

Environmental Protection Agency
Sustainable Region 9 Internship

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Acknowledgements

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Additionally these tasks were completed under the mentorship of Laura Bloch and Elyssa Bairstow with Sustainable Region 9 who provided all project guidance and supervision. I greatly appreciate their consistent feedback and direction to ensure quality work.

Executive Summary

The duration of my internship included a few main projects which each had a subset of tasks. The primary project was centered on creating educational materials that would demonstrate to building tenants and others how the Environmental Protection Agency (EPA) Region 9 would attain a LEED platinum certification for their sustainable building renovations. To create these materials I completed research on green social marketing, and applied that knowledge to creating over 30 individual signs that demonstrated the sustainable features of Region 9's renovation.

The secondary project was the analysis of over 700 surveys. These surveys were taken by project officers who represented the recipients of Greening Grants: grants allotted to qualifying organizations to help them implement sustainable practices. The grantees were asked to participate in any number of seven categories of voluntary measures. The surveys taken by the project officers were for the purpose of gaining insight on the degree of participation, popularity of the various categories, and the reasons for grantees declining to participate. To complete this project I edited and sorted the raw survey data, generated several tables and figures to display the results, and created a PowerPoint presentation with my findings and suggestions to increase voluntary participation.

The last project focus was to illustrate the structure of various Federal agencies and where the position of Chief Sustainability Officer (CSO) sat within that structure. To illustrate this I located existing flowcharts of organization for four Federal agencies and indicated within that chart which position held the responsibilities of CSO as dictated by an executive order. However, as I indicated in my report, the CSO positions were recently changed by a new executive order issued in March 2015, and the new structure had yet to be defined.

Project Objectives

The initial main project objective was to aid in the process of EPA Region 9 offices becoming LEED certified at a platinum standard by researching LEED green building education best practices. This included completing research on social marketing as it applies to green marketing, and using that knowledge to generate educational tools that would help tenants, other federal agencies, and the public understand green buildings and sustainability in the built environment using Region 9's building as an example. Specifically project tasks included researching renovated features and their sustainable attributes, making informational signage that depicted sustainability features, and generating new ideas for ways to display that information. Although many efforts remained strongly oriented around this goal, other project objectives came up throughout the internship duration.

The LEED platinum certification was well under way with less to be achieved by the time that my internship began. Because of this, the greater need for contribution in other areas, and my mentors desire to assign tasks that were relevant to my career interests, many other objectives came up throughout my internship. The other projects that came up included the analysis of Greening Grant (grants given to qualified applicants to aid with implementation of environmental programs) surveys, analysis of federal agency structure and placement of chief sustainability officers, and the presentation of this information by PowerPoint slide show and organizational charts, respectively.

Analysis of Greening Grant surveys included downloading the survey data for the fiscal year of 2014, and editing the raw data into information that could be used to make conclusions about the grantees' decisions to participate in various programs encouraged by the EPA.

Project Approach

LEED Signage and Research

All signage was derived from facts about the newly renovated features that contributed points to the LEED platinum certification. Using an excel database of all renovated features, I found all items with sustainable features listed in the database to do further investigation and find more information online from the manufacturer to make a more detailed list of specifications. Using this detailed list and a single page fact sheet of LEED point categories, I made over 30 detailed educational signs in simple language for the purpose of showing LEED achievement in those various categories.

Greening Grant Survey Analysis

The Greening Grant survey analysis involved many steps. I used informational presentations and an excel database from a previous fiscal year's analysis to develop a better understanding of the function of Greening Grants and context of my assignment. After that I downloaded the 2014 fiscal year surveys, and transferred that information to an excel sheet. I then organized the raw data, deleting any unnecessary information or accidental surveys. Using the remaining relevant data, I sorted, counted, and categorized survey answers to determine frequent and/or significant survey responses. Using those significant responses, I generated several tables, graphs, and charts to display the analysis findings. I then transferred those figures into a PowerPoint presentation, and added my recommendations for how to get more Greening Grant participants to voluntarily participate in more greening measures.

Federal Agency Structure and Chief Sustainability Officer Placement

Determining where the position of Chief Sustainability Officer (CSO) is in various federal agencies was primarily a task of using each agency's website. Almost all federal agencies had an existing organizational chart showing the positions within the agency in relation to each other. Additionally a separate government website listed each person designated as CSO within each agency, which I then located in the organizational chart. However, upon further research, I found that a recent Executive Order had reversed a previous order that designated those individuals as CSOs. The new CSO positions have yet to be determined which I included in my analysis with the organizational charts.

Project Outcomes

LEED Signage and Research

Both the research and the signage itself became easier to generate as I went along. Once I became familiar with the manufacturers websites and data sheets concerning their products I could quickly find the relevant information I needed to generate the signs. The signs themselves became easier because I developed several templates that I could quickly replicate (Appendix, Figure 1). After some feedback from my mentors, I was able to fine tune these signs into something that could be easily used throughout Region 9s many renovated floors. I was also able to color code the database of renovated features so that my mentors and future interns could understand how each feature was chosen or not chosen for signage.

