2021 Student Research Grant Application

Green Fund Mission Statement: "The NAU Green Fund promotes student participation in and provides funding for projects that reduce NAU's negative impact on the environment and create a culture of sustainability."

In support of the Green Fund's Mission Statement and its ability to improve sustainability on campus, the Green Fund will be accepting proposals for research projects that help to understand and reduce NAU's environmental impact, with the goal that this research funding could act as seed funding for Green Fund project proposals.

Although the Green Fund will consider all applications that meet the Student Research Grant guidelines, the Green Fund has recognized a need for specific fields of research that will improve sustainability on campus. Below is a list of desired research projects. Applications addressing these categories will be given preference in the selection process. Additionally, research projects that are designed to produce actionable results at NAU through the Green Fund will be given further preference.

2021 Student Research Grant Proposal Recognized Needs:

- Energy
  - Analyzing NAU's energy usage and identifying areas of improvement
  - Feasibility of large-scale renewable energy projects on campus
- COVID19
  - Environmental impacts of online learning
  - Mental health impacts of online learning
  - Understanding food insecurity of the NAU community
  - Transportation impacts of COVID19
  - Consumer safety of single-use plastic versus reusable materials
- Emissions
  - Quantifying carbon sequestration on campus
  - Feasibility of utilizing algae for carbon sequestration
  - Carbon emissions of manufacturing construction materials used on campus
  - Analyzing carbon emissions of NAU
- Other
  - Analyzing water capture and reduction on campus
  - Understanding sustainability behavior/perspectives of NAU students
  - Waste management or minimization on NAU campus

Application opens: **February 5, 2021**

Application closes: **March 22, 2021 at 5:00PM**
Funding awards will be announced by: **April 8, 2021** Submit completed application packages to: **GreenFund@nau.edu**

Application Details

All applications **must** meet the following requirements to be considered for funding:

1. Research must be primarily conducted by either an **undergraduate or graduate student** who is currently enrolled full-time at NAU.
2. Research must be conducted under the guidance and approval of a full-time NAU faculty member.
3. Research design and goals must focus on improving sustainability on NAU's campus.

Only a complete application package will be considered for funding. A complete application package includes:

- An abstract of the projects goals, expected results, and broader impacts to the NAU campus community; 200-300 words.
- Detailed project proposal (1-2 pages), with specific information about current literature, research goals, methods, and how this research will improve sustainability at NAU.
- Questionnaire (filled out from template provided below).
- Project budget (filled out from template provided below).
- Project timeline (filled out from template provided below).
- Letter of recommendation from the faculty supervisor of the project which specifically addresses the student's ability to conduct and complete the research (may be submitted separate from the rest of the application package, but must be received by the deadline).
- Signed commitment from the student to present a status update of their research in the form of both an oral presentation to the Green Fund Committee and a poster/exhibit presentation at the Undergraduate or Graduate Symposium, no more than 1 year after receiving notification of funding.

Additional Requirements and Rules:

- Funding provided by the Green Fund may not be used in any way for faculty salary.
- Funding may allow for use as student wages depending on the specifics of the project and explicit approval from the Green Fund. The Green Fund recognizes that some projects require minimal physical materials, but rather a significant amount of time.
- Funding is limited to one proposal per student per year, but applicants may apply across multiple years. A student who has previously received a Green Fund Student Research Grant is no more or less likely to receive a second year of funding.
- Recipients of the Student Research Grant will be determined at the sole discretion of the Green Fund Committee. Funding is dependent on a merit and goals-based review of all complete applications.
- Average award funding is $3,500, but applications requesting higher amounts will still be considered.
- Undergraduate students may budget $10.00/hour for 200 hours maximum
- Graduate students may budget $15.00/hour for 200 hours maximum

Contact Information

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Co-Project Leader Name: Darren Bingham Phone: (330) 635-3188 E-mail: drb386@nau.edu

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osition: Assistant Research Professor Department: SICCS

Project Name:
Creating a Roadmap to Zero Waste at NAU's Flagstaff Mountain Campus

