# *Thank you for your commitment to green initiatives at the University of Illinois. One of the ongoing requirements listed in the terms of the funding agreement for your project is the submission of semesterly reports with key information about your project. In addition to this form, please provide additional financial documentation and/or progress photos if available.*

# *Please be as accurate as possible in describing the project (including possible setbacks or challenges in meeting the initial goals of the project). Not fully meeting your project's goals will not disqualify you from making future funding requests as long as your reports are as complete and accurate as possible. If you have any questions, please contact the Student Sustainability Committee, at* *sustainability-committee@illinois.edu**.*

**Project Name:** Environment-friendly phosphorus filter from fly ash

**Date of Report Submission:** 1/9/2018

**Project Purpose:**

The aim of this project is to develop ceramic pellets using fly ash and other additives to remove dissolved phosphorus. The outcome of this research will reduce fly ash disposal to the landfill, improve water quality due to reduction in phosphorus pollution, and also train undergraduate students in research.

**Detailed Accounting of Expenditures to Date:**

During the fall 2017, the following expenses incurred for this project:

Undergrad hourly wage: $985.14, material and supplies: $94.34

**Project Progress to Date:**

During the summer and fall 2017, we manufactured fly ash pellets and used them in laboratory experiment to evaluate the performance in removing dissolved phosphorus in water. We built a laboratory scale bioreactor and filled the two chambers with woodchips and pellets to remove both nitrogen and phosphorus from the water. The results from this experiment was promising. We have recently submitted a journal article based on the experiment that we conducted during 2017-fall semester.

**Student Involvement and Outreach to Date:**

During the fall 2017, an undergraduate hourly was working on this project. The laboratory experiment was conducted by a visiting scholar working in my lab and the student was helping in water sample collection and analysis. This arrangement helped to leverage the support from SSC with a self-supporting visiting scholar to conduct the laboratory experiment.

**Marketing and Promotion Efforts to Date:**

In order to disseminate the finding from this study, we have submitted a research paper to an international journal based on the laboratory experiment conducted during the summer and fall of 2017. The article is currently in review process.

**Additional Comments:**

The visiting scholar who was working on the project returned to his home country. Therefore, I plan to involve two undergraduate students to conduct the follow up experiment during the spring 2017 semester.