ACCESSIBILITY

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INTRODUCTION

- Legal setting

- Web content accessibility guidelines
  - POUR principles

- Manitoba Laws site
  - Previous shortcomings and May 1, 2023 improvements

LEGAL SETTING

- *The Accessibility for Manitobans Act*, C.C.S.M. c. A1.7

- *Accessible Information and Communication Standard Regulation*, M.R. 47/2022
  - Requires web content and applications to meet WCAG 2.1 AA guidelines:
    - By **May 1, 2023**, in case of a government department
    - By **May 1, 2024**, in case of
      - A government agency,
      - A health authority,
      - The City of Winnipeg and any other municipality that is a city
      - An education institution or library
    - By **May 1, 2025**, in case of any other organization to which the Act applies if it has any employees in Manitoba.

WEB CONTENT ACCESSIBILITY GUIDELINES
(WCAG 2.1 LEVEL AA)

WCAG 2.1 is the World Wide Web Consortium (W3C) recommendation from June 5, 2018.

- It defines how to make web content more accessible to people with disabilities.

- Accessibility involves a wide range of disabilities, including visual, auditory, physical, speech, cognitive, language, learning and neurological disabilities.

WEB CONTENT ACCESSIBILITY GUIDELINES
(WCAG 2.1 LEVEL AA)

W3Cx: Introduction to Web Accessibility

- 20-25 hour, self-paced course jointly sponsored by W3C and EdX.

- [W3Cx: Introduction to Web Accessibility | edX](https://www.edx.org/learn/web-accessibility/the-world-wide-web-consortium-w3c-introduction-to-web-accessibility)
  - **https://www.edx.org/learn/web-accessibility/the-world-wide-web-consortium-w3c-introduction-to-web-accessibility**

WEB CONTENT ACCESSIBILITY GUIDELINES
(WCAG 2.1 LEVEL AA)

POUR Principles

13 guidelines organized under 4 principles

Perceivable	Operable	Understandable	Robust
1.1 Text alternative 1.2 Time-based media 1.3 Adaptable 1.4 Distinguishable	2.1 Keyboard accessible 2.2 Enough time 2.3 Seizures and physical reactions 2.4 Navigable 2.5 Input modalities	3.1 Readable 3.2 Predictable 3.3 Input assistance	4.1 Compatible

POUR PRINCIPLES — (1) PERCEIVABLE

1.1 — Text alternative
- Provide text alternative for non-text content
    - User-input box or control should have a name describing its purpose
    - Captions under images and text descriptions of images inside image tags
    - Video or audio should, at a minimum, have a descriptive label (more under guideline 1.2)

1.2 — Time-based media (pre-recorded or live video or audio)
- Any page providing access to audio or visual content should include a descriptive label and captions for all audio and descriptions of video information unless they are provided as an alternative to text.

POUR PRINCIPLES — (1) PERCEIVABLE (CONT'D)

1.3 — Adaptable

- Content should be adaptable for different layouts
  - Information, structure and relationships can be programmatically determined
  - If sequence is important, correct reading sequence can be programmatically determined
  - Content is not restricted to one orientation (portrait or landscape)
  - Purpose of input field collecting user information can be programmatically determined

1.4 — Distinguishable

- Make it easy for users to see/hear content, including separating foreground from background
  - Use of color should not be the only means of conveying information
  - Use sufficient contrast (4.5:1, or 3:1 for large text)

POUR PRINCIPLES — (2) OPERABLE

2.1 — Keyboard accessible

- All functionality must be operable by keyboard.
- No keyboard traps. If focus can be moved via keyboard, the component with focus should be visible. If it requires more than TabKey or ArrowKey, user should be advised.
- Keyboard shortcuts – there must be a mechanism to turn it off or remap it or it must be active only when the element to which it applies has focus

2.2 — Enough time

- Give users enough time to read and use content
- Allow user to stop any mechanism that moves, blinks or scrolls information for more than 5 seconds or that automatically updates information.

2.3 — Avoid triggers for seizures and physical reactions

- Don't design content in a way known to cause seizures or physical reactions (e.g. don't let content flash more than 3 times a second).
- Allow user to disable any motion animation triggered by interaction.

POUR PRINCIPLES — (2) OPERABLE (CONT'D)

2.4 — Navigable:
- **Bypass blocks**— include a mechanism to bypass content repeated on multiple pages. For example, a top link to jump to main content; adding links to at top of each page to each area of content on the page; use <heading>, <main> and <section> elements to mark areas of content.
- **Page title** — every page should have a meaningful descriptive title
  - In HTML, in the <title>...</title> tag in the invisible <head> section
  - In PDF, in the Title field of the document properties
- **Focus order** — focusable components should receive focus in an order that preserves meaning and operability
  - In HTML, tab order allows user to jump from one control/link to the next in sequence
  - In PDF, ensure correct tab and reading order
  - Dynamically inserted content should appear right after the trigger element
- **Link purpose** — purpose should be determinable from link context

