu. The Reference Type dropdown's items need menuitem roles. The added tags should not be grids. The remove tag button needs to state which tag is being removed.  Add Entry Manually: The modal needs role="dialog", aria-modal="true", and aria-label="Add Entry Manually". The 'X' close button needs a label. |
| [4.1.3 Status Messages](https://www.w3.org/TR/WCAG21/#status-messages) (AA)  In content implemented using markup languages, status messages can be programmatically determined through role or properties such that they can be presented to the user by assistive technologies without receiving focus. | Supports (N/A) | There are no status messages of the kind described by this criterion on Mendeley Reference Manager. |
| **Multimedia** | | |
| **WCAG 2.1**  **Checkpoint** | **Supporting Features** | **Remarks** |
| [1.2.1: Audio-only or Video-only (Prerecorded)](http://www.w3.org/TR/WCAG20/#media-equiv-av-only-alt) (A)  Provide alternatives for pre-recorded audio-only or video-only content. | Supports (N/A) | There is no audio-only or video-only content in Mendeley Reference Manager. |
| [1.2.2: Captions (Prerecorded)](http://www.w3.org/TR/WCAG20/#media-equiv-captions) (A)  Provide captions for pre-recorded audio | Supports (N/A) | The site does not have any pre-recorded audio. |
| [1.2.3: Audio Description or Media Alternative (Prerecorded)](http://www.w3.org/TR/WCAG20/#media-equiv-audio-desc) (A)  Provide alternatives for pre-recorded synchronized audio/video | Supports (N/A) | The site does not have any pre-recorded audio/video. |
| [1.2.4: Captions (Live)](http://www.w3.org/TR/WCAG20/#media-equiv-real-time-captions) (AA)  Provide captions for live audio in synchronized audio/video. | Supports (N/A) | There is no live audio in synchronized audio/video. |
| [1.2.5: Audio Description (Prerecorded)](http://www.w3.org/TR/WCAG20/#media-equiv-audio-desc-only) (AA)  Provide an audio description of pre-recorded video. | Supports (N/A) | The site does not have any pre-recorded video. |
| [1.4.2: Audio Control](http://www.w3.org/TR/WCAG20/#visual-audio-contrast-dis-audio) (A)  Audio can be paused and stopped, or the audio volume can be changed. | Supports (N/A) | There is no audio that plays automatically on the site. |
| [2.2.2: Pause, Stop, Hide](http://www.w3.org/TR/WCAG20/#time-limits-pause) (A)  Users can stop, pause, or hide moving, blinking, scrolling, or auto-updating information. | Supports (N/A) | There is no moving, scrolling, or auto-updating information. |
| **Usability** | | |
| **WCAG 2.1**  **Checkpoint** | **Supporting Features** | **Remarks** |
| [2.2.1: Timing Adjustable](http://www.w3.org/TR/WCAG20/#time-limits-required-behaviors) (A)  Users are warned of time limits shorter than 20 hours and time limits can be turned off or extended | Supports (N/A) | There does not appear to be a session timeout for Mendeley Reference Manager. |
| [2.4.5: Multiple Ways](http://www.w3.org/TR/WCAG20/#navigation-mechanisms-mult-loc) (AA)  More than one way is available to navigate to other web pages. | Supports | There are multiple ways to each page, mostly through the main navigation. |
| [3.2.2: On Input](http://www.w3.org/TR/WCAG20/#consistent-behavior-unpredictable-change) (A)  Changing the setting of a checkbox, radio button, or other UI component does not trigger unexpected changes in context. | Supports | User inputs do not cause unexpected actions. |
| [3.2.3: Consistent Navigation](http://www.w3.org/TR/WCAG20/#consistent-behavior-consistent-locations) (AA)  Navigation menus are in the same location and order on every web page. | Supports | Navigation menus are consistently in the same place and in same order.  For example, the navigation has the same links/buttons in the same order. |
| [3.3.4: Error Prevention (Legal, Financial, Data)](http://www.w3.org/TR/WCAG20/#minimize-error-reversible) (AA)  For web pages with legal or financial commitments, input can be reviewed and corrected before final submission, and submissions can be reverted. | Supports (N/A) | There are no submissions which require legal or financial commitments. |
| **Mobile User Experience** | | |
| **WCAG 2.1**  **Checkpoint** | **Supporting Features** | **Remarks** |
| [1.3.4 Orientation](https://www.w3.org/TR/WCAG21/#orientation)  (AA) Content does not restrict its view and operation to a single display orientation, such as portrait or landscape, unless a specific display orientation is essential. | Supports | Mendeley Reference Manager does not restrict its view to a single orientation. |
| [2.5.1 Pointer Gestures](https://www.w3.org/TR/WCAG21/#pointer-gestures) (A) All functionality that uses multipoint or path-based gestures for operation can be operated with a single pointer without a path-based gesture, unless a multipoint or path-based gesture is essential. | Supports (N/A) | Mendeley Reference Manager does not use any multipoint or path-based gestures. |
| [2.5.2 Pointer Cancellation (A)](https://www.w3.org/TR/WCAG21/#pointer-cancellation)  For functionality that can be operated using a single pointer, at least one of the following is true:   * No Down-Event * Abort or Undo * Up Reversal * Essential | Supports | All interactive content functions through the Up-Event, allowing users to potentially move their pointer off the component to cancel. |
| [2.5.4 Motion Actuation (A)](https://www.w3.org/TR/WCAG21/#motion-actuation)  Functionality that can be operated by device motion or user motion can also be operated by user interface components and responding to the motion can be disabled to prevent accidental actuation, except when:   * Supported Interface * Essential | Supports (N/A) | There is no content on Mendeley Reference Manager that utilizes device or user motion. |