

Forge Garden

Water Feature

- 1) Project Description
- 2) Interview Summary
- 3) Brainstorm
- 4) Research
- 5) Design



Project Description

- **Collaboration** with the Santa Clara University Engineer 110 Group, Muwekma Ohlone Tribe and Forge Garden
- For the **Muwekma Ohlone Tribe** and the **general community**
- **Objective:** Create a vertical water feature, where the sound of running water could be heard
Integrate decorative features that resemble Muwekma Ohlone Tribe such as abalone shells

Interview Summary

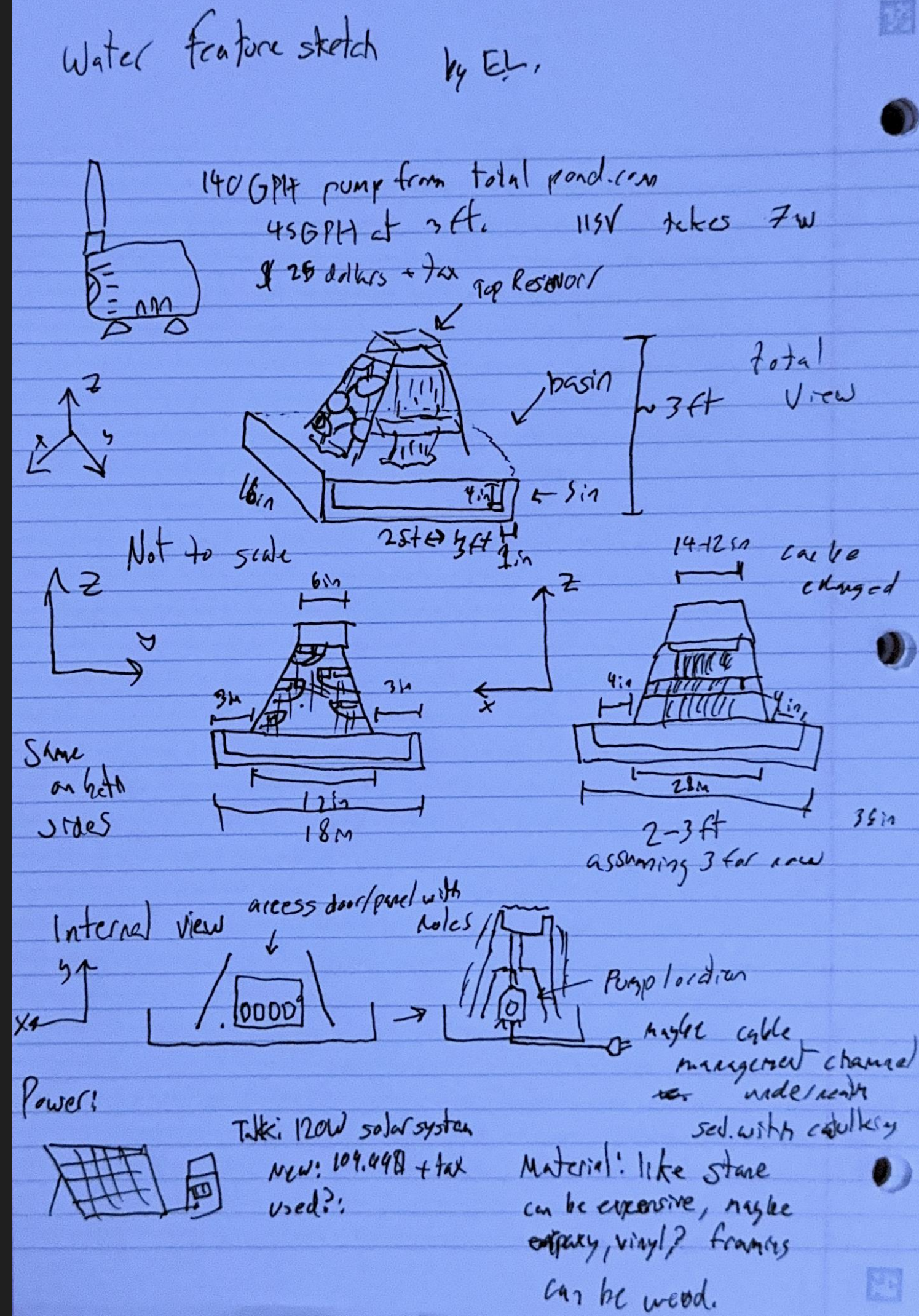
Forge Garden: Water Feature

- Abalone shells are an importance to the Muwekma Ohlone Tribe
- The water should fall vertically, and the fountain itself should be relatively small
- The system should be on 24/7 using renewable energy
- Cares about longevity, but can have some maintenance necessities aspects
- Abalone shells are emphasized (we don't know if she wants it on the fountain or around)

