National Oceanic and Atmospheric Administration

Site Profile Template Guide

2023

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LAKE SUPERIOR
NATIONAL ESTUARINE RESEARCH RESERVE

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Forward

The **2023 Site Profile Template** is a "How To Guide" for generating a user friendly, interactive, and web-based version of the National Estuarine Research Reserve (NERR) Site Profile.

The purpose of the site profile is to understand the existing state of each Reserve with respect to research, monitoring activities, environmental health, and gaps in knowledge, that should be supported, enhanced or addressed in the future.

While these goals are easier to state, adequately and concisely representing the breadth of activities, the amount of work visualizing, preparing, and executing Reserve related projects, and quantifying Reserve staff expertise, is difficult to convey in traditional paper versions or pdfs.

Therefore the intent of this Site Profile Template is to present Reserve related materials in a web-based format that is interactive, and engages the audience.

The incorporation of interactive components such as enhanced navigation, story maps, embedded web-map applications, and an interactive timeline for the chapter on community and historical ecology, are essential to the flow and usability of the Template.

Each of these components can be customized in the Template's code to provide a user experience unique to each Reserve in the NERR system.

This document is meant to help Reserve staff incorporate lessons learned by the He'eia and Lake Superior Reserves during our efforts to create a digital Site Profile. Site profile themes can be custom tailored to Reserve characteristics and styled to present relevant reserve related information in an interactive, online format.

While there is a long history of sharing Site Profile documents with researchers, resource managers, academia, and the general public, it can be difficult to tailor these materials to all audiences. The various groups interested in the history of the Reserve, its resources, and its ongoing research initiatives provides for a diverse audience that may be difficult to engage.   It is our hope that this new Template accomplishes this by using interactive design elements such as online maps, rich timelines, and ample navigation options so that multiple layers of information and data can be presented in one space to multiple audiences.

In addition, we hope the Template design:

- Provides a guide that makes the development of a web-based, interactive Site Profile easy to develop for all Reserves even if they do not posses web development staff;

- Provides a format that is easy to replicate across all Reserves within the NERR system;

- Allows for adaptability and more frequent updates compared to a published pdf;

- Leverages existing investments in GIS technologies;

- Provides interactive components encouraging discovery of Reserve research areas, monitoring sites, habitat, history, etc.;

- Allows for easy customization by each Reserve through the use of icons, logos, images, and colors; and

- Illustrates the cultural identity, the history of resource management, and the research activities undertaken throughout the history of each Reserve.

Acknowledgement:

QUICK START GUIDE

Quick Start Guide

Step 1

Open the project folder in your code editor; you should see all of the available files in the folder including:

- **index.html**
- **Chapter1.html**;
- **Chapter2.html**;
- **Chapter3.html**; and
- **stylesheet.css**

What is a code editor? How do I get one? See <u>page 21</u>

Step 2

Load the first .html file (**index.html**) into your browser window by right clicking on the file, selecting "Open With," and choosing a browser. The file launches in the browser but does not represent an active website. Instead it provides a convenient visual of the page that will update as you change the code.

index.html represents the landing page for the Reserve and is used to highlight major projects, interactive maps, and mapping applications.

- Note: Template viewing and Template code edits occur in separate places.

Step 3

Open the same .html file (**index.html**) in your code editor (e.g.; Visual Studio Code).

- What is an html file? See <u>page 26</u>

Step 4

Open the **stylesheet.css** file in the code editor as well.

- What is a css file? See <u>page 29</u>

Step 5

In **stylesheet.css** find the Comment that says "**stop here to personalize the Template for your Reserve**"

- What is a comment? What do they look like? See <u>page 28</u>

Quick Start Guide

Step 6

After the commented area **"stop here to personalize the Template for your Reserve"** You will see additional elements for "main color," "secondary," "accent1," and "accent 2." You can change the hex codes for these elements to hex codes appropriate for your Reserve - we suggest using an accent color in your Reserve logo.

- Which colors do I use? How do I find hex codes for colors in my logo? See page 43

Step 7

Save the changes made in the .css file. Then head to the **index.html** file in the browser window and refresh it. You should see the updated color changes reflected in the browser.

- **Note:** changes made to the main color, secondary, or accent color in **stylesheet.css** will be reflected across all of the pages in the Template.

Step 8

Go to the **index.html** file in your code editor - look for comments that say **"stop here to change…."** and edit content as needed (including, words, images, logos and external links).

Step 9

Save the changes made to **index.html**, then head to the browser and refresh it. You should see the words, logos, and images updated.

- How do I get images and logos into the file to be connected to **index.html**? See page 17

Step 10

Repeat the process for each html page you plan to use. As there is only one .css file you will not need to make css updates specific to each page - they should be visible in every page now.

GETTING STARTED

Getting Started

Let's clear the air, getting going with the new Site Profile Template may seem overwhelming. You've either never compiled one, or you've already done this exercise in a pdf, word document, or paper format. The assurance I will give you is that by doing it in the new Template you will create less work for yourself in the future. To say it better, the initial investment is well worth the future returns of saved staff time and the leveraging of previous technical investments.

The interactive Template is designed to use readily available and free resources on the internet for its generation and maintenance. The primary code behind the template is HTML and CSS, which is used with JavaScript to give the template its look, feel, and interactive components.

Also, the term "Template" will soon become synonymous with "Website," and as you change the components of the Template you will be changing the components of the website containing your Site Profile.

In the accompanying pages we will discuss the elements included in the Template, how to update them with Reserve specific content, and how to leverage existing investments in GIS technologies like ArcGIS Online and the NOAA GeoData Platform to add interactive maps to the Template.

Image credit: Keli'i Kotubetey

The pages of this guide focus on:

- Folder content, data structure, and online collaboration;

- Approaches to coding, including how to use a code editor, and the important elements of HTML, CSS, and JavaScript ;

- Imagery formats and naming conventions; and

- Template elements

Additional pages discuss the code behind the Template itself and give guidance on how to create, edit and update the site profile in the future.

Content & Collaboration

Creating a "Collaboration Area"

Generating the Site Profile begins with organizing your resources. You will first need a folder structure for collaborative writing and content development.

