

8/25/2017

## Memorandum

*Re: Accessibility of public-facing school nutrition websites provided by Nutrislice in light of WCAG 2.0, ADA, and Section 508*

*From: Ben Roberts, CTO, Nutrislice*

### Summary

Questions about accessibility of the food service marketing and menus websites (the “Nutrislice Menus” platform) provided by Nutrislice arise from time to time. In addition to Nutrislice Menus website development generally being accessibility-oriented, a comprehensive review of accessibility of the Nutrislice Menus website framework has been conducted, including both an internal review and an external audit by The Center for Disabled Persons, a non-profit organization that specializes in web accessibility. Nutrislice has updated the Nutrislice Menus website framework to implement the findings of the audit and bring the website templates into full compliance with WCAG 2.0 AA standards and federal accessibility requirements.

### Background

Under the Americans with Disabilities Act as well as Sections 504 & 508 of the Rehabilitation Act of 1973, and subsequent expansions, revisions and interpretations thereof, educational institutions are required to make websites and electronic information accessible to people with disabilities, including individuals that use assistive technology for web navigation. The World Wide Web Consortium (W3C) has developed a comprehensive set of resources called the Web Content Accessibility Guidelines (WCAG), which provide a specific, concrete set of technical guidelines for developing accessible, compliant websites. Specifically, it is commonly accepted that compliance with the WCAG 2.0 “AA” standard should meet or exceed compliance with the federal laws and rules governing accessibility.<sup>1</sup>

Nutrislice provides food service websites that are used by school districts, colleges, universities and other institutions to market and convey information about their food service programs and menus. Nutrislice’s core mission is to provide people with information about food so that they can make healthy choices, and this mission is fully inclusive of users with accessibility needs. As such, building accessible websites is a priority for Nutrislice.

### Actions Taken by Nutrislice to Meet Accessibility Standards

Nutrislice has hired developers and designers who are generally knowledgeable in best practices for building accessible websites and has required its team to be knowledgeable of and follow such best practices, including avoiding the use of color as a sole means to navigate or differentiate items, providing alternative text descriptions/captions for non-text content, using appropriate HTML tags and attributes, making content navigable via keyboard, providing appropriate color contrast between text and background, and following other WCAG 2.0 guidelines.

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<sup>1</sup> See <https://www.section508.gov/content/build/website-accessibility-improvement/WCAG-conformance>

Additionally, in the first quarter of 2017, Nutrislice did an internal review of the accessibility of its public facing web sites in view of WCAG 2.0 standards. Nutrislice uses a combination of WCAG self-evaluation tools, and a web accessibility evaluation software suite entitled WAVE, to evaluate WCAG 2.0 compliance and identify enhancements to undertake, with a goal of achieving at least “AA” level compliance in all areas. Based on findings from this internal review, opportunities for accessibility improvements were identified, and Nutrislice undertook development to implement these improvements. All legitimate accessibility concerns identified through the WAVE tool and self-evaluation have been resolved. The self-evaluation criteria can be found at <https://www.w3.org/WAI/WCAG20/quickref/> . The WAVE software (Chrome plugin) can be found at <https://goo.gl/whd21a>

In addition to self-evaluation, Nutrislice has an engagement with the WebAIM organization, operated by the Center for Persons with Disabilities at Utah State University, to provide external audits and expert recommendations for improving accessibility on Nutrislice websites in light of WCAG 2.0 AA standards. The WebAIM organization has deep experience and specialization in these types of professional evaluations, including working with many school districts, universities, and businesses around the country. As of summer 2017, Nutrislice has fully implemented all WebAIM recommendations that were provided in the audit of the Nutrislice Menus website framework. (A demo site that uses the same templates and markup as our live client sites was used for the audit.)

## Accessibility Features

The following list is an example of some but not necessarily all of the accessibility features implemented on Nutrislice websites, with corresponding WCAG 2.0 Guidelines indicated. For additional detail, please see the attached Sample VPAT document.