Greening Grant Survey Analysis

The results of this analysis, represented by various figures (Appendix, Figure 2), showed that about 29% of grantees are not participating in any voluntary greening measures. The results also suggested a few primary reasons why grantees are not participating in any measures. The top three reasons, representing 88% of the answers, were the following: grantee decided not to participate (generic answer), grantee did not list specific activities, and grantee did not have time or resources to participate. My recommendations included getting more detailed feedback from project officers working with grantees, emphasizing the ability of voluntary measures to help already ongoing projects, and minimizing the perceived barriers of participation. This analysis seemed to clear up a lot of questions my mentors had about voluntary measure participation and could be very effective in the future for encouraging more participation.

Federal Agency Structure and Chief Sustainability Officer Placement

In total, I located four organizational charts and indicated where in the agency structure the CSO position was previously located before the new Executive Order took effect. The CSO positions were assigned to individuals with existing positions as an additional responsibility. I indicated the position of the individual with CSO responsibilities using a red circle in the organizational charts (Appendix, Figure 3).

Conclusions

LEED Signage and Research


Completing some preliminary research on social marketing and how it applies to influencing green behaviors and green education was a great first step to designing the LEED signage. Understanding basic marketing techniques helped to inspire unique ideas and concepts. From there, designing the signs was relatively simple and developing the template made it even simpler. My hope would be that future interns would be able to use my research paper on social marketing and my signs as a good starting point and templates for their own work.

Greening Grant Survey Analysis

My recommendations for future interns completing similar tasks would be to keep detailed notes and to annotate their work and databases. Considering how I was able to use the work of staff from previous years as a guideline, I tried to ensure that my work could also be used for developing a clear understanding of what a complete survey analysis should include. Unless the survey questions or other circumstances change, my excel sheet and PowerPoint presentation could potentially be used as a template for future fiscal years' analysis.

Both the LEED signage and Greening Grant survey projects sharpened my research and analysis skills, especially due to the direct and consistent feedback from my mentors. Being able to participate in a few different projects rather than one was extremely illuminating for what interests me as a future career and what my strengths and weaknesses are. Finding the CSO positions amongst various federal agencies and learning about how the Executive Orders affected those positions also helped me to understand where career options in public and private sectors could lead. Overall this internship greatly expanded my knowledge of careers in my field and what they could potentially entail. Additionally, learning more about my skills and what I enjoy doing on a daily basis has given me a lot to consider now that I am searching for employment, and I am very glad that I have this experience to help me choose the positions to which I will apply.

Appendix

The ceiling system in this room was manufactured in Hilliard, Ohio by  Armstrong.

- ✓ **67% Pre-Consumer recycled content**
- ✓ **15% Post-Consumer recycled content**
- ✓ **90% light reflectance value reduces fixtures necessary to illuminate room.**

Figure 1. Typical sign created for educating viewers on sustainable changes made for LEED certification.