Brainstorm

Credit: Erick Lopez
Idea 1

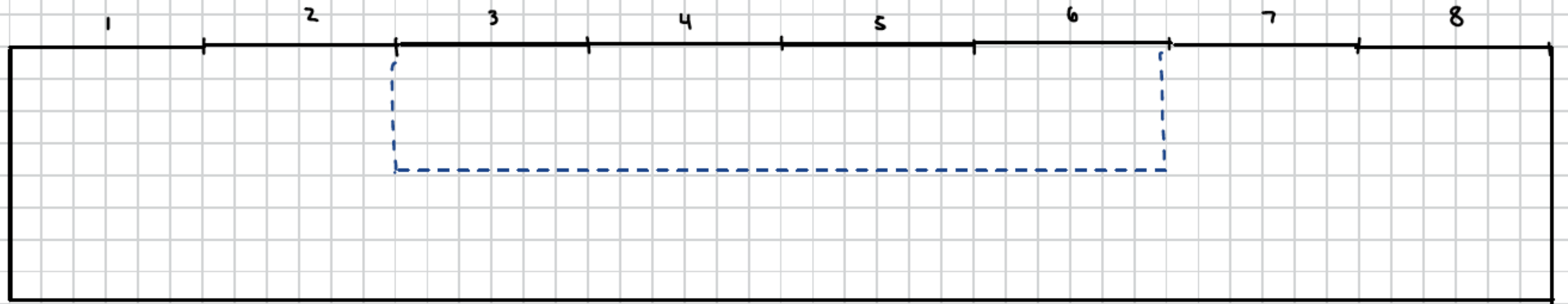
Forge Garden: Water Feature



Brainstorm

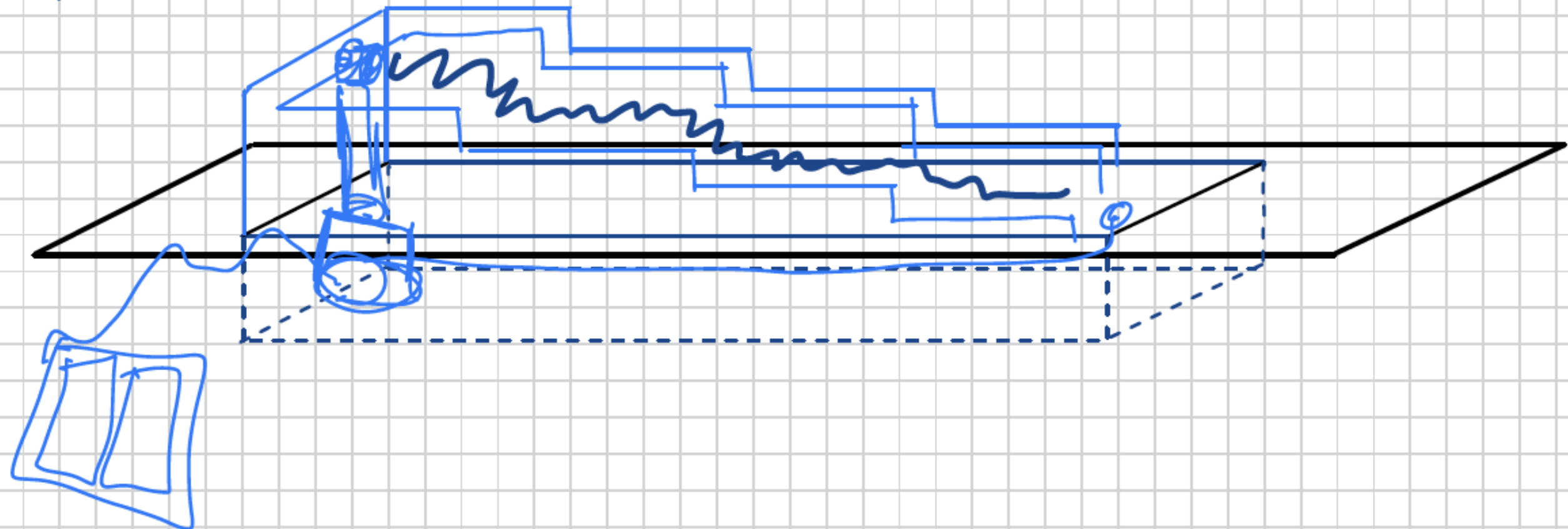
Forge Garden: Water Feature

Credit: Tiffany Doan
Idea 2



cost :
solar \$63.99 / \$16.99