- **1.1 Text Alternatives:** Provide text alternatives for any non-text content.  
**Supports.**
  - Suitable alt-text captions or descriptions are made available for all non-text content (i.e., image) areas of the site, including all food images and marketing widgets.
  - For custom user-provided non-text content, text description fields are provided, along with instructions, to enable admin users to provide effective alt-text descriptions when they upload content.
- **1.2 Time-based Media:** Provide alternatives for time-based media. **N/A.**
  - N/A. Time-based media not utilized.
- **1.3 Adaptable:** Create content that can be presented and navigated in different ways. **Supports.**
  - Canonical headings and HTML structure are provided. Empty headings avoided or removed. Form controls labeled correctly.
- **1.4 Distinguishable:** Make it easier for users to see and hear content, including adequately separating the foreground from the background. **Supports.**
  - Font colors have a contrast ratio of at least 4.5:1 against background color, across the site including on food names and footer.
  - Accessible image library – text color of any images that include text sufficiently contrasts with background color(s).
- **2.1 Keyboard Accessible:** Make all functionality available from a keyboard.  
**Supports.**

- Interactive elements correctly and visibly receive keyboard focus and can be interacted with using a keyboard
- **2.2 Enough Time:** Provide users enough time to read and use content.  
**Supports.**
  - Time-sensitive content not utilized.
- **2.3 Seizures:** Do not design content in a way that is known to cause seizures.  
**Supports.**
  - Content does not flash.
- **2.4 Navigable:** Provide ways to help users navigate, find content, and determine where they are. **Supports.**
  - Interactive elements have visible keyboard focus indicators.
- **3.1 Predictable:** Make web pages appear and operate in predictable ways.  
**Supports.**
  - Changes in context are user-initiated and consistent.
- **3.3 Input Assistance:** Help users avoid and correct mistakes. **Supports.**
  - Form controls have proper labels. Error messaging, if provided, is accessible.
- **4.1 Compatible:** Maximize compatibility with current and future user agents, including assistive technologies. **Supports.**
  - Proper tags are utilized.
  - Role attributes and are provided where appropriate.
  - Aria attributes are used correctly to facilitate navigation by screen readers and assistive technology

As of the date of this Memorandum, these accessibility features have been implemented across all Nutrislice Menus websites. As such, we believe that Nutrislice web pages on sites that use the Nutrislice Menus website framework (resembling the site provided at <http://demo.nutrislice.com>) meet WCAG 2.0 AA standards and comply with federal accessibility rules.

### **Caveat**

The review and audit described above, and any resulting code, were implemented on the common templates and platform functionality used by Nutrislice across all its Nutrislice Menus websites. Any custom user content that is uploaded to our site by a customer may need to be verified independently for accessibility purposes. Common issues with accessible user content can be avoided by providing proper alternative text descriptions for non-text content, and verifying sufficient (4.5:1) contrast between any image-based text and background.

### **Contact Information**

While we believe that our sites adequately meet the accessibility guidelines provided in WCAG 2.0 (AA Standard), we are constantly making improvements to our Websites, including add accessibility improvements, and are happy to address any issues that are brought to our attention. If you have any concerns, recommendations, or questions related to the accessibility of Nutrislice websites, please contact Ben Roberts, CTO and Co-founder of Nutrislice, at [ben@nutrislice.com](mailto:ben@nutrislice.com) .

### **Attachments: Sample VPAT Assessment**

# **SAMPLE VPAT (Voluntary Product Accessibility Template) Web Content Accessibility Guidelines 2.0 level AA**

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**Nutrislice, Inc.**

**8/25/17**

# Principle 1: Perceivable – information and user interface components must be presentable to users in ways they can perceive.

Standard	Description	Apply Yes/No	Meets Yes/No	Comments (MANDATORY)
<i>Guideline 1.1 Text Alternatives: Provide text alternatives for any non-text content so that it can be changed into other forms people need, such as large print, braille, speech, symbols or simpler language.</i>				
1.1.1	<p>Non-text Content: All non-text content that is presented to the user has a text alternative that serves the equivalent purpose, except for the situations listed below (Level A).</p> <ul style="list-style-type: none"> <li>• Controls, Input: If non-text content is a control or accepts user input, then it has a name that describes its purpose. (Refer to Guideline 4.1 for additional requirements for controls and content that accepts user input.)</li> <li>• Time-Based Media: If non-text content is time-based media, then text alternatives at least provide descriptive identification of the non-text content. (Refer to Guideline 1.2 for the additional requirements for media.)</li> <li>• Test: If non-text content is a test or exercise that would be invalid if presented in text, then text alternatives at least provide descriptive identification of the non-text content.</li> <li>• Sensory: If non-text content is primarily intended to create a specific sensory experience, then text alternatives at least provide descriptive identification of the non-text content.</li> <li>• CAPTCHA: If the purpose of non-text content is to confirm that content is being accessed by a person rather than a computer, then text alternatives that identify and describe the purpose of the non-text content are provided, and alternative forms of CAPTCHA using output modes for different types of sensory perception are provided to accommodate different disabilities.</li> <li>• Decorative, Formatting, Invisible: If non-text content is pure decoration, is used only for visual formatting, or is not presented to users, then it is implemented in a way that it can be ignored by assistive technology.</li> </ul>	Yes	Yes	<p>All of the requirements to the left have been met. For example:</p> <p>Suitable alt-text captions or descriptions are made available for all non-text content (i.e., image) areas of the site, including all food images and marketing widgets.</p> <p>For custom user-provided non-text content, text description fields are provided, along with instructions, to enable admin users to provide effective alt-text descriptions when they upload content.</p>
<i>Guideline 1.2 Time-based Media: Provide alternatives for time-based media.</i>				

