Responsive Design: Definition

- A responsive website responds to the user’s:
  - screen size
  - platform/browser
  - device
  - orientation

- Provides an optimal viewing experience across all devices using the same codebase and content.
Statistics

- Mobile users will exceed desktop users by 2014: *(Morgan Stanley)*
- Over 30% of Americans own a tablet computer or e-reader
- 69% of US mobile users access the internet on their phones daily
- 25% of US users access the web ONLY through their mobile device
- In the US many mobile-only users are older people and many come from lower income households
- 17% of visitors accessed Maryland.gov through their mobile devices
Myths of Mobile

- Mobile users are rushed and distracted
  
  *Mobile users can and should be as relaxed as desktop users*

- Mobile = Less
  
  *Mobile users expect to be able to do as much as desktop users*

- Complexity is a dirty word
  
  *Mobile users don’t mind complexity, as long as content is clearly presented and easy to navigate*

- Extra taps and clicks are evil
  
  *Users are happy to click more if the clicks are meaningful and logical*

- The mobile web is different from the desktop web
  
  *There is no difference. We need to make the web accessible from all devices.*
Best Practices

- **Start Small (Mobile First)**
  
  *Mobile first does not mean mobile only!*

- **Content Audit**
  
  *Responsive design should be driven by the website content*

- **Make It Modular**
  
  *Dividing up content will make RWD easier to implement*

- **Exit Photoshop, Enter Browser**
  
  *The sooner the site can be viewed in a browser, the better*

- **Test Always**
  
  *In different browsers, monitors and devices*
How is Responsive Web Design Achieved?

- **Adaptive layout** - intelligent use of CSS media queries to modify the layout in ways that suit different screen sizes.

- **Fluid grids and layouts** - uses relative units like percentages instead of fixed-width units like pixels.

- **Flexible media/images** - images and other media (like videos) are scaled using relative units so they don’t expand beyond their containing element.
How is Responsive Web Design Achieved?

- Media Queries

- Combines a **media type** and a **condition** to specify how web content will appear on a particular device.

- Conditions such as min-width, max-width, device-width and orientation control how content is displayed differently.

- For example, **max-width** sets a maximum browser width that a certain set of styles would apply to.
State Agency Template

- The template was built using the Twitter Bootstrap framework.

  Bootstrap, from Twitter
  Simple and flexible HTML, CSS, and Javascript for popular user interface components and interactions.

- The framework includes **grids**, **layouts** and **media queries**

- Template is ready for design and markup
State Agency Template

- Be aware of areas that have the greatest potential to break the responsiveness of the templates:
  - Fixed-width images and other media
  - Tables
  - Fixed-width columns
State Agency Template – Images

- Image height and width are not declared in the code.
- The CSS resizes the images as needed.
- Set maximum width of image to 100% of the browser width – image will size with browser.
**State Agency Template - Tables**

http://css-tricks.com/examples/ResponsiveTables/responsive.php
State Agency Template – Content

- Content will re-format itself

- Elements DROP left to right – what’s on the RIGHT in desktop will be at the BOTTOM on mobile.
State Agency Template - Content

- Making every piece of content from a large screen available on a smaller screen or mobile device may not always be the best answer.

- Hiding elements for mobile devices may be a good solution, allowing for simpler navigation and more focused content.
Conclusion

- Responsive Web Design is not only about adjustable screen resolutions and automatically resizable images, but rather about a whole new way of thinking about design.

- The goal is to provide a consistent user experience across sizes and devices.

- A responsive site should be more cost-effective than separate device-specific sites because code, assets, and process are shared and reused.
Additional Resources

- Smashing Magazine: *Responsive Web Design: What It Is and How To Use It*  

- CSS Tricks: *Media Queries for Standard Devices*  

- 1st Web Designer: *A Brief Overview of Responsive Design*  
  [http://www.1stwebdesigner.com/design/responsive-design-overview/](http://www.1stwebdesigner.com/design/responsive-design-overview/)

- Responsive Web Design: *A Visual Guide*  