#1

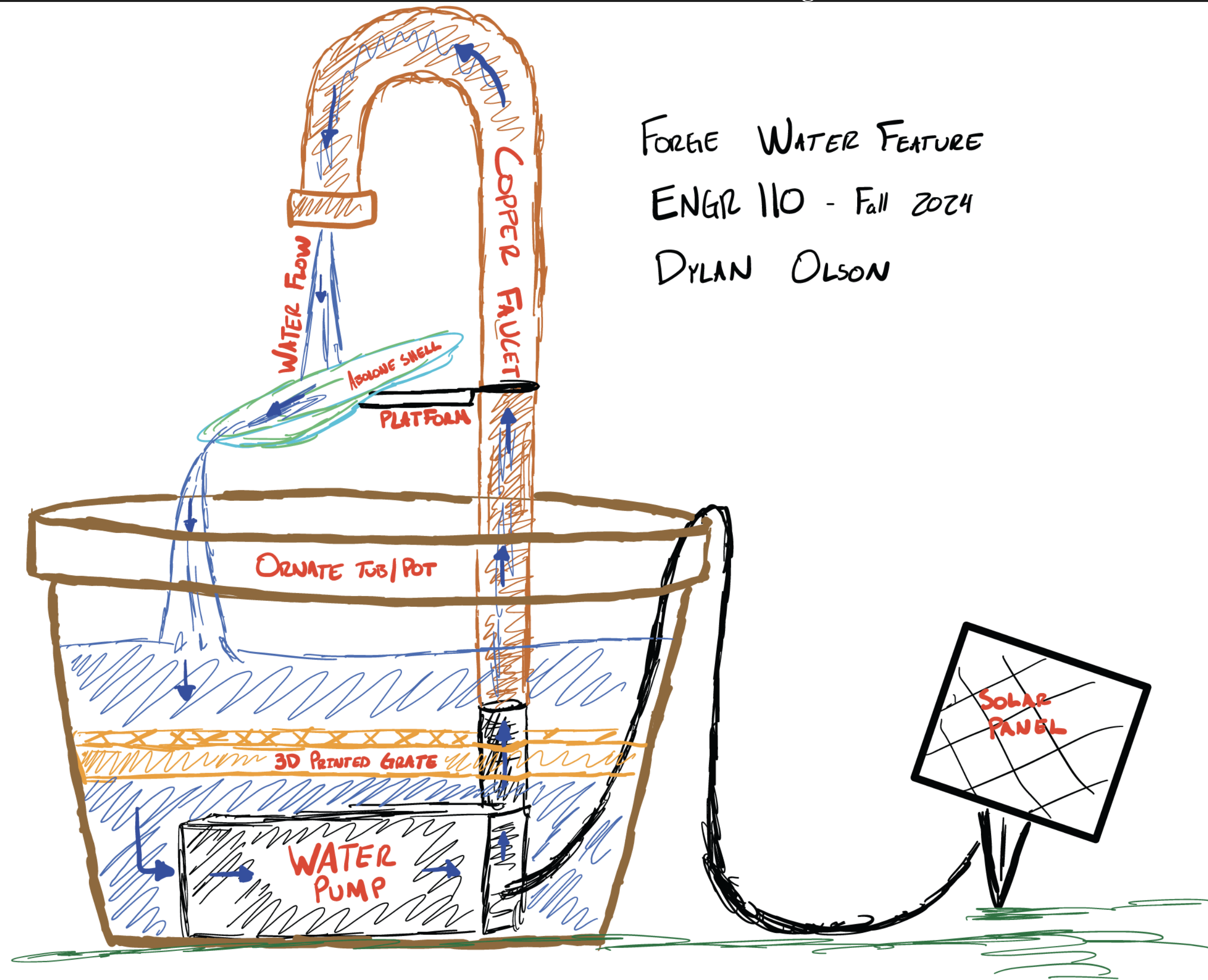


Brainstorm

Credit: Dylan Olson

This is the idea we have collectively decided on. Forge Garden, Muwekma Ohlone Tribe, and us, all think this idea would be the most viable to implement.