Abstract:
The ultimate goal of this research proposal is to provide NAU with a guiding document that will provide both a unified vision, implementable solutions, and realistic timelines for getting NAU to zero waste. The City of Flagstaff has a Rethink Waste Plan and goal of 90% reduction by 2050 (1). This cannot occur if NAU does not support this goal and potential collaborations could occur with shared outcomes. NAU has no formal document or roadmap that will lead the university forward in its goal of reducing waste and ultimately achieve zero waste operations. Most top-tier research universities have a guiding plan or document that aims to reduce its environmental impacts, disposal costs, and educate its students. By creating and developing a zero waste plan, the Green Fund, Facilities Services, Building Managers, and the Office of Sustainability will have a guiding document to follow. As a strategic partner and the largest commercial account for the City, NAU must do their part to reduce its waste and increase waste diversion. Additionally, a comprehensive analysis of other zero waste plans from universities, cities, and non-profits will be used to direct this research. With recycling being seen as a first step in environmental awareness, it is important that the university provide students the infrastructure, education, and skills to reduce their consumption of natural resources. Also, as a top-tier research university, this caliber of research should be reflected in its management of its own waste. By incorporating a no landfill methodology, the university will be on the cutting edge of the circular economy and become a living laboratory for students to learn, investigate, and pilot ideas. Lastly, focus will be given to improving composting operations, students move-out programs, diversion of construction & demolition waste, and implementing manufacturer end of life collection policies. (296 words)

Project Proposal:
Zero waste means to divert 90% of material from the landfill. The City of Flagstaff has a goal to achieve zero waste by 2050 (1). NAU is the single largest commercial user of the City's solid waste service and it will be vitally important that the City and university work together. The City of Flagstaff recently released its draft Carbon Neutrality Plan and found that 16% of its emissions are related to solid waste with the majority coming from landfill emissions (2). Additionally, one of the primary goals for 2030 is 80% community waste prevented and diverted from landfill. This grant will provide NAU with a framework to support the City and their joint goals. Disposal costs will only increase overtime and the university will benefit financially from any reduction in its landfilled material. Lastly, colleges and universities have been seen as living laboratories where students engage with real world problems directly connected to their university. Zero waste is a simple, easy, and effective way for students to do this and many universities have programs, labs, and courses on the topic (3,4,5). Below are some two figures that depict the methodology of the circular economy and zero waste hierarchy that will guide the thinking of this grant (6,7). In the future, NAU could provide the City information, pilot projects, case studies, and policies that have helped NAU divert waste. This connects again to the goal of NAU being a living learning laboratory.

This grant will compare and contrast other universities zero waste plans, cities with universities zero waste plans, and will partner itself alongside the City of Flagstaff's Rethink Waste Plan and Carbon Neutrality Plan. This grant will provide clear goals and recommendations for the university to implement. The recommendations section of this document will be divided into short term, medium term, and long term steps to take. Additionally, this project will be evaluated by Dr. Richard Rushforth, Assistant Research Professor, School of Informatics, Computing, and Cyber Systems. who has previous experience as a zero waste project analyst at Arizona State University (ASU), Sustainability Practices and has worked extensively with the City of Phoenix conducting GHG emissions inventories and developing and implementing circular economy projects. Several universities have zero waste plans and will be reviewed for this grant or are incorporated into their sustainability master plan (8,9,10). The business case for waste diversion has become commonplace with General Motors providing nine steps to achieve landfill-free operations (11).

The top four strategies that will be reviewed for reducing NAU's waste will encompass aversion, diversion, composting, and green purchasing. This research grant will provide the university with a document that can be used to influence policies, projects, and programs NAU implements. One major outcome of the document will be to develop a portfolio of zero waste projects and rank them in terms of cost, GHG avoided, and waste avoided using a multi-criteria decision assessment. Cost would be measured by Return On Investment, net present value, internal rate of return, and payback period. Additionally, we will use a methodology refined by Dr. Rushforth at ASU called SPAT 2.0 that evaluates potential zero waste projects on a set of criteria and will be used as a decision support tool for our research (8). This document will provide actionable projects for the university to implement. The goal will be to find unicorns -- projects that are NPV positive, reduce GHG emissions, and reduce waste -- but in some cases if the GHG emissions and waste reductions are so great, might justify financially unrealistic outcomes. This project will be something by which someone could help guide and hold decision-makers accountable. We want to identify all possible projects and also the ones that never make sense but could be pushed due to vendor interest or future changes.