During this Site Profile project, the Heʻeia and Lake Superior Reserves each set up a Google Drive directory for team collaboration. The directory was divided into folders for each of the 6 chapters included in the outline:

1. Reserve Introduction
2. Community / Historical Ecology
3. Estuary Characterization
4. Research and Monitoring
5. State of Knowledge
6. Learning Extensions

Each of these folders contain files specific to that chapter, including a working Google Doc for written content, image files for potential use, and additional resources such as maps, pdfs, and relevant research papers. A final draft can be created for information needing to go into the Site Profile Website.
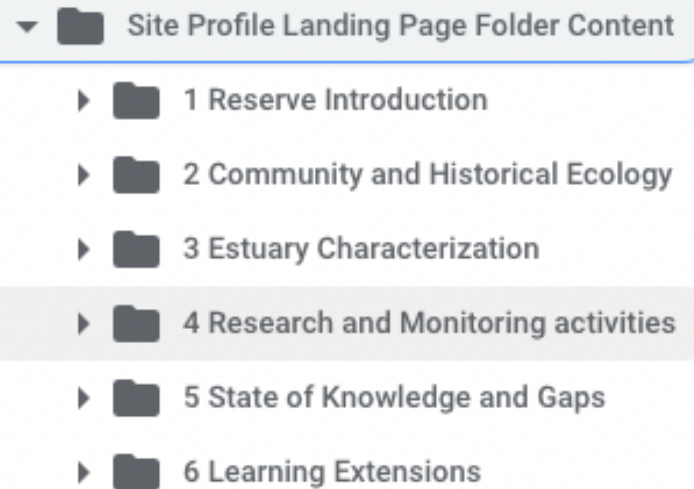

Image of a Collaboration Area folder setup

Creating a "Staging Area"
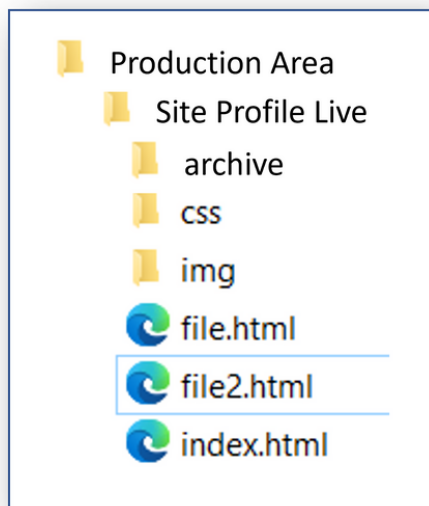
In addition to the Collaboration area, you will need a separate folder structure for your draft html code, images, and CSS elements. This is called the "Staging Area" and it is contained within the Collaboration Area. The Staging Areas is a separate set of folders that hold the draft code intended for the live website but it is not the live site. The folder structure would look like this:
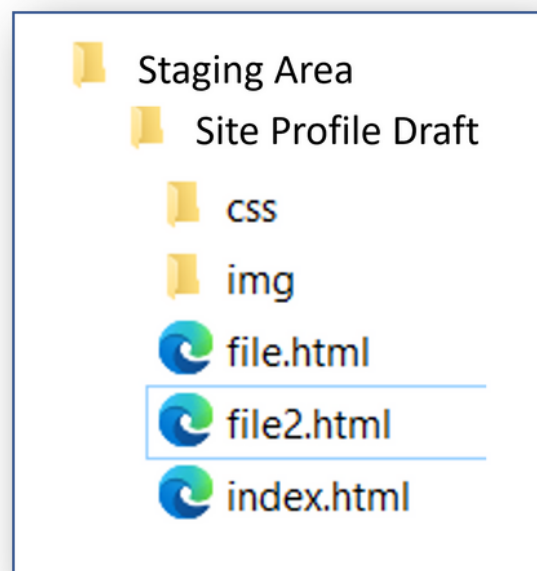
Staging vs. Production Areas

An additional component to the Collaboration and Staging Areas is determining what items will go live or public?

In a typical website build environment you would have a minimum of two code locations; one for staging or development where draft code can be proposed and reviewed, and a second for production materials that are live on the website. The Production Area is identical to the Staging Area's folder structure with the addition of an "**archive**" folder.


```
📁 Production Area
   📁 Site Profile Live
      📁 archive
      📁 css
      📁 img
      🌐 file.html
      🌐 file2.html
      🌐 index.html
```

The archive folder is used to house previous version of the website code that can be reverted to if necessary. When thinking about the utilization of the Staging and Production areas adhering to the following rules governing these two locations will save time and heartache in the future.

Staging Area
- Used for drafts, proposed edits, and code review.

- Can be accessed and changed by the whole project team.

- A copy of the current production code (all images, .css, and .html documents) will be stored here.

Production Area
- Represent what is live on the Site Profile / Website and is visible to the public. **SO BE CAREFUL!**

- Folders should have a dedicated steward who is the **only** person responsible for editing.

- When code is to be updated, a copy of the code to be taken down is moved to the archive folder prior to any updates.

- Archived versions of the code should be dated and stored, along with notes on subsequent changes to the code. If an issue occurs you can always load a previous working version of the code from the archive folder.

Examining the Website Folder Structure

The Production Area can also be referred to as the Live Website. The code governing the website is divided into distinct parts to help with loading speed, resource maintenance (images, pdfs, etc.), and versioning control. It is standard practice to divide .html, .css, and image files into separate areas of the main folder structure. The .html files remain one level above the css and image folders.

In the "Site Profile Template" package you received, you will see the following folders and .html files:
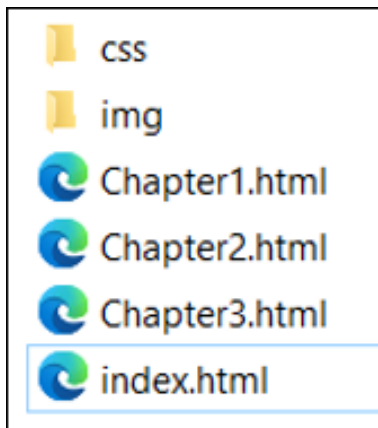
css - contains stylesheets / documents dictating the look and feel of the website

img - contains images

.html files uses css styles and images to tell the computer what is visible on the website

Note: The standard shortening of the image folder in the coding world is "img."

Four .html documents are provided to you, along with one .css stylesheet. The img folder will be empty except for a few icons and a sample Reserve logo to start, and you will update this folder with your Reserve specific images.

Although the .html documents are located one level up in the folder tree structure from the images and css file, these files are linked in the .html code and do not represent independent items. It is important to realize how these elements are connected, especially for hosting considerations, as they will have to remain together in your staging and production areas, and they will need to be uploaded together to your web hosting platform when you want the site to go live.

How files are connected

.html files reference a .css stylesheet and images using supplied paths to those files in the code. If the .css or image file is located in a folder, the folder will need to be referenced in the path. In the first lines of any .html file you will see a link to the stylesheet (the .css document). In the code block below, line 8 reads

<link rel="stylesheet" href="css.stylesheet.css">

Note: Colors are used by code editors to distinguish element tags, file paths, comments, etc., from each other.