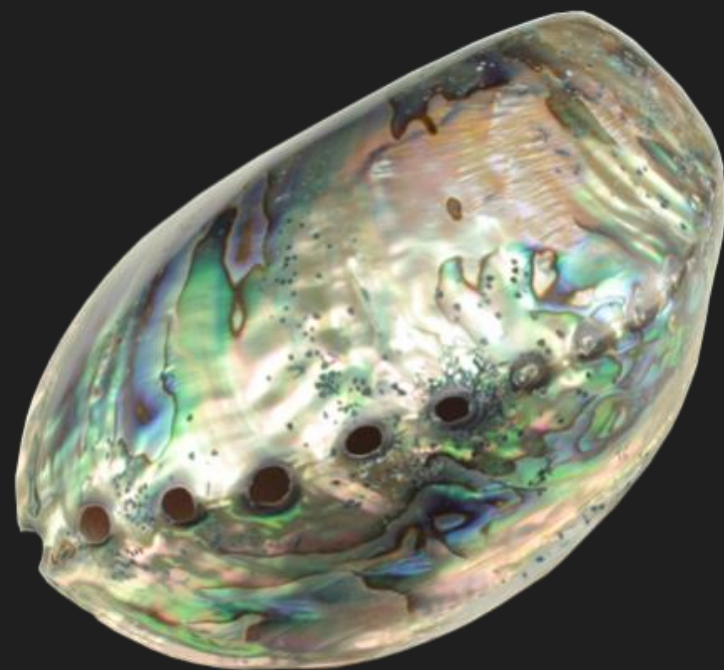
Forge Garden: Water Feature



Research: Part Analysis

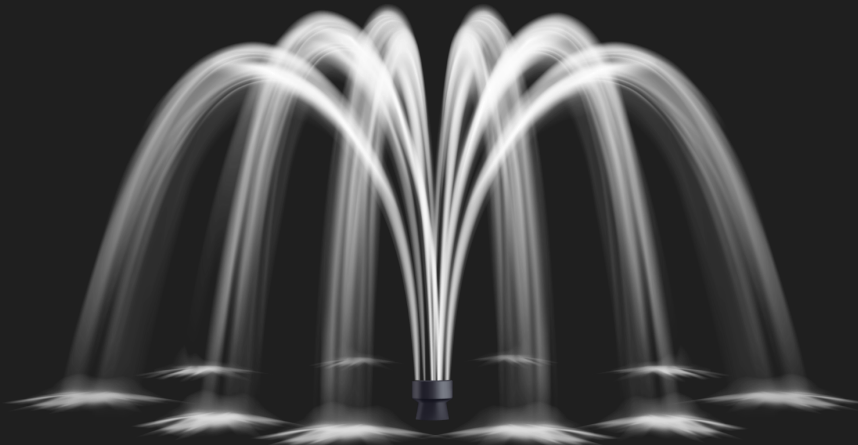
Elements that are needed

Forge Garden: Water Feature



Abalone Shells