Annotated Bibliography:

1. The City of Flagstaff. (n.d.). Rethink waste plan [PDF]. https://flagstaff.az.gov/DocumentCenter/View/55962/Rethink-Waste-Plan_Final?bidId= This document was created by the City of Flagstaff to guide them in their goal of being zero waste by 2050. The document gives timelines and recommendations for the City to pursue over the next several years.
2. The City of Flagstaff. (2021, March 11). Flagstaff carbon neutrality plan [PDF]. https://www.flagstaff.az.gov/DocumentCenter/View/66105/Flagstaff-Carbon-Neutrality Plan_Draft_3-5-21

This document, created by the City of Flagstaff, updates and expands upon the 2018 Flagstaff Climate Action and Adaptation Plan. It details the City's vision for a carbon-neutral future and the actions they will take to achieve carbon neutrality by 2030. The management of our consumption is one of the four focus topics of its plan.

3. University of Colorado Boulder. (n.d.). *About the zero waste lab.* https://www.colorado.edu/ecenter/zero-waste/research-resources/zero-waste-lab

The CU Environmental Center's Applied Learning Lab for Zero Waste supports students undertaking projects focused on sustainable materials management. Doing this helps to integrate zero waste and sustainable materials management concepts within coursework to provide cutting edge research to its global and immediate communities.

4. Hansen, S. S. The campus as a living laboratory: Macalester College case study. *Handbook of Theory and Practice of Sustainable Development in Higher Education*, World Sustainability Series. https://doi.org/10.1007/978-3-319-47895-1_14

Hansen's paper examines the ability of Macalester College's living laboratory program to improve student education, as well as community and campus sustainability. Hansen analyzes the strengths and weaknesses of this particular program and provides recommendations for its improvement. Additionally, Hansen points out that many colleges do not adjust coursework to fit the local environment and that students may be unaware of their college's sustainability footprint. However, utilization of campus as a living laboratory could potentially address these issues and prove beneficial to campus sustainability and education quality.

5. University of Louisville. (n.d.). *Campus as a living lab.* https://louisville.edu/sustainability/education-research/LivingLab

This webpage describes the University of Louisville's efforts to turn their campus into a living lab that enables students, faculty, and researchers to explore ways of improving sustainability. Utilizing campus as a living lab allows for applied learning, while increasing campus sustainability at the same time.

6. Zero Waste Washtenaw. (n.d.). *Zerowaste Washtenaw (event recycling & composting).* https://www.washtenaw.org/402/ZeroWaste-Washtenaw-Event-Recycling-Comp This figure illustrates the zero waste hierarchy that is used as a reference and guide to better understand how to achieve zero waste. At the top is reducing waste at the top which is the most preferred action.

7. Glasco, J. (2019, July 23). The circular economy: vision, problems and smart city solutions. *Bee Smart City.* https://hub.beesmart.city/en/strategy/the-circular-economy-and-smart-city-solutions This article depicts how the circular economy is viewed by many in the industry. There are both outcomes and reasons for each step of the circular economy and are an improvement of our current linear economy that goes from extraction to manufacturing to use to landfill.

8. Arizona State University & Waste Management, Inc. (n.d.). ASU roadmap to zero waste [PDF]. https://zerowastewestern.weebly.com/uploads/1/0/4/7/104707313/asu-roadmap-to-zero waste.pdf

This document was developed to provide ASU a guiding document for zero waste for their campus. The use of the Sustainable Practices Assessment Tool (SPAT 2.0) from this document will support evaluation and decision making for this project.

9. Stanford Office of Sustainability. (2020, February). Stanford sustainability goal: zero waste by 2030 [PDF]. https://sustainable.stanford.edu/sites/default/files/Stanford_ZeroWaste_SustainabilityReport_2.6 .pdf

This document, created by the Stanford University Office of Sustainability, presents a plan for the school to achieve a 90% diversion rate by 2030. The Zero Waste Plan is based partly on waste stream data specific to Stanford and includes steps based on zero waste, sustainable materials management,

and circular economy concepts. A zero waste feasibility study was conducted prior to creating the Zero Waste Plan.

10. The University of Texas at Austin. (2016). Sustainability master plan [PDF]. https://capitalplanning.utexas.edu/sites/cpc.utexas.edu/files/Sustainability-MasterPlan-2016.pdf

This Sustainability Master Plan created by the University of Texas at Austin outlines the institution's direction for sustainability, including goals and strategies specific to their core values. The plan utilizes an interdisciplinary approach to address sustainability problems.