This line of code tells the .html file that the css folder contains a document named "stylesheet.css" which governs the font, color, etc. of elements on the .html document and subsequently on the webpage. As long as each of the four provided .html documents has this link, all of them will have the same appearance and css style elements.

```
1    <!DOCTYPE html>
2    <html lang="en">
3
4    <head>
5      <title>He'eia Estuary Characterization</title>
6      <meta charset="UTF-8">
7      <meta name="viewport" content="width=device-width, initial-scale=1">
8      <link rel="stylesheet" href="css/stylesheet.css">
```

Linking an Image

Similar to the stylesheet, images will be referenced in the same format. Instead of rel= you will have the source or "src" pointing to the img folder. For example, you would link to an image by setting the "src" to the route folder and then adding the image name: src="img/imagename.png"

Images also have an "alt" or alternate text attribute that is used by screen readers. The alt information should be filled out to ensure compliance with accessibility guidelines. Example .html code calling the He'eia Reserve logo from the image folder, and giving it the alternative text "He'eia NERR Logo":

```
<img src="img/heeia_logo_footer.png" alt="He'eia NERR Logo"
```

Types of Pages

The template folder you received includes three types of .html pages and one .css styling sheet. The .html pages are:

1. A Reserve landing page;
2. A general chapter setup page; and
3. A page specific to chapter 2 incorporating an interactive timeline

A blank version of these pages is included in the Template folder and the stylistic elements (color, font, logo) are modeled after the Lake Superior Reserve. Lorem Ipsum content (filler words) populates the sections on each page and is used as a placeholder until you add custom language.

The Landing Page

The landing page is named **index.html** and is intended to highlight the interactive components of the Site Profile. It is intended to be simple in design with direct links to the interactive maps, applications, and the timeline that are incorporated throughout the site profile. This page has multiple navigation elements to facilitate fast movement to your Reserve's key monitoring projects or initiatives.

General Chapter Pages

Chapters 1, 3, 4, 5 and 6 fall into this category and are comprised of alternating text and images, with the occasional, picture gallery, interactive map or application added in for context. In the folder of files you received the General Chapter pages are named **Chapter1.html** and **Chapter3.html**. These pages can be duplicated for chapters 4-6.

The Timeline Page - **Chapter2.html**

This page is specific to Chapter 2 and includes an interactive timeline highlighting key dates and elements in Reserve history. The other components on the page are identical to those used in the General Chapter pages.

Stylesheet.css

In addition to the .html pages, the template folder contains a styling document called **stylesheet.css**. This file controls the stylistic elements of the template.

A change made to this file regarding font size, background color, etc., will be replicated across all template pages.

Image Format & Naming Conventions

Image Format

Industry standards suggest the following when using images on a website:

Pixel width: full-screen background images, between 1500 - 2500 pixels wide, and for most other images a max-width of 800 pixels. These parameters ensure proper loading on computers and mobile screens.

Image size: The best overall (pixel) size of your images depends on your use case, e.g., background images versus insert.

File size: Some standards recommend no more than 200 KB, but anything bigger than 20 MB in size can impact website speed.

Image attribute: Image attributes (alt text or alt tag) are text-based and don't really impact website performance. They're used for the visually impaired via screen-reader software, and should be short and concise.

Given these image size considerations, something that can be done ahead of time to reduce the file size of you image is to optimize the image.

Image Optimization

With today's technology, when a photo is taken with a smart phone or modern camera, additional information is attached to the photo, such as a time stamp, the date, location information such as coordinates, and more. This additional information adds size to the file and can slow down the rendering of these images in a website. Furthermore, this information is often not presented to the viewer making it unnecessary for the purpose the image is fulfilling.

Unneeded ancillary information can be removed from an image with a free image optimization software like ImageOptim (https://imageoptim.com), which will scrub this data from the file and reduce the image's overall size.

It is recommended that you perform this step for all images you intend to add to the website.

Image Naming Conventions

The easiest way to work with imagery is to use naming conventions and formatting guidelines that will not only make images load faster, but will also make it easier to find image names in the code, and facilitate easier update and replacement of images.

For the purpose of navigation and finding images for future updates, replacements or removals, images should be named with the following convention:

- **Chapter #:** the chapter in the Template where the image is located; it should precede the image name (e.g., chapter1Watershed, chapter2History, etc.);

- **Section Location** - specific section or heading in the chapter where the image is found (e.g., Restoration)

- **Photo Name**: the unique name of the photo (e.g., FieldWork)

- **CamelCase:** CamelCase is a coding standard where the first letter of each word in a file name is capitalized and the spaces are removed. This helps in the active cataloging of images in the code and file folder structure, making it easier to find specific images.

- **No Spaces:** Spaces in an image name can cause the image to not show up at all on the website.

Using these guidelines, a photo located in the Chapter 2: "Community and Historical Ecology," in the Restoration and Remediation Efforts section, and labeled Field Work, could be named...
 "chapter2RestorationFieldWork.png"
Using this approach will also reduce the number of folders in your Google Drive folder structure, as you will not need separated folders for Chapter 1, Chapter2, etc.

Code Editors & HTML

Using a Code Editor

To begin working with the code behind the Template, you need to install a code editor. There are a variety of free code editors or editing software available. You should check with your agency's IT Department for download restrictions and/or preferred software. Your organization may already have purchased software and licenses available for use.

Code editing software makes it easier to not only work with your code, but also provides guides such as color coding, error detection, and links to online help resources. For the purpose of this document we refer to the use of "Visual Studio Code," a free code editing software, however the same principles may be applied to other coding software.

This document will go into specific coding elements later on, but for now the image below is meant to illustrate one of the benefits derived from code editing software.

You can see from the code example in the image below, that the various coding elements are represented in unique colors in an effort to make them more readable to the user. Color is used to designate instructions, text, commands, and whether the code is something you will see on the screen or not. In the example, **green text** illustrates instructions that are not related to something on the screen, while **blue** represents tags for the various elements added to the screen, and **orange** is a stylistic declaration. These differences are discussed later in more detail (page 28).

```
4    <meta charset="UTF-8">
5    <meta name="viewport" content="width=device-width, initial-scale=1">
6    <link rel="stylesheet" href="css/stylesheet.css">
7    <link rel="icon" href="https://heeianerr.org/wp-content/uploads/2019/04/NERRS_favicon-
8
9    <body>
10
11   <!-- Navbar (sits on top) -->
12   <div class="w3-top">
13     <!---This next line is for the little strip of color at the very top of the page.
14     |   It is supposed to pick up a color or shade in the reserve logo-->
15     <div style="height: 20px; background-color: #e0ebcc;"></div>
16     <!--- This is where the Site Specific NERR LOGO goes after the "img" tag
17     |   |   We are no longer using the NOAA logo  at the top of the page and instead it i
18     |   |   along with the logos of partnering agencies/groups.--->
19       <div class="w3-bar w3-white w3-wide w3-padding w3-card">
20         <img src="img/heeia_logo_footer.png" alt="He'eia NERR Logo" width="150" height="
```

W3Schools

W3Schools is a free web developer site that allows users to experiment with code, download website templates, and test their code in a hosted environment.

Use this **link** to try out a free, hosted code editor on W3Schools. A screenshot of the example page is provide below, with the left side of the screen showing entered code, and the right side providing a view of how the code would be rendered on a website.