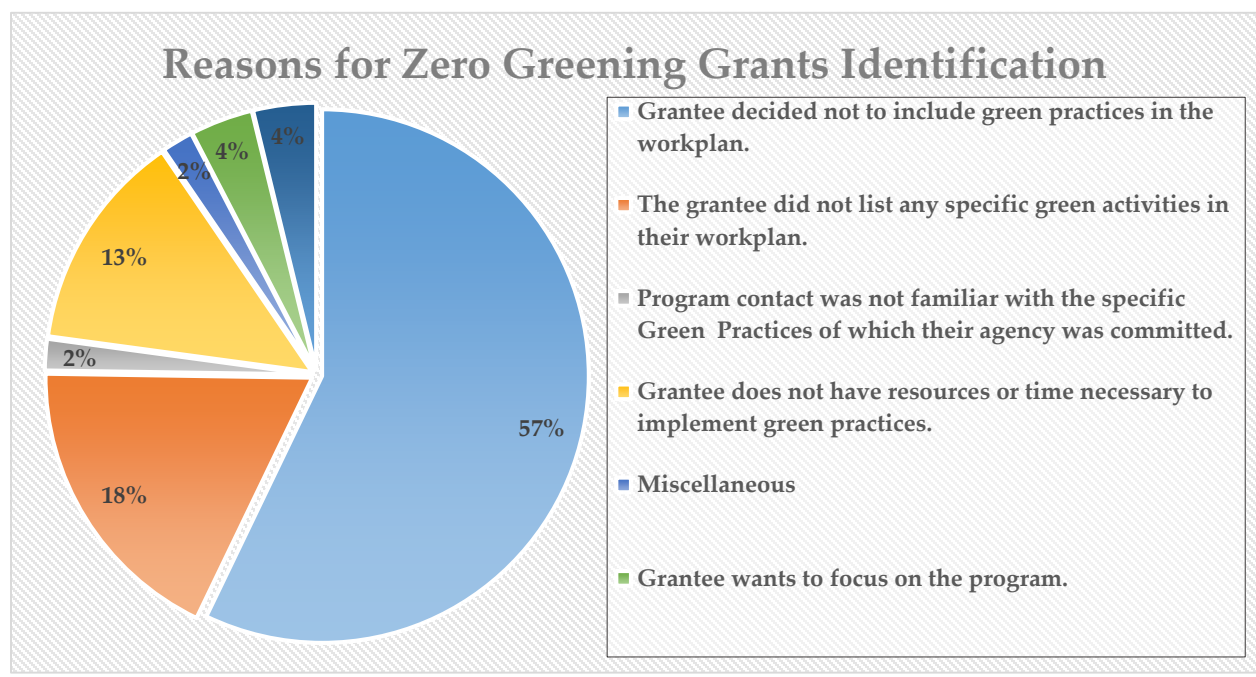


Figure 2. One of the several figures illustrating results of Greening Grant survey analysis.

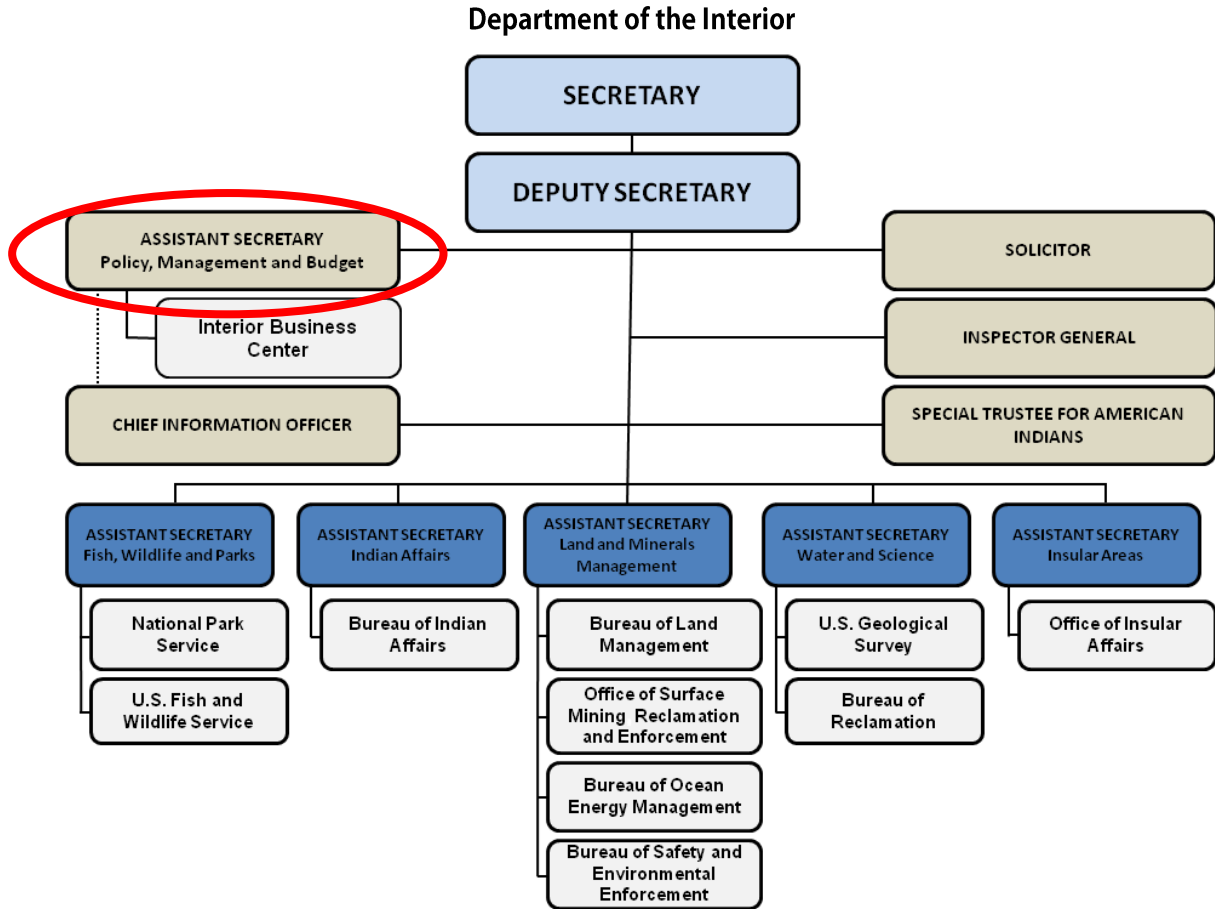


Figure 3. Typical flowchart illustrating position of CSO via red circle within Federal Agency structure.