Additionally, it was designed to be modified overtime.

11. General Motors. (2018, February 28). The business case for zero waste [PDF]. https://www.generalmotors.green/dld/content/product/public/us/en/GMGreen/factsheets/_jcr_content/par/download_0/file.res/GM's%20landfill-free%20blueprint_%202018%20Update.pdf

This document provides an overview of General Motors (GM) landfill-free program, which includes the program's goals, benefits of waste reduction in a business setting, requirements for implementing the program, and nine steps for achieving landfill-free status. The nine steps developed by GM can be followed by any company or facility with the goal to increase waste reduction and become landfill-free.

QUESTIONNAIRE

Please select the focus of your research project, then address the following questions.

☐ Analyzing NAU's energy usage and identifying areas of improvement

☐ Feasibility of large-scale renewable energy projects on campus

x Environmental impacts of online learning

☐ Mental health impacts of online learning

☐ Understanding food insecurity of the NAU community

☐ Transportation impacts of COVID19

☐ Consumer safety of single-use plastic versus reusable materials

☐ Quantifying carbon sequestration on campus

☐ Carbon emissions of manufacturing construction materials used on campus X Analyzing carbon emissions on NAU

☐ Analyzing water capture and reduction on campus

☐ Understanding sustainability behavior/perspectives of NAU students

X Waste management or minimization on NAU campus

☐ Other:

1. How will your research benefit the mission statement of the Green Fund and improve sustainability on NAU's campus?

The City of Flagstaff has a Rethink Waste Plan and has a goal of 90% reduction by 2050. Our current diversion rate is 10% and any improvement cannot occur if NAU (the largest entity being served by the City) does not support this mission. This project will directly focus on waste management and minimization on campus. Since, NAU has no formal document or roadmap that will lead the university forward in its goal to reduce its waste impacts on the environment. Waste accounts for 16% of greenhouse gas emissions for the City of Flagstaff and accounts for a similar amount at NAU. By creating and developing a zero waste plan, the Green Fund and Office of Sustainability will have a guiding document to follow. This grant will provide a reliable process, realistic projects, and attainable timelines that will help students, staff, and faculty in reducing their

waste and becoming better stewards of our natural environment. This project will not focus on this but will cover analyzes of carbon emissions related to waste for NAU and will investigate some of the waste impacts related to online learning and remote work. With recycling being seen as a first step in environmental awareness, it is important that the university and Green Fund provide students the infrastructure, education, and skills to reduce their consumption of natural resources. Also, NAU is a top-tier research university with a history of being a sustainability leader and that level of research and commitment should be reflected in its management of its waste. By incorporating a no landfill methodology, the university will be on the cutting edge of the circular economy and become a dynamic living laboratory for students to learn, investigate, and pilot ideas.

2. Will your research require the utilization of any spaces or infrastructure on campus? If so, identify the specific locations and/or infrastructure, how much of the space you require, and what each space will be used for.

This research will lead to recommendations of spaces and infrastructure needed for the university to develop zero waste management on campus. Also, upgrades and improvements to the south campus composting program on campus would need to expand and buy new equipment potentially. For example, one recommendation would be to expand the composting program to have public drop-off locations for collection on campus. One idea for a location for a collection site could be by the existing SSLUG and SNAIL gardens on south campus. This recommendation will need equipment and infrastructure for each location and coordination with the campus gardens working group.

QUESTIONNAIRE

3. Will other departments on campus (other than your own) be needed to assist in this project (i.e. Facility Services, Campus Transit)? If so, identify department partnerships.

Facility Services of NAU will be included in the planning and development of the zero waste plan. Their insight will be used to best recommend proper infrastructure and projects for waste diversion programs, i.e. locations for campus community compost drop-off locations. Additionally, Sodexo has been a big partner in the composting program of NAU and we will meet with them to determine best practices for NAU and review programs from other universities.

PROJECT BUDGET

Please respond to the following funding question, and complete a thorough breakdown of all project costs in the provided Line Item Budget below. **Include a 5% line item for contingency**.

1. Does this project have any other sources of funding, and/or have you applied for other sources of funding? If so, list all additional sources of funding, both confirmed and potential, outside of the funds being requested from the Green Fund.