This is a good place for staff unfamiliar with coding to being changing text, experimenting with tags or code, and getting it to display on a website (the right pane).

To start, go to the W3Schools link and try changing the text inside the **<title>**, **<h1>**, and **<p>** tags in the left-side portion of the page. Click "Run" and notice how the content changes on the right side of the page.

Pay attention to the way the font size, boldness and other characteristics of the text changes.

You can also experiment with adding in any of the element tags listed on page 22.

```
<!DOCTYPE html>
<html>
<head>
<title>Page Title</title>
</head>
<body>

<h1>This is a Heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```
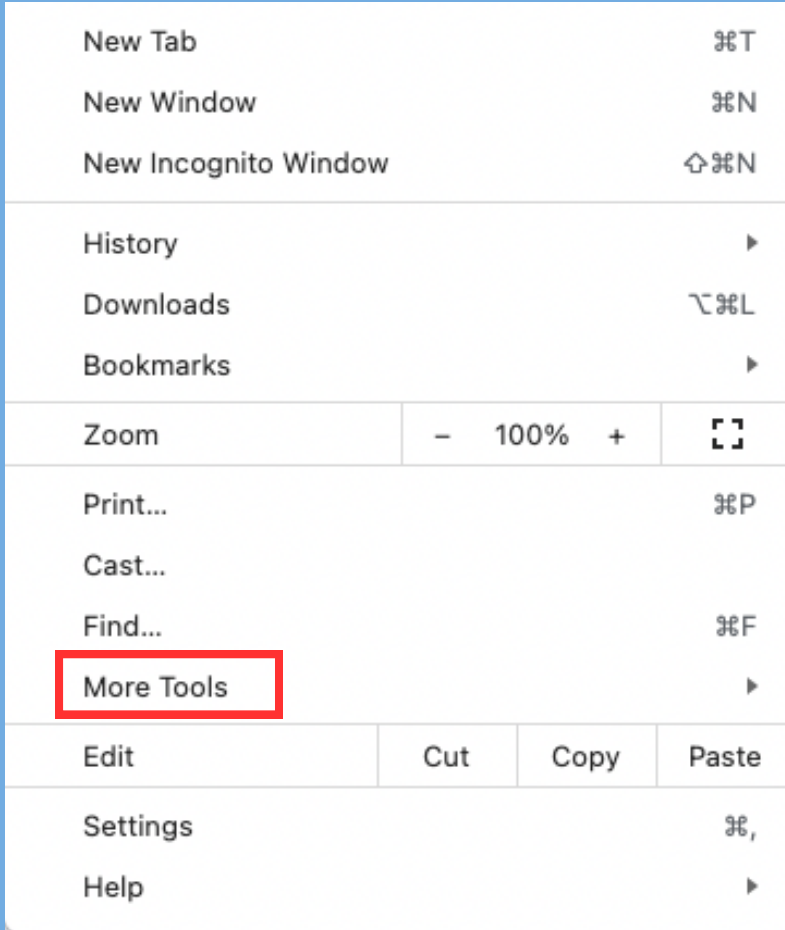
This is a Heading

This is a paragraph.

Example of using a code editing environment on the W3 Schools website

Google Developer Tools

Another useful tool when starting out is to open the blank template in google chrome, click the icon in the top right corner showing three dots,
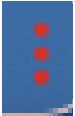
select **"More Tools,"** then select **"Developer Tools"** to open a side window that allows you to inspect and interact with template elements. In this window you can see the precise code for each part of the site side by side - this will help you to find out which part of the html/css to alter to get any changes you want.

New Tab	⌘T
New Window	⌘N
New Incognito Window	⇧⌘N
History	▶
Downloads	⌥⌘L
Bookmarks	▶
Zoom	− 100% + ⛶
Print...	⌘P
Cast...	
Find...	⌘F
More Tools	▶
Edit	Cut	Copy	Paste
Settings	⌘,
Help	▶

Save Page As...	⌘S	More Tools
Create Shortcut...		Edit
Name Window...		
		Settings
Clear Browsing Data...	⇧⌘⌫	Help
Extensions		
Task Manager		
Developer Tools	⌥⌘I	
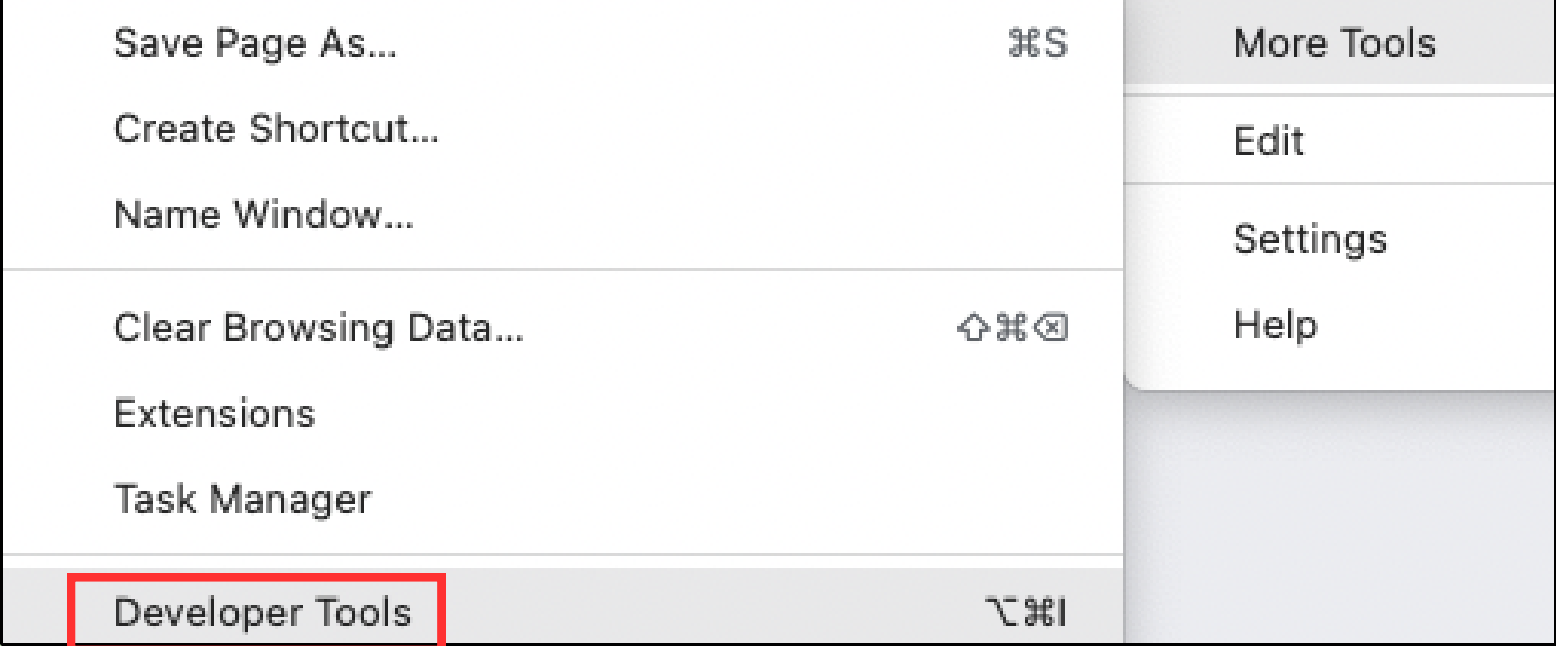
THE TEMPLATE

CODE

The Template Code

Core Components

It is important to think of the Site Profile Template as the sum of several parts. These parts work in conjunction to display the data, images, maps, and information you want presented online. These parts usually live in separate folders and will include, but do not have to be limited to, HTML code, Cascading Style Sheets (css), JavaScript (js), and images. In addition, you may have separate folders for archiving older code components or for pdf files of the template generated for review and markup.

The **index.html** file serves as your starting point and when you want to view the Site Profile Template it serves as a local document that can be viewed over an internet browser without being served to the public.

Possible folder structure

The Site Profile Template package you received contains four .html files and one .css file:

- **index.html;**
- **chapter1.html**;
- **chapter2.html**;
- **chapter3.html**; and
- **stylesheet.css**

These documents represent a blank slate for your site profile, and are the core elements of the Reserve landing page and the first three chapters: Site Overview, Community and Historical Ecology, and Estuary Characterization. Each of these documents have unique structures although they all possess similar elements that can be moved from one chapter to another.

- **index.html** - this is the landing page for each Reserve, intended to have heavy navigation elements and to highlight interactive components such as maps, web applications, and the timeline in chapter 2.
- **chapter1.html** - specific to chapter one containing text on reserve characteristics and a habitat map.
- **chapter2.html** - contains an optional timeline element that can be removed if needed.
- **chapter3.html** - similar format to chapter1.html.

Core Components: HTML

HTML stands for Hyper Text Markup Language and is the standard markup language for creating online content. HTML is the building block of the Template and is used to call the other folders discussed previously. The separation of HTML from the components like CSS and JS, makes it easier to maintain sites, share style sheets across pages, and tailor pages to different environments. Managing the online site profile will be easier with this practice and can allow for reduced code on each HTML page.

HTML is a way to organize what you want to share and incorporate stylistic elements defined in your CSS. One way to think of it is that HTML contains a variety of "tags" which are designations for common elements like paragraphs, images, or hyperlinks.

The tag tells the webpage what type of information is contained within it, and each tag has an "open" and a "close" component that is needed to tell the computer where the particular element begins and ends.

Tags are often rendered blue in code editing software to make them easier to distinguish from other code types. Tags come in pairs, with the specific type of tag enclosed in brackets **<>**. The opening tag usually differs from the closing tag by the addition of "**/**" in the closing tag. The format will be:

1. Opening tag **<>** with the type of tag contained inside these brackets; for example a paragraph is denoted by the letter p so the opening tag would be **<p>;**
2. Closing Tags **</>** have a **"/"** prior to the tag designation, so for our paragraph example it would be **</p>**; and
3. Content: the text for the actual paragraph goes between the opening **<p>** and closing tag **</p>**

Example:
<p> Welcome to the National Estuarine Research Reserve Site Profile Template **</p>**

The tags are then styled to look a certain way (font, size, color, borders, etc.) using a cascading style sheet or CSS.

Important HTML tags to know:

- **head** - contains title for the page, scale and character set, links to css and js, sometimes links to online style sheets

- **div** - defines a division or a section in an HTML document

- **nav** - main navigation menu

- **main** - main content for the page

- **body** - main section for content for the page

- **footer** - at end of every page, contains partner org info, logos, and acknowledgements

- **aside** - sidebar or menu on the side of the page

- **class** - gives a name to a group of items, can be used to add style

- **id** - gives a name to a specific item, can be used to add style or "jump to" spots

- **p** - paragraph

- **a href** - denotes a hyperlink or connection to an outside resource (like a pdf or url), href="" you input the url between the ""

- **h3** - h denotes a heading and the number with it denotes size and other heading characteristics (styled in css)

- **li** - list items

- **ol** - denotes the beginning of an ordered list (numbered)

- **ul** - denotes the beginning of a unordered list (bullets)

- **section** - denotes the beginning of a new section which may have different style parameters

- **br** - line break

- **iframe** - specifies an inline frame used to embed another document such as a map

An html document in its simplest form will look like this...