Aesthetics



Water Feature & Catchment System

Core of Our Project



Some source of renewable energy

Additional Benefit



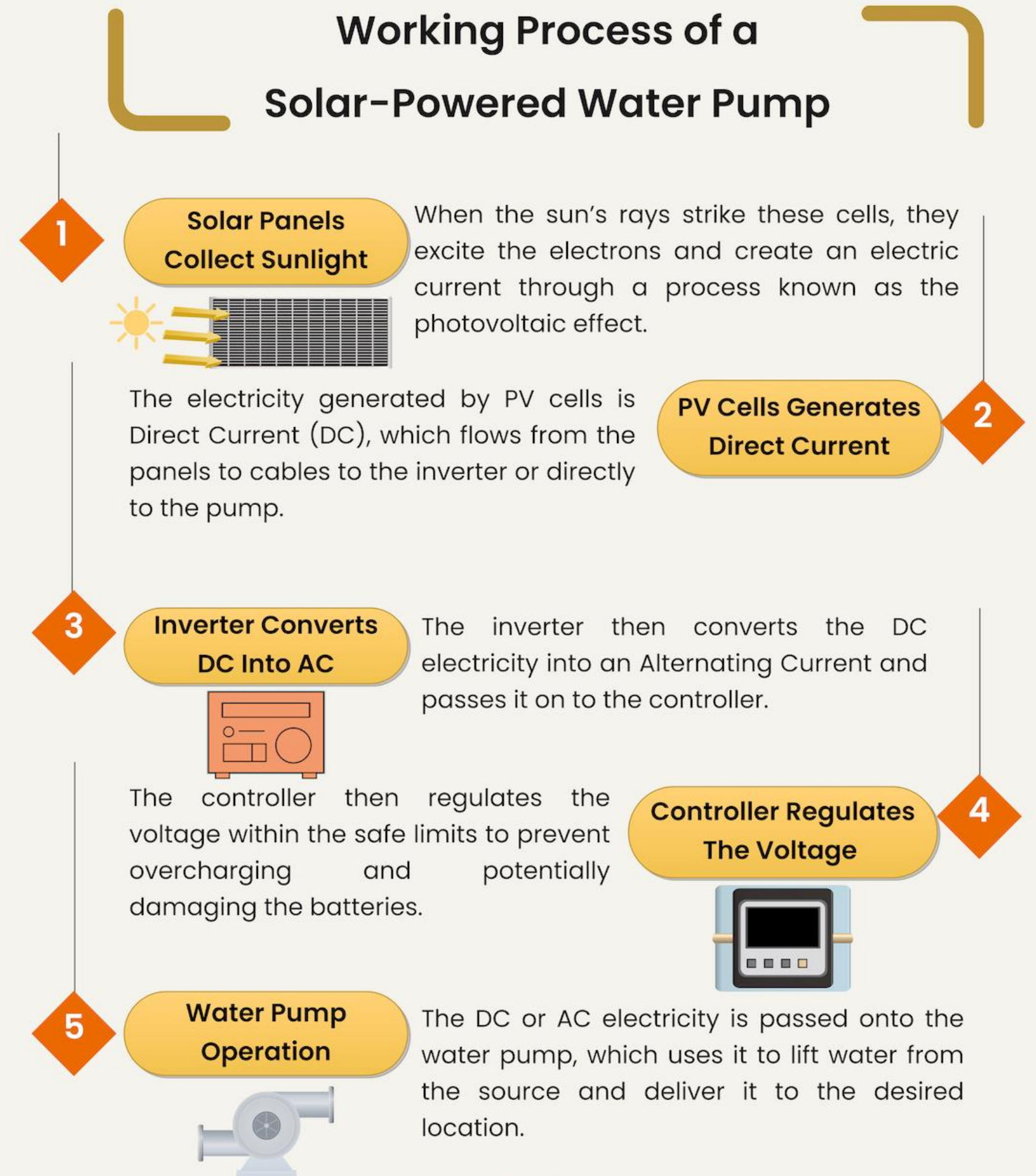
Plant Bed (provided)
What we are working with