This project will seek additional funding from the Arizona Recycling Coalition yearly grant and the City of Flagstaff's Neighborhood Sustainability Grant program when they open later this year. No other funding has been confirmed but support from the City of Flagstaff has been offered to help with evaluation, potential collaborations, and research from their Sustainability Section and the Solid Waste Division for this project.

Line Item Budget:

Item	Justification	Quantity Price per Unit	Total per Row
Graduate student labor	Research and project evaluation	167 hours 15/hr	2500
Undergraduate student labor	Research and report creation	86 hours 10/hr	860
Undergraduate student labor	Research and report creation	86 hours 10/hr	860
5% Contingency	Contingency	5% $175+$5	180

Total Funding Requested: $4,400

PROJECT TIMELINE

Please provide an expected timeline for your research in the template below. The Green Fund recognizes that complex projects of this nature should have flexible, adaptable schedules, and the timeline provided will be treated as such. However, it is expected that you strive to adhere to this schedule as much as possible.

EXPECTED TIMELINE:

Action	Parties Involved Month/Year
Funding awarded	Green Fund April 2021
Research begins on project	Josh, Annie, and Darren
- Comprehensive analysis of zero waste plans from other universities and cities	Josh, Annie, and Darren April - mid June 2021
- Research how other universities operate as a living laboratory and how NAU can operate as one	Josh and Annie May - July 2021
- Research aversion, diversion, composting, and green purchasing strategies that could be implemented by NAU	Josh, Annie, and Darren July - mid December 2021
- Identify all possible projects for NAU to implement	Josh, Annie, and Darren July - mid December 2021

- Ensure that potential projects are NPV positive, reduce GHG emissions, and reduce waste - Determine how much waste and GHG emissions will be avoided by the project - Measure cost of projects by ROI, net present value, internal rate of return, and payback period - Create a new assessment tool for NAU zero waste projects - Evaluate projects using new assessment tool - Determine if NAU will need infrastructure for projects. If infrastructure is needed, reach out to NAU Facility Services - Create attainable timelines for projects	Richard July - mid December 2021 Josh, Annie, Darren, and
- Reach out to possible partners regarding collaborations (City of Flagstaff, County, Sodexo, SSLUG, etc.)	Josh, Annie, and Darren Summer 2021
- Analyze carbon emissions related to waste for NAU and waste impacts related to online learning/remote work	Richard and Darren late Summer - mid December 2021
- Apply for funding from Arizona Recycling Coalition yearly grant and the City of Flagstaff's Neighborhood Sustainability Grant program	Josh, Annie, and Darren Summer and Fall 2021
Mid Point Check on Project	Richard and Darren August 2021
Research ends	Josh, Annie, and Darren mid December 2021
Research reviewed by advisor and others	Richard,City, and FS mid Dec.2021 - mid Jan. 2022
Report created without final design formatting	Josh, Annie, and Darren mid Jan. 2022 - early March 2022
Report reviewed by advisor and Facility Services	Richard, City, and FS early March 2022 - mid March 2022
Report edited for Green Fund	Josh, Annie, and Darren mid March - late March 2022
Report given to Green Fund	Josh, Annie, and Green Fund late March - early April 2022
Poster created for undergraduate symposium	Josh and Annie late March - mid April 2022

Expected Project Completion Date: Late March/Early April

RESEARCH & DELIVERABLES:

Our research will be focused on waste reduction strategies that can be implemented by NAU. Broadly, these strategies include aversion, diversion, composting and green purchasing. Specific projects and steps that fall under these waste reduction strategies will be identified through further research of zero waste plans that have been developed by other universities and cities.

Comparing and contrasting zero waste plans that have been implemented elsewhere will help guide our research. Identifying specific projects and steps will also require us to consider the needs and goals of both NAU and the City of Flagstaff. We will look at NAUs waste streams, and determine the costs and benefits of various zero waste strategies. We will also research living laboratories and how NAU could operate as one. A literature review of known NAU waste data, review projects for specific waste streams, and analysis of a triple bottom line for zero waste projects will be researched.