```
<!DOCTYPE html>
<html>
    <head>
    </head>
    <body>
    </body>
</html>
```

<!DOCTYPE html> goes at the top of every HTML page and indicates that it is written for HTML5, and the **<html>** tags tell your browser that the content is HTML.

The **<head>** tag contains the title for the page and other metadata about the page, while the **<body>** is where you add the code and the rest of the content that will appear when your Site Profile Template is live.

There are many web tutorials available to help you experiment with and learn more about HTML documents and the tags in them. We recommend using the resources provided by W3Schools as they are free and mimic the way the Site Profile Template was built.

In addition to tags, comments are used in coding languages to assist you as you move through the code. Comments often appear green in code and give information to the reader that is of an instructive nature and does not appear on the website. Comments should not be removed, as they provide a roadmap for completing the Site Profile. We have left comments throughout the html code indicating what elements are expected in each section. This practice of of including notes, directions, etc., is referred to as "commenting out."

These notes / instructions are always bracketed by these symbols **<!---** & **--->.**

Example instructions:
<!--- The line of code below is where you insert a link to the image for your Reserve Logo --->

Note: Forgetting to include the closing symbol **--->** will results in all code being considered a comment until the bracket is closed. This is true for all tags and until a tag is closed, all information following an opening tag will take on its properties. For example, everything following **<head>** will be considered as part of the **<head>** tag until it is closed with **</head>**.

Additional code elements you will see will be references to file or stylistic elements that can be added into the html. These elements will appear in orange text. For example, the image below shows a link to the stylesheet file name stylesheet.css. The tag is blue but the file reference is orange.

