

LML Marine Debris Data Visualization

Release 1.0 Plan

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High Level Goals

The goal of this web application is to share data and spread awareness on marine debris. It must visually convey the impact of humans on marine life by showing the data on a map. The target audience for this application is the general public, therefore the user interface must be simple, interesting, easy to understand, and easy to interact with. This first release is to achieve a good foundation that includes all the minimum requirements outlined below.

User Stories for Release:

Sprint 1 - Setup Codebase

"As a developer, I want a locally hosted web application to ensure our environment is set for future testing of the project, that all developers have access to."

"As a developer, I want the ability to store and pull data from a backend database framework."

"As a developer, I want a detailed wireframe map of the project's required pages and their visual components."

"As a developer, I want formal coding practices which help make our code readable and simple for others."

"As a developer, I want to know when our project can be considered out of development."

"As a developer, I want a wide range of options to host my web application, and want to understand how to host under various domains."

Sprint 2 - Figuring Out Building Blocks

"As a developer, I want to design and implement the file topology for react so that we have a skeleton to code within."

"As a developer, I want to finalize the wireframe design and continue getting feedback from the sponsors regarding the visual components of the web application."

"As a developer, I want to implement the foundation of the wireframe so that all the important components of the web application are displayed."

"As a developer, I want to be able to upload our data in a .CSV file to postgresSQL, so that I can query the data and interact with it."

"As a developer, I want to understand the different map and data visualization tools available so that I can pick one to use for our web application."

Sprint 3 - Data Page Planning + Static Pages

"As a developer, I want to have React.js and Postgres set up locally so that the whole team can have the same foundation to start working on."

"As a developer, I want to understand how the data should be compared and displayed."

"As a developer, I want to pick a data visualization tool that is minimalistic and simple to work with, so that interpreting the debris data is easy to understand."

"As a general user, I want to be able to view how the Survey Slug program collects its marine debris data."

"As a general user, I want to view the people who contributed to this website."

"As a general user, I want an informative homepage, so that I can learn about ways I can help lower the human impact on marine debris."

"As a general user, I want to have a navigation bar so that I can interact with all the different pages on the website."

Sprint 4 - Static Pages + Map

"As a developer, I want to pick a restricted map tool to visualize and pin select locations of rural and urban beaches."

"As an admin user, I want to be able to upload my csv file on the website and have my data safely stored and displayed."

"As a general user, I want to be able to view a page that contains the map and interactive graphs to view marine debris data."

"As a general user, I want to be able to view how the Survey Slug program collects its marine debris data."

"As a general user, I want to view the people who contributed to this website."

"As a general user, I want an informative homepage, so that I can learn about ways I can help lower the human impact on marine debris."

"As a developer, I want to understand our options to host and deploy the web application."

Sprint 5 - Data Visualization

"As a general user, I want to be able to visit the official LML Marine Debris website."

"As a general user, I want to be able to view a map with all the beaches with the collected debris data."

"As a general user, I want to be able to view a bar graph of the total amount of debris by beach."

"As a general user, I want to be able to view a bar graph of the total amount of debris across a single beach by season."

"As a general user, I want to be able to view a bar graph that compares marine debris across all rural vs. urban beaches or any beach with another beach."

Sprint 6 - Data Visualization and Login Page

"As a general user, I want to be able to visit the official LML Marine Debris website."

"As a super admin, I want to be able to securely log into the LML Marine Debris website and view a dashboard to manage other admin users."

"As a general user, I want to be able to compare and interact with beaches on a map with the collected debris data."

"As a general user, I want to be able to view a line graph to see the amount of debris accumulated on a beach over time."

"As a general user, I want to be able to view a pie chart to compare the amounts of different types of debris by beach."

Sprint 7 - Hosting, Admin Page, and Cleanup

"As a general user, I want to be able to visit the official LML Marine Debris website."

"As a super admin, I want to be able to log on to the LML website and update the data used to display the graphs on the website."

"As a general user, I want to be able to interact with and view data of beaches on a map with collected debris data."

"As a general user, I want an informative homepage, so that I can learn about ways I can help lower the human impact on marine debris."

"As a general user, I want to be able to view how the Survey Slug program collects its marine debris data."

"As a general user, I want to view the people who contributed to this website."

"As a developer, I want to create an easy to understand poster and presentation of how and why the LML Marine Debris project was developed."

Sprint 8 - Security, Wrap Up

"As any admin, I want to be able to securely log in and upload new data to the LML Marine Debris website."

"As a super admin, I want to be able to view and manage other admin users."

"As a general user, I want the official LML Marine Debris website to be updated with the latest version of code."

"As a LML website visitor, I want to see and interact with a clean, user-friendly data visualization page."

"As a LML website visitor, I want to see and interact with a clean, user-friendly website."

"As a developer, I want to create an easy to understand poster and presentation of how and why the LML Marine Debris project was developed."

Known Bugs:

- Hover popups sometimes flicker when pins are close together
- Team page header is off center when zooming in
- Beach images take time to load when clicking a new pin, wrong image is displayed for a moment
- On mobile, pins often need to be tapped a few times for the charts to update
- Leaving the upload process stores only some rows of data

Product Backlog:

- Improve mobile view of the website
- On smaller window sizes the graph pop out should cover the entire page
- Add other ways to access beach pins for convenience (e.g. dropdown menus)
- Show CSV file upload history
- Downloadable current displayed csv data
- Improve admin view of csv data display
- Develop easy way for admins to update written descriptions and images displayed on website

[Initial Presentation](#)

[Winter Quarter Progress Presentation](#)

[Final Partner's Day Poster](#)

[Spring Quarter Presentation](#)