POUR PRINCIPLES — (2) OPERABLE (CONT'D)

2.4 — Navigable: (continued)

- **Multiple ways** — provide multiple ways to locate or access a web page within a set of web pages. Use two or more of the following:
    - Include links to related web pages
    - Include a Table of Contents with hyperlinks
    - Include bookmarks in a PDF
    - Provide a site map
    - Provide a search function
    - Provide links to all pages from the home page
- **Headings and labels** — use labels and structured headings to help users find content and orient themselves
    - Structured headings require use of <H1> to <H6> heading elements, rather than simply applying styles to <p> elements to give them a "heading" appearance.
    - Screen readers provide user with context by listing the structured headings an allowing the user to navigate to a selected heading

2.5 — Input modalities

- **Pointer gestures** — Ensure that multi-point gestures work as intended. A multi-point gesture involves touch and moving the touch location.
- **Pointer cancellation** — ensure at least one of the following is true
  - The down-event is not used to execute the function.
  - Execution is on the up-event, but there is a mechanism to cancel or abort after the down-event and before the function is executed (e.g. sliding the mouse/touch off of the hyperlink before letting go [the 'up-event']).
  - The up-event reverses any outcome of the preceding down-event.
  - Completion of the down-event is essential.
- **Label in name** — screen reader labels for components should have a name that matches the visible name of the component
- **Motion actuation** — if an interface component can be activated by a device or user motion, allow it to be operated by a user interface component.
- **Target size** (level AAA, so not yet required by Manitoba law)
  - As a general rule, target for a pointer input should be at least 44x44 pixels.

POUR PRINCIPLES — (3) UNDERSTANDABLE

The information on the site and the operation of the user interface must be understandable.

3.1 — Readable

Make content readable and understandable

- **Language** — (AA)
  - Default human language of each page can be programmatically determined
  - Human language of each passage or phrase can be programmatically determined
- **Unusual words** — (AAA, so not yet required in Manitoba)
  - Provide a mechanism to access the definition of each word or phrase used in an unusual or restricted way
- **Abbreviations** — (AAA, so not yet required in Manitoba)
  - Provide a mechanism to expanding the form or meaning of each abbreviation.
- **Reading level** — (AAA, so not yet required in Manitoba)
  - If content requires higher than lower secondary education reading level, make additional content or version available that doesn't require the higher level.

POUR PRINCIPLES — (3) UNDERSTANDABLE (CONT'D)

The information on the site and the operation of the user interface must be understandable.

3.1 — Readable (cont'd)

- **Pronunciation** — (AAA, so not yet required in Manitoba)
  - Provide pronunciation of words where their meaning, in context, is ambiguous without knowing the pronunciation

3.2 — Predictable

Make web pages appear and operate in predictable ways

- **On focus** — when any user interface component receives focus, it should initiate a change of context
- **On input** — when user changes the setting of a user input control, it causes no change unless the user has been first advised of the change
- **Consistent navigation** — navigational mechanisms on multiple pages occur in the same order from page to page

POUR PRINCIPLES — (3) UNDERSTANDABLE (CONT'D)

The information on the site and the operation of the user interface must be understandable.

3.2 — Predictable (cont'd)

- **Consistent identification** — components with same functionality on multiple pages are identified consistently
- **Change on request** — changes of context are initiated only by user request, or user is given a mechanism to turn off automatic changes.

3.3 — Input assistance

Help users avoid and correct mistakes when providing input

- Error identification — identify and describe user errors to user
- Error suggestions — if known, provide suggested corrections unless it compromises security or purpose of content
- Labels or instructions — provided when user input is required
- Error prevention — (legal, financial, data)
- Context sensitive help — (AAA, so not yet required in Manitoba)

POUR PRINCIPLES — (4) ROBUST

4.1 — Compatible

Maximize compatibility with current and future user agents, including assistive technologies.

- **Parsing** — Strict requirement for start and end tags for HTML elements, with unique IDs if IDs are used
- **Name, role, value** — for all user interface components, the name and role can be programmatically determined; states, properties and values can be programmatically set by the user; and notification of changes is available to assistive technologies.
- **Status messages** — can be programmatically determined through role or properties so they can be presented to the user by assistive technologies without receiving focus.

