**REGENERATING FLY RANCH**

The Paiute people of Nevada's great basin have a particular ethos about living with nature in treating the land as if it were their own backyard. Instead of seeing nature as a resource, they cultivate the land for the benefit of it. Thousands of years ago, the Paiute dug irrigation ditches that routed runoff from melting Sierra Nevada snows into the valley. Unlike modern irrigation practices, the Paiute didn't channel the water to serve specific parcels of land; instead, they looked at the entire landscape as a garden and made the valley bloom with wild, native plants. The extraction of various natural resources in the region surrounding Fly Ranch has been disastrous for the environment. Water resources have depleted through the canal, and mining and industrial farming continue to damage the ecosystem. Our proposal aims to restore this harmonious relationship between the Paiute people and the land.

**TECHNOLOGY**

To achieve our goal, we plan to use technologies based on autonomous infrastructure to harvest invasive species, plant native vegetation, and create an irrigation system on the grassland. These rewilding vehicles will collect invasive plants on Fly Ranch, grind them up, and pile the material on the ground in a pre-determined pattern. Once the piled organic matter has decomposed, seeds of native species will be spread on it. The pattern will slowly become visible as the native plants grow, thus forming a large-scale land art. The rewilding vehicle is a small, lightweight electric vehicle capable of having different tools attached to it, like an autonomous farming robot commonly seen today. The attached tools will be available for operations such as collecting and grinding the plants, piling the organic materials for decomposition and spreading native species' seeds.

**ACTIVITY**

This proposal would support community engagement programs to teach Paiute traditions and volunteer works. We believe this project will allow Fly Ranch to lead by example and demonstrate how we can reverse years of poor land treatment through smart and sustainable solutions.

**OPERATION**

To operate our system, we've centered it around a number of hub areas where there will be solar panels to provide power to the autonomous rewilding vehicles. Along with the vehicles themselves, tools for other various operations will be needed, and shelters to protect the vehicles. Instead of abiding by the Paiute traditions and Burning Man's ethos of "leave no trace" we propose any structures be bio-degradable 3D printed structures. These structures can also provide unique opportunities for creative placemaking and community engagement programs such as summer camps to learn about Fly Ranch and responsible, sustainable infrastructure.

**OUTPUT**

The autonomous infrastructure's waste output creates a loop cycle where the waste would be compostable and used to help the native plants grow—the ecological transformation itself, from harmful invasive species to native species.

**COST ESTIMATE**

Required number to be developed with Fly Ranch Team

* Autonomous Vehicles: Approximately $20,000 per vehicle
* Solar: Approximately $400 per panel

**STRATEGY**

Our strategy of rewilding infrastructure would happen over a multi-year process. This strategy would include the deployment of the autonomous robots and the solar panels needed to power them. After their deployment on-site, they will begin removing invasive species, water distribution, and seed planting to start the land art cycle.

**ENVIRONMENT**

The environmental impact left by the autonomous vehicles will be minimal. Inevitably, the machines will leave tire marks on the landscape, but in taking inspiration from the traditional Paiute irrigation system, these marks will guide and spread water throughout the land. The design of our proposal is ephemeral. As the rewilding process progresses and local ecology improves, the artificial pattern will slowly fade as nature begins to take over.