



Colorado Science and Engineering Fair

2025 Individual Project Abstract Form

Please print 2 copies of the completed form. Sign both copies, keep 1 for your notebook and submit 1 copy to your Regional Fair Director with your other paperwork.

Title of Project: Self-Sustaining Water Flow

Finalist's Name: Zachary

School and City: Limon High School Colorado

Sponsor's Name: Becky Thompson

Category: Engineering

Division: Senior (grades 9 - 12)

Abstract (250 words or less):

In today's world electrical energy is substantial in everyday operations. Ways of creating energy that are not harmful to the environment as well as perpetual have always been sought. Through this project there is an attempt at creating a perpetual system for this year's project to then apply to generate energy to over compensate for energy input used in a later project.

This system utilizes an auger to transport water upwards and a drive chain pushed by falling water to turn this auger. To add to the amount of water there is to push and make up for the eventual loss of system movement through friction, there is a USB powered pump to bring water to the drive chain. This system is completely sealed to contain all water without any leaks. The overall goal is that energy generated exceeds that required for the input to the pump providing extra usable energy.

After all testing and additions, this specific design does not work. The gearing system is fully functional, water can be transported upwards, and the water is contained, but there is not enough weight from the water to push the drive chain making the entire system not effective to run. From the many faults shown through the creation and testing, advancements will be made.

I hereby certify that the above statements are correct and the information provided in the Abstract is the result of one year's research. I also attest that the above properly reflects my own work.

Finalist's Signature:

Date:

In addition, all students must complete the ISEF Student Checklist (1A), Research Plan, Approval Form (1B), and Checklist for Adult Sponsor (1), and any other ISEF forms required for this type of project. See the International Rules and Guidelines for form requirements. Return COPIES of all of these forms to your Regional Fair Director with you Finalist Verification/Permission Form. **A signed copy of this form must be included in your notebook.**