1.2.1	<p>Audio-only and Video-only (Prerecorded): For prerecorded audio-only and prerecorded video-only media, the following are true, except when the audio or video is a media alternative for text and is clearly labeled as such (Level A):</p> <ul style="list-style-type: none"> <li>• Prerecorded Audio-only: An alternative for time-based media is provided that presents equivalent information for prerecorded audio-only content.</li> <li>• Prerecorded Video-only: Either an alternative for time-based media or an audio track is provided that presents equivalent information for prerecorded video-only content.</li> </ul>	No	N/A	Time-based media not utilized. If district provides upload or link to time-based media, they should assure that the media meets this requirement.
1.2.2	Captions (Prerecorded): Captions are provided for all prerecorded audio content in synchronized media, except when the media is a media alternative for text and is clearly labeled as such. (Level A)	No	N/A	Time-based media not utilized. If district provides upload or link to time-based media, they should assure that the media meets this requirement.
1.2.3	Audio Description or Media Alternative (Prerecorded): An alternative for time-based media or audio description of the prerecorded video content is provided for synchronized media, except when the media is a media alternative for text and is clearly labeled as such. (Level A)	No	N/A	Time-based media not utilized
1.2.4	Captions (Live): Captions are provided for all live audio content in synchronized media. (Level AA)	No	N/A	Time-based media not utilized
1.2.5	Audio Description (Prerecorded): Audio description is provided for all prerecorded video content in synchronized media. (Level AA)	No	N/A	Time-based media not utilized
<i>Guideline 1.3 Adaptable: Create content that can be presented in different ways (for example simpler layout) without losing information or structure.</i>				
1.3.1	Info and Relationships: Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text. (Level A)	Yes	Yes	Canonical headings and HTML structure are provided. Empty headings avoided or removed.

1.3.2	Meaningful Sequence: When the sequence in which content is presented affects its meaning, a correct reading sequence can be programmatically determined. (Level A)	Yes	Yes	Content is structured in the order it is presented on the screen, proper tab-order compatible
1.3.3	Sensory Characteristics: Instructions provided for understanding and operating content do not rely solely on sensory characteristics of components such as shape, size, visual location, orientation, or sound. (Level A)	Yes	Yes	No content is dependent solely on sensory characteristics.
<i>Guideline 1.4 Distinguishable: Make it easier for users to see and hear content including separating foreground from background.</i>				
1.4.1	Use of Color: Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. (Level A)	Yes	Yes	Color is not used as sole visual means of conveying information, etc.
1.4.2	Audio Control: If any audio on a Web page plays automatically for more than 3 seconds, either a mechanism is available to pause or stop the audio, or a mechanism is available to control audio volume independently from the overall system volume level. (Level A)	Yes	Yes	No audio plays automatically.
1.4.3	Contrast (Minimum): The visual presentation of text and images of text has a contrast ratio of at least 4.5:1, except for the following: (Level AA) <ul style="list-style-type: none"> <li>• Large Text: Large-scale text and images of large-scale text have a contrast ratio of at least 3:1;</li> <li>• Incidental: Text or images of text that are part of an inactive user interface component, that are pure decoration, that are not visible to anyone, or that are part of a picture that contains significant other visual content, have no contrast requirement.</li> <li>• Logotypes: Text that is part of a logo or brand name has no minimum contrast requirement.</li> </ul>	Yes	Yes	Contrast of both fonts on the page and images that include text has been verified.
1.4.4	Resize text: Except for captions and images of text, text can be resized without assistive technology up to 200 percent without loss of content or functionality. (Level AA)	Yes	Yes	Confirmed.