Deliverables for this project will include a Zero Waste Roadmap with recommendations for NAU to

transition to zero waste and operate as a living laboratory, as well as projects with specific steps and practical timelines. A summary of most viable zero waste projects for NAU and how they fit together in a zero waste project portfolio will be created. We will include a document with information regarding the projected costs, cost savings, GHG reductions, waste reductions, and equity & environmental impacts of projects, as well as any other relevant information. We will provide an analysis of all emissions associated with waste at NAU and will be provided in an excel document that can be used for future emission reduction goals. Another deliverable includes a new and dynamic decision-making assessment tool for zero waste projects that can be used by NAU. This tool will be an excel spreadsheet that has been adapted and customized to fit the needs of NAU.

HOURS JUSTIFIED:
The graduate student will be heavily involved in researching zero waste projects for NAU, reviewing other zero waste plans, review of GHG emissions related to waste, compiling a literature review for this project, the creation of an assessment tool, and analysis of the proposed projects using the decision-making assessment tool. The coordination between different departments, the City, and Facility Services will be done by the graduate student. Additionally, the graduate student will review and edit the revisions provided by the faculty advisor. The two undergraduate students will provide editing and review documents and excels. Both undergraduate students will research and compile a literature review for living laboratories and provide recommendations to the graduate student for projects to consider or implement. One of the undergraduate students will be responsible for editing and formatting the final documents, while the other undergraduate will be responsible for the Green Fund presentation and symposium poster. The final documents will adhere to NAU marketing standards, colors, and imaging. The goal is for this document to be shared widely and be put online for others to see. Lastly, once the project is finished, a press release that was created will be provided to local media outlets by the undergraduates.
Please read and sign the statement below, acknowledging your commitment to present the findings of your research.

If selected as a recipient of the 2020 Green Fund Student Research Grant, regardless of the outcome of my research project, I, Annie Bachmayer, commit to presenting the status of my research described in this application in the form of both an oral presentation to the Green Fund Committee and a poster/exhibit presentation at the Undergraduate or Graduate Symposium, no more than 1 year after receiving notification of funding.

The oral presentation to the Green Fund Committee will consist of an approximately 10 minute long PowerPoint that includes the following aspects of your project:

- Original goal and purpose of research
- Conflicts or changes to original purpose
- Results/Conclusion
- All relevant graphical displays of data

Project Leader Signature:

Thank you for your submission. We deeply appreciate your commitment to sustainability at NAU, and we look forward to reviewing your application. Please direct any further questions to ***GreenFund@nau.edu***.

Dear Green Fund Research Grant Selection Committee,

I'm writing in support of the project, "Creating a Roadmap to Zero Waste at NAU's Flagstaff Mountain Campus," proposed by the student team of Joshua Rihs, Annie Bachmayer, and Darren Bingham. This project will provide an invaluable service to the Northern Arizona University campus in its efforts to achieve more sustainable campus operations. Specifically, the proposed project seeks to provide a sustainability solution toolbox to reduce NAU's solid waste impact on City of Flagstaff operations. The proposed project will further NAU's role as a living laboratory by connecting students and faculty with solid waste operations to develop an economically viable zero waste roadmap.

In my experience, developing solid waste management projects and plans with and for R1 research universities, cities, business organizations, and Fortune 50 companies, developing effective and economic zero waste management projects is an all-hands-on-deck endeavor. Solid waste management is often a 'hidden' service provided by organizations that only becomes an issue when not done correctly, which provides outsized incentives to maintain status quo operations and complicates the development of zero waste plans. Any change to solid waste collection practices is a potential for public pushback. Therefore, proposed zero waste projects must meet exacting criteria for diversion goals, economic viability, and collections practices. This project aims to build a portfolio of economically viable zero waste management projects to substantially increase NAU's waste diversion and bolster its sustainability reputation while helping the City of Flagstaff meet its zero waste goal.

I have known and worked closely with members of the project management team. I served on Darren Bingham's master's committee, interacted with him in the classroom, and we have co authored papers for peer review. Darren has proven himself to be a strong leader, a creative innovator, and an effective project manager in each of these interactions. Both Josh and Annie have experience working zero waste events for Praxis Waste Solutions, a company led by Darren Bingham. They have volunteered numerous hours for The Azulita Project (a local waste-related non-profit). Annie is also a City of Flagstaff Master Recycler. Finally, given the team's solid analytical background, I believe they are well suited for this research project.

The research team is excited for the opportunity to build this project and develop strategies to reduce NAU's environmental footprint. Therefore, I'm highly confident that this project will succeed if funded by The Green Fund.

Sincerely,

Richard R. Rushforth, Ph.D., M.B.A.

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