```
<link rel="stylesheet" href="css/stylesheet.css">
```

Core Components: CSS

A cascading style sheet (CSS) is used to style a webpage, including layout and fonts. In other words, without CSS the internet would look like plain writing; one size, one font, no colors going from the top of the page straight down to the bottom. Not only would this be boring, but it would be hard to get across the most important information, keep readers interested, and effectively share information.

One benefit of using a stylesheet over inline style (in the html) is that you can apply stylistic features across all pages of a website this way.

In the Site Profile Template we use CSS style elements from the W3Schools online education platform.

W3Schools is a free code learning platform that will perpetually be available to your Reserve staff and represents a cost effective, widely used, learning platform for webpage development. W3Schools provides a wealth of tutorials and coding resources that can aid future site template development. As a result, you will see lots of elements within the css with a w3 - in the beginning.

In your **index.html** file, you need to list the CSS and JavaScript files associated with the HTML to build your page.

There is one css file included in the site profile template:

stylesheet.css - this file is specific to the stylistic elements of the template.

In the css file we have left helpful notes / instructions, however a css file has slightly different symbols to designate a comment. These comments are often light green in color and always begin and end with these symbols **/*** & ***/**

Example instructions:
	/*Notes on Styling*/

Note: The majority of the changes you will make to the Site Profile Template will be done in the html code rather than in the css.

Important CSS terms:

- <style> - inline style

- text - text color

- background - color or image

- font - text fonts

- height and width - important for managing images, etc.

- stylesheet - how to link css in html header

- @media - makes websites responsive so that they can be viewed on different sized screens

In CSS different open and close tags are used. Often, they look like this:

```
    h3 { open tag and details about the h3
        style here with ; semicolons;
          between and then end with
      }
```

Several more examples of css styling are included in the image to the right.

```css
.half-width{
  width: 47.9%;
  border: solid #3e9ebc 4px;
  border-radius: 15px;
  padding: 0px;
  margin: 40px 10px 10px 10px;
  display:flex;
  justify-content: stretch;
  align-items: stretch;
  flex-wrap: wrap;
}

.full-width{
  display: flex;
  flex-flow: row wrap;
  width: 100%;
  border: solid #3e9ebc 4px;
  border-radius: 15px;
  padding: 10px;
  margin: 10px;
}

.small-width{
  width: 100%;
  border: solid #ffffff 4px;
  padding: 10px;
  display:flex;
  justify-content: center;
  align-items: center;
  font-size: 0.5em;
  flex-wrap: wrap;
  background:#0091CD;
}
```

Core Components: JavaScript

JavaScript (JS) is one of many coding languages that can be used to add animation, questions, and more interactive information to a website. It is a bit more complex than HTML and CSS.

Javascript files are linked in the header of the HTML file and usually add details like an image gallery or the movement of an arrow they are labelled as "scripts". Scripts use boolean math to cycle through possibilities and come to a solution based on an action the user takes.

We have limited the Template's use of JavaScript, depending primarily on using HTML and CSS in an effort to keep the Template easy to understand by non-coders, without sacrificing the usability and intent of the Template. You will likely not need to edit any JavaScript. However, anywhere in the html you see <script>, that is inline JavaScript, and when there are attached files in a head that end in .js you will now know that those are also JavaScript.

Editing Template Pages

The template pages are similar in many regards. Each page is branded with:

1. a Reserve logo;
2. the Reserve name;
3. a color pallet derived from subtle or ancillary colors in the Reserve logo;
4. a main navigation bar located at the top of the page (under the logo and Reserve title); and
5. a secondary navigation pane on the right-hand side of the page.

1 **2**

He'eia National Estuarine Research Reserve Site Profile

Home | Reserve Introduction | Community/Historical Ecology | Estuary Characterization | Research and Monitoring | State of Knowledge | Learning Extensions

4

Administrative Overview

I. Mission, Site Description, Inclusive of Human Dimensions, & Lead Agency Info

Mission

To practice and promote stewardship through Native Hawaiian philosophies and values. Our efforts are supported by Indigenous knowledge, innovative research, education, and training that nourishes healthy and resilient ecosystems, economies, and communities.

Vision

The ahupua'a concept is a global example of a thriving and resilient social-ecological community. The biocultural integrity of the ahupua'a of He'eia is restored to a state of 'āina momona and is a legacy for future generations.

'ĀINA MOMONA - A Song Written by 'Ānuenue Punua/Music, with video here composed and performed by Kāwika Kahiapo at the Paepae o He'eia 10th anniversary fundraiser

Chapter 1: Reserve Introduction

This section covers administrative information, an introduction to the Reserve and an overview of the Estuary.

You will find report summaries below as well as:

An Overview of Reserve Research Priorities

An Interactive Reserve Habitat Map

Additional Resources

Glossary of Hawaiian Words

He'eia Management Plan

Bibliography

Data HUB Link

Additional Management Plan/Documents

Uka (uplands)

Lepo pohō (marsh)

Wai/Kai (stream/ocean)

5

3 Green color

The Landing Page

The landing page is intended to have images and links of the Reserve's major project areas for easy navigation. The code uses **\<a\>** tags to provide urls to the other Template pages where more information on the projects reside. These urls are attached to images making it so that clicking on the image will take the user to the other pages.

Investigate research and sampling stations within He'eia NERR using an interactive mapping application.
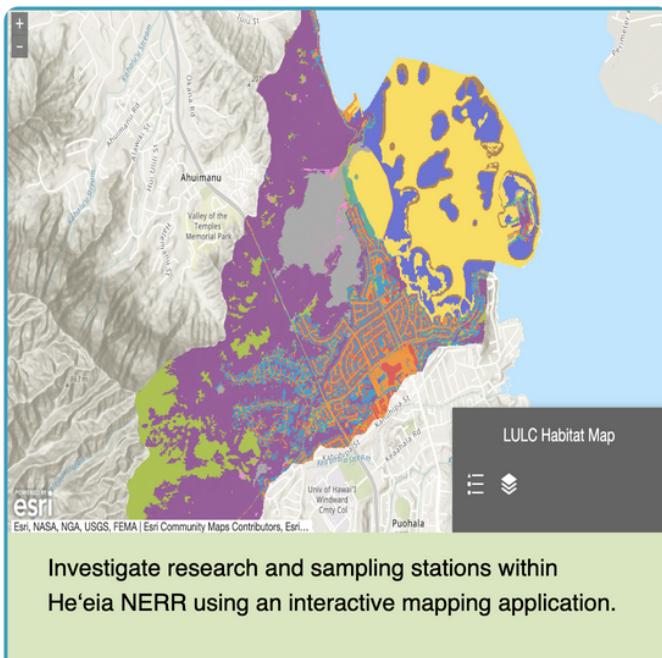
The code specific to setting up an image with a url is provided below and demonstrates the various tags involved in the html.