1.4.5	<p>Images of Text: If the technologies being used can achieve the visual presentation, text is used to convey information rather than images of text except for the following: (Level AA)</p> <ul style="list-style-type: none"> <li>• Customizable: The image of text can be visually customized to the user's requirements;</li> <li>• Essential: A particular presentation of text is essential to the information being conveyed.</li> </ul>	Yes	Yes	<p>Generally, text is used to convey information unless the technology doesn't support it (e.g. for generic image widgets). When images containing text are provided the text is also provided in a text-based attribute.</p>
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## Principle 2: Operable - User interface components and navigation must be operable.

Standard	Description	Apply Yes/No	Meets Yes/No	Comments
<i>Guideline 2.1 Keyboard Accessible: Make all functionality available from a keyboard.</i>				
2.1.1	<p>Keyboard: All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes, except where the underlying function requires input that depends on the path of the user's movement and not just the endpoints. (Level A)</p>	Yes	Yes	<p>Keyboard navigability of all interactive elements is confirmed.</p>
2.1.2	<p>No Keyboard Trap: If keyboard focus can be moved to a component of the page using a keyboard interface, then focus can be moved away from that component using only a keyboard interface, and, if it requires more than unmodified arrow or tab keys or other standard exit methods, the user is advised of the method for moving focus away. (Level A)</p>	Yes	Yes	<p>No keyboard traps.</p>

<i>Guideline 2.2 Enough Time: Provide users enough time to read and use content.</i>				
2.2.1	<p>Timing Adjustable: For each time limit that is set by the content, at least one of the following is true: (Level A)</p> <ul style="list-style-type: none"> <li>• Turn off: The user is allowed to turn off the time limit before encountering it; or</li> <li>• Adjust: The user is allowed to adjust the time limit before encountering it over a wide range that is at least ten times the length of the default setting; or</li> <li>• Extend: The user is warned before time expires and given at least 20 seconds to extend the time limit with a simple action (for example, "press the space bar"), and the user is allowed to extend the time limit at least ten times; or</li> <li>• Real-time Exception: The time limit is a required part of a real-time event (for example, an auction), and no alternative to the time limit is possible; or</li> <li>• Essential Exception: The time limit is essential and extending it would invalidate the activity; or</li> <li>• 20 Hour Exception: The time limit is longer than 20 hours.</li> </ul>	No	N/A	No time limits are set by or on any content.
2.2.2	<p>Pause, Stop, Hide: For moving, blinking, scrolling, or auto-updating information, all of the following are true: (Level A)</p> <ul style="list-style-type: none"> <li>• Moving, blinking, scrolling: For any moving, blinking or scrolling information that (1) starts automatically, (2) lasts more than five seconds, and (3) is presented in parallel with other content, there is a mechanism for the user to pause, stop, or hide it unless the movement, blinking, or scrolling is part of an activity where it is essential; and</li> <li>• Auto-updating: For any auto-updating information that (1) starts automatically and (2) is presented in parallel with other content, there is a mechanism for the user to pause, stop, or hide it or to control the frequency of the update unless the auto-updating is part of an activity where it is essential.</li> </ul>	No	N/A	No moving, blinking, scrolling or auto-updating information is provided.
<i>Guideline 2.3 Seizures: Do not design content in a way that is known to cause seizures.</i>				
2.3.1	Three Flashes or Below Threshold: Web pages do not contain anything that flashes more than three times in any one second period, or the flash is below the general flash and red flash thresholds. (Level A)	Yes	Yes	Website contains no flashing content.
<i>Guideline 2.4 Navigable: Provide ways to help users navigate, find content, and determine where they are.</i>				
2.4.1	Bypass Blocks: A mechanism is available to bypass blocks of content that are repeated on multiple Web pages. (Level A)	Yes	Yes	Skip links are provided
2.4.2	Page Titled: Web pages have titles that describe topic or purpose. (Level A)	Yes	Yes	Titles are provided.
2.4.3	Focus Order: If a Web page can be navigated sequentially and the navigation sequences affect meaning or operation, focusable components receive focus in an order that preserves meaning and operability. (Level A)	Yes	Yes	Focus order preserves meaning and operability