Info on Solar Pump

Battery Capacity in Wh x Battery Efficiency / Wattage = Total Time

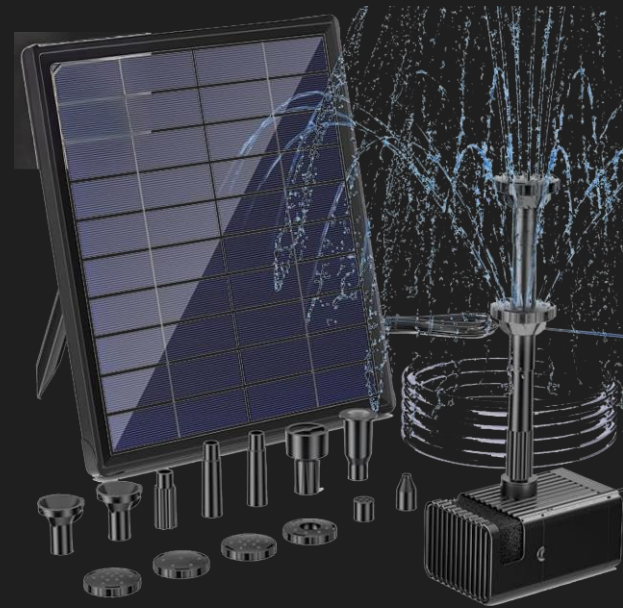
**Runtime Calculation will differ for each pump
We will consider the efficiency, and power
factor of the battery while selecting our parts.**