```html
<div class="half-width">
  <div>
    <a href="reserve-introduction.html#ehabs"><img src="img/monitoring-station-map.png"
      alt="Image of the Monitoring Stations Interactive Map"></a>
  </div>
  <div class="home-label">
    <p style="padding-top:10px; padding-left: 25px; padding-right: 25px;">
    Investigate research and sampling stations within He'eia NERR using an interactive mapping application.
    </p>
  </div>
</div>
```

Chapters 1 and 3

chapter1.html and chapter3.html have a similar look and feel. These chapters alternate between a one column section that spans the entire page…

and a two column section that usually pairs text and an image…

Alternating between these styles provides the Template important pauses or breaks for the reader.

The key to these types of sections is understanding the use of the div tag.

- The **\<div\>** tag defines a division or a section in an HTML document.

- The **\<div\>** tag is used as a container for HTML elements

- The **\<div\>** tag can be styled in the css using the class or id attribute.

- Any sort of content can be put inside the **\<div\>** tag can hold any type of content including text, images, links, etc.

This graphic shows an example of how divisions might look on a website prior to adding content. The div tag is used to separate the page into areas of content and should be used to organize your website.
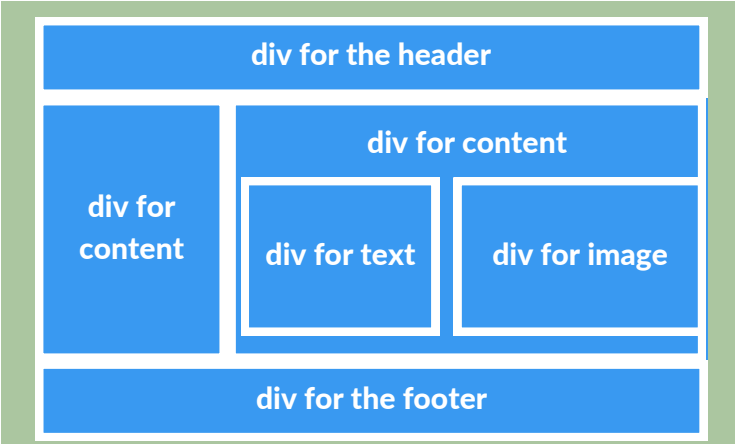
The Interactive Timeline: Chapter 2

The interactive timeline is unique to chapter 2 and is comprised of a **\<div\>** containing multiple **\<p\>** elements for key dates or images included in that section. The **\<p\>** tag is styled to have a colorful line preceding the associated text, in order to change these colors just use the find function in the CSS file to search for the "class" listed and edit it once there. This will then change all tags throughout the timeline that have the same class.

To change timeline content you will add text, images and documents inside the **\<p\>** tag.

The timeline when finished will look like the following image, and you will change the images, header, text and media associated with each section.
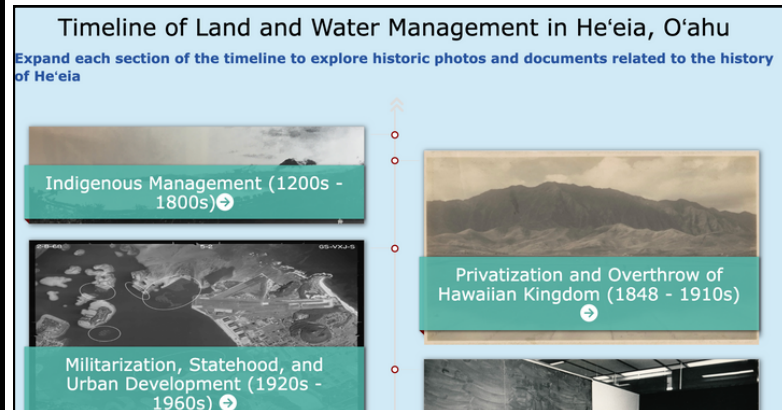
Each of the sections (Indigenous Management, Privatization, and Militarization) can be expanded to show key historic components and media specific to that section.

LEVERAGING AGENCY INVESTMENTS

Leveraging Agency Investments

ArcGIS Online

When it comes to GIS data management, your organization may already invest in web-based GIS offerings like ArcGIS Online. For the purpose of this guidance document, we focus on methods for accessing ArcGIS Online content and adding it to the Template via HTML code.

When thinking about available GIS resources through your organization it is important to understand the history, staff resources, and update schedule. Considerations for accessing organizational GIS data through the Template include:

- Privacy - whether the data, web application, etc., is intended for public viewing;

- Updates - availability of staff for future updates of the resources;

- Links & 3rd Party Content - Story maps have the ability to connect to a wealth of content including videos, research papers, etc. These media can be taken down or changed requiring review of your map/application.

Adding A Map

Adding an ArcGIS Online resource to the Template is achieved through an "iframe." An iframe or Inline Frame, is an element that loads an external HTML element inside of a web page. An iframe is denoted by the html tag set **<iframe></iframe>**

Inside the **<iframe>** you need to include a source in URL form for the ArcGIS Online resource you wish to display.

Each ArcGIS Online resource maintained includes a URL that terminates with a unique ID.   Here is an example of how a web app from ArcGIS Online would be entered into an iframe:

url =.
 "https://Domain.maps.arcgis.com/apps/webappviewer/index.html?uniqueID"

The pieces of this url are:
- Domain - the domain associated with your organization, for example heeianerr.maps.arcgis.com
- apps/webappviewer - denotes this is a web map
- uniqueID - a long string of letters and numbers entered in after the "?"

The full url can be copied and pasted from the browser window when your application is open and there is no need to go searching for any of these elements. The url will then be placed inside of the **iframe** tag and will be preceded by **src="url-here "**

The final code for adding an **iframe** inside of a **div** element would look like this:

Note: the example is for a fictional He'eia NERR GIS resource, the url will not link you to an existing application

```
<div>
    <iframe src="https://heeianerr.maps.arcgis.com/apps/
        webappviewer/index.html?43f278t45hod4868327647">
    </iframe>
</div>
```

Remember!!!

- **div - creates a division or section in the webpage to add the iframe**

- **iframe - where you add the source or the url for your ArcGIS Online resource**

- **Closing tags are required, so </div> and </iframe> are used to designate where the html elements/tags end**

- **Each ArcGIS Online Resource (Story Map, Web App, Map, has its own unique ID which appears after the "?" in the url**

NOAA GeoPlatform

A secondary option for organizational, online, GIS Data management is <u>NOAA's GeoPlatform</u>, a GIS data resource designed to "provide geospatial data, maps and analytics in support of NOAA's mission."

Adding NOAA GeoPlatform resources to the template's code is identical to the steps outlined above for adding ArcGIS Online resources. An **iframe** is used to capture a unique URL from NOAA's catalogue of available resources.

On the opening page of the NOAA GeoPlatform select Gallery to open the catalogue of available resources. You can filter by the desired type and then open the resource to obtain the URL. For example,
 https://noaa.maps.arcgis.com/home/item.html?id=51c41fd3f78c4939a28b016e0ddb5109

could be added to an iframe to embed

<u>In Hot Water: Ocean Heat and Our Warming World - Overview (arcgis.com)</u> into your Site Profile Template.
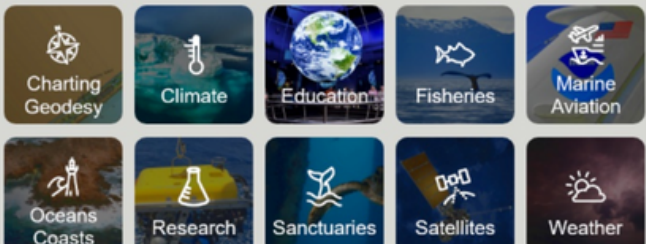
BRANDING

Branding

Personalize the Template

Every NERR is unique, and we want to make sure that anyone can tell at a glance which NERR is being presented in the Template. Your organization likely already has some branding guidelines, however we have made it easy to incorporate some simple stylistic elements into the Template that will provide a unique look and feel. Branding can also help you build relationships with readers, as people viewing the site will be aware that the information is site specific.

The Template is setup so that color changes can easily be made in the header, footer, and sidebars. For the Reserves involved in the Template's pilot project (He'eia and Lake Superior), ancillary colors were selected from each Reserve's logo to associate the Template with the logo in the viewer's mind. We recommend using colors from the background of your Reserve's logo to generate this desired effect.

There is a small stripe of color at the top of each page, and this color is shared by the side navigation and the footer. Since these colors are set in the CSS, this color choice is replicated across all of the Template chapters.

To change the color in the html look under the **<body>** section and you will see

<!-----This next line is for the little strip of color at the very top of the page.-->

The div immediately under this line shows that it is using an "accent color"

<div class="accent-color1" style="height: 20px;"></div>

To change the "accent-color1", search for this in your css file. The color is represented by a hex value, which is a unique alpha numeric code preceded by a #. Changing the alpha numeric code will change the color.