2.4.4	Link Purpose (In Context): The purpose of each link can be determined from the link text alone or from the link text together with its programmatically determined link context, except where the purpose of the link would be ambiguous to users in general. (Level A)	Yes	Yes	Purpose of each link is clearly distinguishable
2.4.5	Multiple Ways: More than one way is available to locate a Web page within a set of Web pages except where the Web Page is the result of, or a step in, a process. (Level AA)	Yes	Yes	Pages can be linked to directly, navigated via buttons or menus, or by search term (Ctrl+F)
2.4.6	Headings and Labels: Headings and labels describe topic or purpose. (Level AA)	Yes	Yes	Heading and labels have been used canonically and provide topics and/or section headers of the page
2.4.7	Focus Visible: Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible. (Level AA)	Yes	YES	Visible outline, underline, color change or other distinguishably visible indicator is provided for all keyboard focusable elements

### **Principle 3: Understandable - Information and the operation of user interface must be understandable.**

Standard	Description	Apply Yes/No	Meets Yes/No	Comments
<i>Guideline 3.1 Readable: Make text content readable and understandable.</i>				
3.1.1	Language of Page: The default human language of each Web page can be programmatically determined. (Level A)	Yes	Yes	Html tag has lang attribute
3.1.2	Language of Parts: The human language of each passage or phrase in the content can be programmatically determined except for proper names, technical terms, words of indeterminate language, and words or phrases that have become part of the vernacular of the immediately surrounding text. (Level AA)	Yes	Yes	Standard, natural language, is used
<i>Guideline 3.2 Predictable: Make Web pages appear and operate in predictable ways.</i>				

3.2.1	On Focus: When any component receives focus, it does not initiate a change of context. (Level A)	Yes	Yes	Focus does not initiate change of context
3.2.2	On Input: Changing the setting of any user interface component does not automatically cause a change of context unless the user has been advised of the behavior before using the component. (Level A)	Yes	Yes	No user interface components have settings that automatically change the context of the user experience
3.2.3	Consistent Navigation: Navigational mechanisms that are repeated on multiple Web pages within a set of Web pages occur in the same relative order each time they are repeated, unless a change is initiated by the user. (Level AA)	Yes	Yes	Navigation is consistent.
3.2.4	Consistent Identification: Components that have the same functionality within a set of Web pages are identified consistently. (Level AA)	Yes	Yes	Identification is consistent. Same templates or partial templates are used from one page to another to maintain consistency.
<b><i>Guideline 3.3 Input Assistance: Help users avoid and correct mistakes.</i></b>				
3.3.1	Error Identification: If an input error is automatically detected, the item that is in error is identified and the error is described to the user in text. (Level A)	Yes	Yes	Input errors identify the items they correspond to, and errors are described to users in text.
3.3.2	Labels or Instructions: Labels or instructions are provided when content requires user input. (Level A)	Yes	Yes	Labels match inputs. Instructions are provided where labels are not sufficiently self-explanatory.

3.3.3	Error Suggestion: If an input error is automatically detected and suggestions for correction are known, then the suggestions are provided to the user, unless it would jeopardize the security or purpose of the content. (Level AA)	Yes	Yes	While this scenario doesn't currently exist, if a suggestion to correct an error was known, we provide it.
3.3.4	Error Prevention (Legal, Financial, Data): For Web pages that cause legal commitments or financial transactions for the user to occur, that modify or delete user-controllable data in data storage systems, or that submit user test responses, at least one of the following is true: (Level AA) <ul style="list-style-type: none"> <li>• Reversible: Submissions are reversible.</li> <li>• Checked: Data entered by the user is checked for input errors and the user is provided an opportunity to correct them.</li> <li>• Confirmed: A mechanism is available for reviewing, confirming, and correcting information before finalizing the submission.</li> </ul>	Yes	Yes	All inputs are checked for input errors, and where information is critical (legal or financial) confirmation is provided, with a reversible option prior to submission.

**Principle 4: Robust - Content must be robust enough that it can be interpreted reliably by a wide variety of user agents, including assistive technologies.**

Standard	Description	Apply Yes/No	Meets Yes/No	Comments
<i>Guideline 4.1 Compatible: Maximize compatibility with current and future user agents, including assistive technologies.</i>				
4.1.1	Parsing: In content implemented using markup languages, elements have complete start and end tags, elements are nested according to their specifications, elements do not contain duplicate attributes, and any IDs are unique, except where the specifications allow these features. (Level A)	Yes	Yes	Proper, canonical HTML is provided.
4.1.2	Name, Role, Value: For all user interface components (including but not limited to: form elements, links and components generated by scripts), the name and role can be programmatically determined; states, properties, and values that can be set by the user can be programmatically set; and notification of changes to these items is available to user agents, including assistive technologies. (Level A)	Yes	Yes	Role and Aria attributes are provided where useful and/or appropriate.