Locorum Gigantica

By building large scale versions of local flowers and using them to collect, filter, and distribute water and solar power we intend to merge the use of technology and art to convey the beauty, diversity, and usefulness to visitors of fly ranch.

Our experienced team of engineers, artists and builders will create steel flowers with modular steel and coated stems to filter water to the large bases. Along with the water we will use sunpower c60 solar cells to build custom arrays on each of the flowers petals. Storing this power for use in 200ah gel type batteries. Visitors will be able to access this power for charging as well as powering any lights for the art piece (which can easily be switched off for the ambiance of night on the ranch.) Sun and rain are the inputs for this project which will output into potable water and usable electricity. To add to the art story plaques will provide information about the flower and its uses as well as the water and power systems within.   
  
Our design is low maintenance and will require no user input to operate on location. This allows for a very small need for yearly maintenance including:

* replacing the water filtration materials estimated every 5 years
* replacement of the batteries approximately every 5 years.
* Solar panels need to be cleaned occasionally for better performance.
* Components will be made to be modular which will ease servicing or replacing items for any reason.

Our flowers will collect 200 Amp-hours estimated and store a minimum of 100 gallons of water per placement. Approximately every 5 years the battery and filtration materials will need to be fully replaced and disposed of. Batteries can be recycled. Filtration materials can be composted.

To obtain this goal with as little disruption to fly ranch as possible our plan is to fabricate in Portland Oregon and assemble on Fly Ranch when the time comes. The following is a list of digging and holes that need to be made for installation:

* Water barrel anchors minimum of 3 per barrel 1-2 meter in length
* Electrical cables trench buried a minimum of 1 meter underground and 3 meters from the water collection barrel.
* Water line to be buried ½ meter underground and ½ meter away from the water collection barrel.
* The maximum affected area for a flower cluster is 4 meters.

Flowers and stems will be mostly made of steel, powder coated for longevity. The rainwater collection barrel will be made of plastic. Solar cells and their components will come from the manufacturer, as packaged, however their layout will be based on style of the flower. Fully installed the footprint of the water barrel is expected to be 2-3 meters in diameter and 3-4 meters in height.

Conceptual Cost Estimate: 1 flower bunch attached to a rain barrel/s with output housing for electrical and pump to potable water.

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| Budget | |
| Solar Cells | 325.00 |
| Connectors | 180.00 |
| Battery | 449.99 |
| Wiring and Connectors | 150.00 |
| Battery Housing | 99.99 |
| Steel for Flowers | 1,000.00 |
| Stem Steel | 2,500.00 |
| Leaf Steel | 1,500.00 |
| Powder Coating (we do know a local) | 2,000.00 |
| Rain Water Barrel | 200.00 |
| Water piping | 200.00 |
| Water Pump | 59.99 |
| Anchors | 361.96 |
| Filtering supplies | 780.00 |
| Research and Development | 1000.00 |
| Tools | 1,200.00 |
| Budget Creep | 1,200.69 |
| Total | 13,207.62 |

Design testing and validation will happen in Portland on a smaller scale to test all engineered concepts. Design will incorporate materials and coatings that can withstand the weather and environment of the Black Rock desert without degradation or damage to the surrounding area. Material type should reduce the amount of maintenance required. Coloring and material to be as close to natural surrounding habitat to blend into the surrounding area and affect local wildlife.