Source



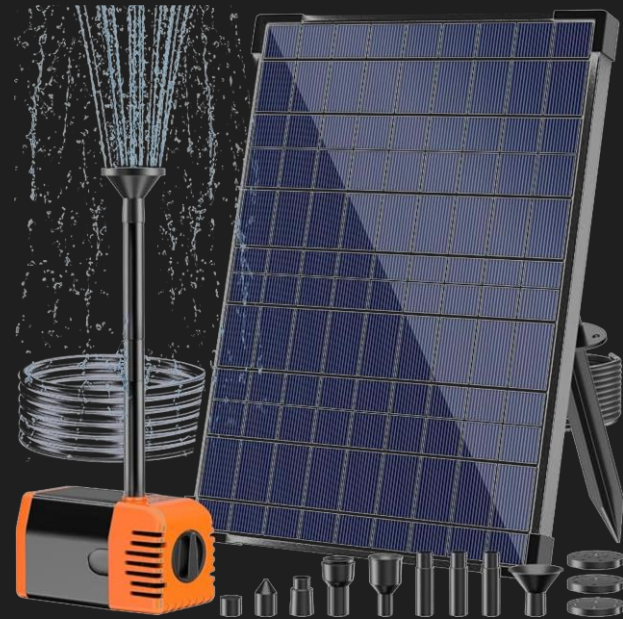
Cost Analysis: Water Pumps

Forge Garden: Water Feature



\$25.99

- + 6 W, 80 GPH
- + 3000 mAh Battery Backup
- + Cheap



\$64.99

- + 25W, 410 GPH
- + Sound will be loud
- No reserve battery



\$83.99

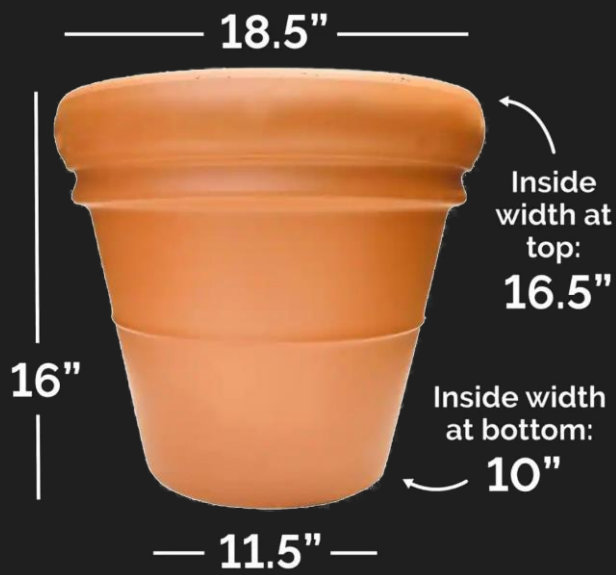
- + 25W, 410GPH
- + Backup battery available for purchase



\$35.99
+ 2600 mAh

Cost Analysis: Pot

Forge Garden: Water Feature



\$39.97

- + 18.5" x 16"
- + Good dimensions
- Low stock

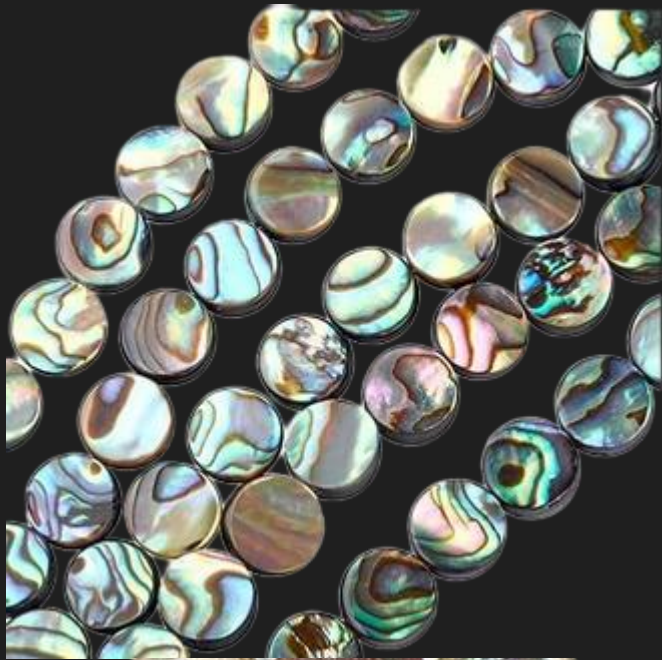


\$29.97

- + 19.5" x 17"
- + Cheaper

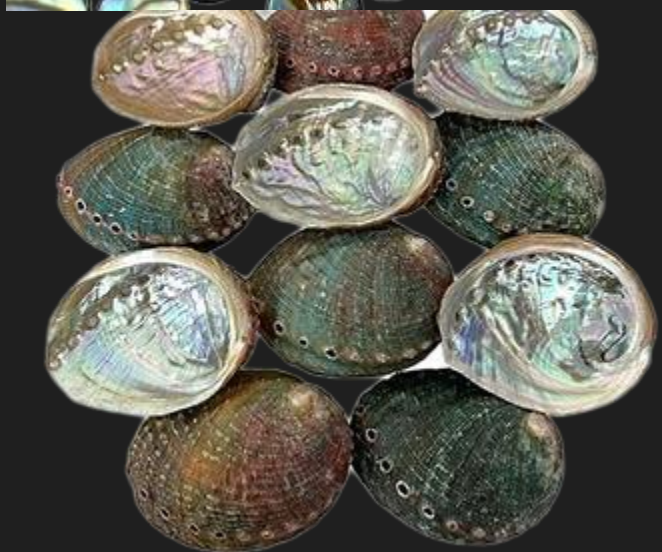
Cost Analysis: Abalone Shell

Forge Garden: Water Feature



\$15.99

- + Cheap
- + More reflections and coverage



\$28.99

- + Full shells
- Pricy



\$17.97

- + Many Shells
- Looks less like abalone
- Less shiny