```
.accent-color1{
  background-color:  #ffd046;
}
```

In the next div you will see where to add your logo. Look for the **<img>** tag and below that you will change the name of the reserve site in the html document at the **<h4>** tag.

```
<!-- This is where the Site Specific NERR LOGO goes after the
<div class="w3-bar w3-white w3-wide w3-padding w3-card">
  <img src="img/heeia_logo_footer.png" alt="He'eia NERR Logo"
  <!-- This is where the reserve title goes-->
  <h4 class="w3-show-inline-block" style="color: #0055a3;">
    Profile</h4>
</div>
```

You can use these same techniques to change any writing in the template; looking for h tags, p tags, image sources, etc. These techniques will also help you change colors throughout the template by looking for inline style notes at the area you want to add branding to or by checking the css document for the background or text color you would like to change.

Also looking for the **<img>** tags throughout will help you to update the pages with your reserve specific images. In the document **<head>** you can also change the title of the page and the small icon that appears at the top of the web browser.

Choosing a color

Every NERR has a unique logo that can be utilized to choose the color associated with your template. In the case of Heʻeia and Lake Superior, both reserve logos were examined for a background or ancillary color. This was done at the suggestion of staff at the Graham Sustainability Institute at the University of Michigan, who helped with the branding of the Template.

Steps:

First open your logo in a program like Powerpoint, Paint, or a similar software program that allows you to use an "eyedropper" tool to determine the color value of a selected pixel.

There is also an extension in Chrome called "Eye Dropper" that can be added, which allows you to get this value for any color on a webpage. Once added, accessing this extension can be achieved by clicking on an icon resembling a small paint brush or smudge.
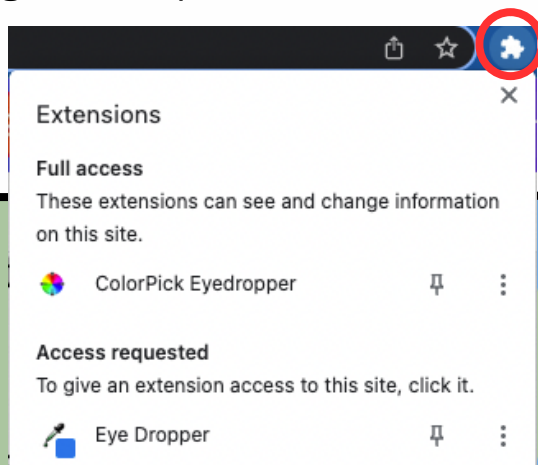

Whichever method you use, the end goal is to generate a "**Hex**" value for the color you want to use. Hex values are denoted by a "#" in front of a series of alphanumeric characters. W3Schools provide a more detailed description of Hex values and color options at this link.

Opening the Eye Dropper extension, clicking "Pick color from web page," and then clicking on the light blue color used in the borders of this page would provide the result of #72ace1.
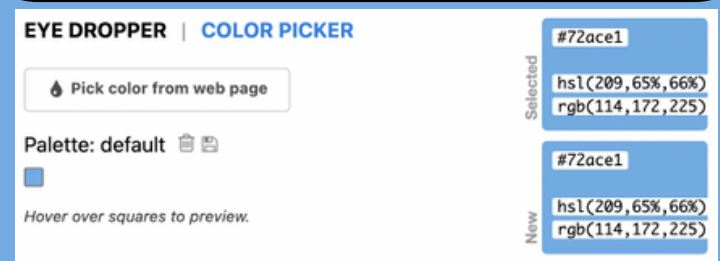
The Template you have been provided comes with the color for the Lake Superior NEER which was determined by selecting the color of the sun behind the lighthouse in the Reserve's logo. You can search for the Hex value #ffd046 in the Template and replace it with the the Hex value for your custom Reserve color.

#ffd046
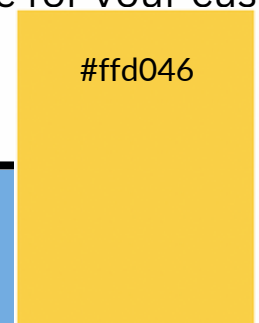
Bibliography and Citations

Zotero

Both the Lake Superior and He'eia Reserves elected to use Zotero for cataloging and citing various research papers and studies included in the template. The reason for this is that a bibliographical software such as Zotero will help to organize a Site Profile specific library of relevant publications and reports for easy sharing. Through Zotero, the permissions for each product are also in tact; for example, Open Access papers are accessible, but those that are not Open Access are available through subscription. In this way, we are not infringing on any copyright limitations. We recommend following a similar approach.

Zotero is a free, easy-to-use tool for collecting, organizing, annotating, citing, and sharing research papers.

Where possible, links to research papers and other media have been included in the Template.

To provide a link to a research paper or journal article, you will need a url. The url must include the https:\\ header information and would go into an <a> tag with the following format:=

Standard <a> tag usage

Text describing the link

Elements of the above format:

- **<a> ** - tag used for links to outside websites and media

- **href="** " - this is where the url goes, inside the " "

- **target = "_blank"** - you do not have to set a target however setting it t _blank will ensure the url opens in a new browser tab versus the same browser tab if left blank

- The text that describes the url goes in between the **<a>** and **** tags. This is what will appear on the Template screen instead of the actual url. Often websites will use the words "click here" to show the user the action that will trigger navigating to the url.

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