PROJECT CHARTER

NCAR Ozone Data Collection Website

10/9/2019

Revision History

Charter Revision Register: This section is used to document any changes and serves to control the development and distribution of revisions to the project charter. It should be used together with a change management processes as appropriate, and housed in the formal project repository. *Note: Best practice is to save the original baseline version as a separate file so that an accurate history of the original document remains available for comparison.*

Change Description	Approved by	Date of Revision

Approval: _____

Accountable Executive/Project Sponsor

Executive Summary

Project Name: NCAR Ozone Data Collection Website

High-level Objective Statement: The purpose of the Ozone Garden project will be to help gather data and educate the public about the impact of ozone on the environment using ozone sensitive plants from gardens across the country.

Background Information: Ozone is a pollutant created in the atmosphere from UV rays. The levels of ozone in different areas can be measured and its impact can be seen on several different species of ozone sensitive plants. Data has been gathered from several ozone gardens across the country. These gardens are specifically created so that we can see what the effects of different ozone levels are on the environment. This website is meant to be a tool for both professional and amateur scientists to collect and enter data from these gardens so that the effects of ozone pollution can be catalogued and studied. The website will contain a way to visualize data from different gardens, enter data, and educate on ozone effects and how to diagnose them in the different ozone sensitive plants.

Successful Outcome Statement: The organization will have a mobile friendly website which can be used for data collection, display and education.

Strategic Alignment: The National Center for Atmospheric Research (NCAR) is dedicated to researching climate change and the effects of different atmospheric pollutants on our planet. Rising ozone levels is another one of the human impacts on our planet. This website will help scientists at NCAR collect data and display it to the public.

Key Initiative Alignment: Data collection, data display, and education.

Primary Project Contacts			
Role	Name/Title	Phone	Email
Project Sponsor	Danica Lombardozzi Becca Hathaway		dll@ucar.edu hatheway@ucar.edu
Team Lead	Kara Wallace	248-930-8804	kawa1424@colorado.edu
Tech Lead	Michael Whitlock	720-483-5935	miwh5449@colorado.edu

Project Scope & Stakeholders

In-scope Goals:
1. Information about ozone bioindicator gardens
2. Implementing visible injury training game to website, provided by project sponsor
3. Data collection capabilities (based on current website, possibly updated for users to select an image of a leaf rather than a category) for different plant species at garden sites across the network
4. Ability for data collection to differentiate between visible injury "experts" and "citizen scientists" (similar to registered user and guest options on other websites)

Stretch Goals:
1. Data visualization capabilities that allows garden visitors to see the progression of injury on different plants at the garden and comparing across garden sites in the network
2. A photo repository for visitors to look at a collection of photos curated by experts
3. The capability to see real-time ozone concentrations from the nearest ozone monitor
4. The capability for users to upload photos of damage during data collection. Ideally these will be categorized by severity by the user and can be used to develop machine learning capabilities to identify ozone damage

Assumptions: We assume that the training will be provided to us, but we will be implementing it. We also assume that this project will have our in-scope objectives completed in the Spring of 2020.

Project Stakeholders: Our stakeholders are Danica Lombardozzi, Becca Hathaway, Ryan Johnson, Erika Wright, NCAR overall, Alan Paradise, and CU Boulder.

Success Criteria & Measures

Impacted Performance Measurement Families:

The ultimate goal of this project is to increase to the use of the ozone data collection website. In order to measure the success of this, measurements are split into multiple categories: user participation and awareness and increased data volume and quality. Increased usage can be definitively measured by comparing new data with data from 2019, however this is outside our project timeline and so cannot be measured by us. We have outlined different success measures below.

Success Measures:

Measurement Family	Targeted Improvement	Target Results Date
Increased use of the ozone data collection website	Make the website mobile friendly and overall easier to use and navigate Increased data entries from users compared to previous recording season	Implementation by May 2020 (before collection season) Changes in use observable by end of first growth period of plants (end of summer 2020)
Consistent, frequent participation	Create a user database and measure the amount of users and specific user activity	Implementation by May 2020
Increased quality of data collected	Add ability for users to upload photos of plants, damage and plant classifications, examples of varying degrees of damage, and a training guide	Implementation by May 2020
Increased user awareness of ozone damage	Allow users to see realtime ozone levels and locations of other gardens on the website Create graphs and other data visualizations of ozone damage in leaves throughout time	Implementation by May 2020

<p style="text-align: center; text-decoration: underline;">Schedule</p>

Schedule Time Box:

Project Phase:	Deliverables/Milestone:	Baseline Time Box Dates	
Initiate	● Identify Project Team Members ● Initiate Project ● Conduct Introductory Meetings	**Start** Sep 2019	**Finish** Oct 2019
Plan	● Complete Project Charter ● Conduct Project Kickoff ● Develop Detailed Requirements ● Develop Test plan ● Develop Work (Schedule)	**Start** Oct 2 2019	**Finish** Nov 2019
Execute	● Finalize detailed requirements ● Complete Test Plan ● Finalize Implementation Plan ● Complete Testing ● Complete Implementation	**Start** Nov 2019	**Finish** April 2020
Close	● Validate Measures of Success ● Ensure operational controls are in place ● Obtain business sign-off on deliverables ● Receive approval to close project	**Start** April 2020	**Finish** May 2020

Key Roles & Responsibilities

Project Sponsor Danica Lombardozzi Becca Hathaway	● Has ultimate authority ● In charge of training materials ● Provides feedback of deliverables
Team Leader Kara Wallace	● Creates agendas for meetings ● Books meeting rooms ● In charge of maintaining meeting minutes ● POC with sponsor
Technical Lead Michael Whitlock	● Maintains Github ● Making sure everyone is working on assigned coding tasks ● Plans with making sure all tasks will be integrated together ● POC for tech lead on sponsor side ● Scrum Master
Backend Developers Tanner Slemmer Hunter Belcher Tanya Leung Abbigail Nicholson	● Designs and implements the backend of the website ● Makes sure their work is compatible with each other and the frontend ● Attending weekly team meetings and sponsor meetings
Frontend Developers Kara Wallace Percy Bell	● Designs frontend of the website ● Makes sure their work is compatible with each other and the backend ● Attend weekly team meetings and sponsor meetings