MANITOBA LAWS WEBSITE

- Shortcomings (before May 1, 2023)
- Accessibility Improvements (May 1, 2023)

MANITOBA LAWS (BEFORE MAY 1, 2023)

ACCESSIBILITY

MANITOBA LAWS (SINCE MAY 1, 2023)

MANITOBA LAWS
ACCESSIBILITY SHORTCOMINGS AND IMPROVEMENTS

Navigation and readability

Previous shortcomings

- Main menu not compatible with some screen sizes
- Focus not visible when using keyboard navigation
- Poor design for navigation of long lists (too many tab stops for keyboard navigation)
- No system or inefficient system for filtering lists
- External files for HTML Table of Contents
- Separate English and French HTML files (for Acts only)
- No user control over font size

MANITOBA LAWS
ACCESSIBILITY SHORTCOMINGS AND IMPROVEMENTS

Navigation and readability (cont'd)

May 1, 2023 improvements

- Main menu
  - Sticky menu (stays at top of screen when scrolling)
  - Decluttered
  - More responsive: adapts better to various screen widths
  - Focus visible when using keyboard navigation
- Long lists (Acts, regulations, forms, etc.)
  - Removed the [A] to [Z] (or [1985] to [2024]) hyperlinks for jumping to different categories or years and replaced that system with input boxes for filtering lists.
  - Added a list of prescribed forms
- Added user control over font-size (top right [A] [A] [A] buttons)
  - Added shortcut keys for these buttons [Alt -], [Alt 0], [Alt +]
  - These correspond to browser ZOOM shortcuts [Ctrl -], [Ctrl 0], [Ctrl +]

MANITOBA LAWS
ACCESSIBILITY SHORTCOMINGS AND IMPROVEMENTS

Navigation and readability — Acts

May 1, 2023 improvements

- Consolidated Acts and annual Acts after 2022 now published as bilingual HTML files.
  - User can view English or French, or both
  - Includes internal Table of Contents with sticky TOC button for ease of access to TOC when scrolling through document.
  - Includes show/hide links in each consolidated Act for regulations, legislative history and previous versions.
  - Includes improved "search within" function that
    - Displays more context (entire section or subsection rather than just the paragraph with the hit)
    - Allows user to keep a sequence of search results.

MANITOBA LAWS
ACCESSIBILITY SHORTCOMINGS AND IMPROVEMENTS

Navigation and readability — Regulations

Previous shortcomings

- All consolidated regulations and annual regulations since 2000 were published only in PDF format. With a few exceptions (e.g. regulations made by marketing boards), they are in a dual-column bilingual format.
- Problem: The bilingual PDFs on the Laws site do NOT meet accessibility standards.

MANITOBA LAWS
ACCESSIBILITY SHORTCOMINGS AND IMPROVEMENTS

Navigation and readability — PDF shortcomings

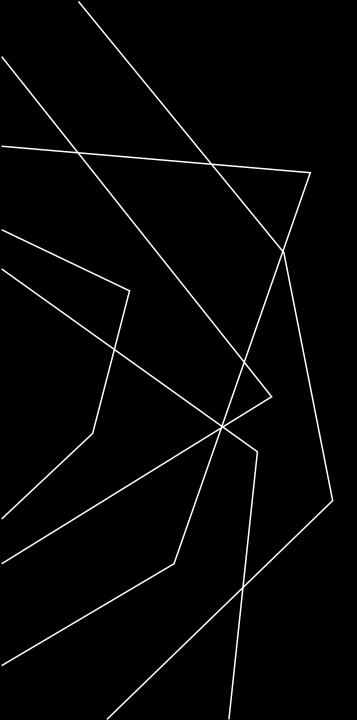The PDF version of the Acts and regulations do not meet WCAG 2.1 guidelines:
- No bookmarks
- Not tagged for screen readers.
    - Screen readers, at this point, cannot handle bilingual PDFs.
    - For tagged versions, we would have to create two versions, one tagged for the English screen reader, one for the French screen reader. This would have to be done manually, as Acrobat's automated tagging is not up to the task.
- No structured headings.
- Most prescribed forms don't meet the guidelines. They don't have a tagged reading order and many don't have properly labelled fields. Text instructions under a blank line do not work.
- Not adaptable like HTML: users cannot change font size and reflow the content.

MANITOBA LAWS
ACCESSIBILITY SHORTCOMINGS AND IMPROVEMENTS

Navigation and readability — Regulations
May 1, 2023 improvements

- All consolidated regulations and annual regulations after 2022 are now published in HTML and PDF.
  - The PDF version is the non-accessible bilingual version.
  - The HTML version, like the HTML version of an Act, is a bilingual version that
    - Allows the user to display the English or the French, or both
    - Includes show-hide buttons to access amending regulations and previous versions
    - Includes the improved "search within" function.
  - If the regulation includes prescribed forms, the regulation includes links to the PDF version of the form (which at this point cannot be accurately and programmatically reproduced in HTML format).

SUMMARY OF ACCESSIBILITY IMPROVEMENTS

- Improved main menu
- Improved lists with filters
  - Restructured list of regulations
- List of prescribed forms (new)
- More adaptable: user can set font size and reflow content
- Bilingual HTML versions of Acts and Regulations
  - Previously Acts were published as separate English and French files, and regulations were published only in PDF format
  - User can display the same document in English or French, or both in both languages in dual-column format
- Improved search features
  - [Search within] — shows more context
  - [Just the hits] — user can show more context or less context
  - Consistency of search features between Acts and regulations (because regulations are now indexed and searchable in the HTML format).

THANK YOU

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