CRYING STONE

The resource of life is water.

Desert landscapes are gaining ground. Nature has organized itself, through adaptation and developed mechanisms to draw water from the air. But due to global warming, water evaporates quickly and plants are blown away by the wind because they cannot take root, which has a big impact on animals and insects.

Fly Ranch area has these kinds of conditions. It has been part of the Burning Man area since 2016 and is located 5 miles from the Black Rock City and in the short distance the nature changes a lot. With a size of 3800 acres, the Fly Ranch forms an extreme ecosystem with hot summers (105°F) and cold winters (0°F). It gives places to many different animals and more than 100 plant species, as well as three geysers.

Behind that background lies the question what impact we (humans) have on nature. More than ever we have to ask ourselves this question to reduce the CO2 emissions and take the laws of nature seriously and adapt to them - not the other way around. Similar to nature, our proposal is to draw water from the air in order to support the already existing nature without changing it, by creating water for animals, nature and human beings.

IDEA

Air always contains a certain amount of water, regardless of local ambient temperatures, humidity condition thanks to a geyser in the south west of our proposition. The idea is to develop a system to produce water. For this purpose, a construction is proposed which catches the smallest particles contended in wind morning fog and lets them condense.

This will be done in two ways: First it stores rainwater, second it catches fog drops in a fine-meshed net of recycled material, and it provides a surface on which dew can form at night. Natural phenomena such as gravity, condensation and evaporation are used to obtain water. The suggested water is then filled into a tank, which can be used by people to drink. The surplus is distributed into the environment via a pipe system and irrigates the dry earth.

MYTH

The starting point is a creation myth of the Paiute people. They are different tribes, which according to the legend originate from a father. One of their myths describes the story of the mother of all Indians and her children. In order to appreciate the Paiute culture and to continue telling their story and to live their way of life in harmony with nature, the myth is transferred into an object. It describes the Myth of “Stone Mother”.

How to quantify the value of a design? Our proposition is to make the transition from a tale to an object and to testify of Paiute relationship with nature.

The design of the volume synthetizes our transcription of the myth into architecture: Together they represent the world complete and stable but then they separated and they each turn in one direction. This Object is a tribute to the mother who cried so much because of it that she turns into rock.

In order to communicate the legend, this object aims to create a place with an atmosphere conducive to sharing stories. Paiute relationship with nature is inspiring and take part into actuality: Now more than ever before, we need to live and build zero carbon foot print and take responsibility for nature. The proposition demonstrate the way of life and tells their story.

CONSTRUCTION

According to the relationship Paiute people have with nature we were looking for onsite resources that allows us to build with zero carbon footprint. Compacted Bentonite a natural clay product of Northern Nevada will be used to build the water tanks. This material is water-resistant. The water storage system works with a ventilation system inspired form the windcatcher. Hot air comes inside meets the water and goes out fresher. The walls varying from 7.874015748inch to 1ft+3.748031496inch for stability and are used as water conservation. In this structure holes have been drilled to Cloud Fisher’s 3D mesh nets and to recover the water contained in the fogs. The structure provides shade during the day and faces the prevailing wind to limit it in addition to irrigating the soil.

The water Installation is located in the Northern part of Fly Ranch in the diagonal of the prevailing wind to recover the humid air from the geysers and transform it into water. The modules are composed in three stages: the water tank on the ground, the net fog and the windcatcher also used to recover rainwater. Each module has its own water tank independently of the others. The last module is used to park motorcycles and store the veiling. The curtain used to make shade is recyclable from company specialized in advertising printing in Nevada. This material is imputricible, fireproof and can be stretch.

Nets Fog are based on CloudFisher technology from *Aqualonis*. They can capture between 10 and 22 liters of water per square meter of net. It has 5812.511 sq ft of net with two nets per hole, which would recover nearly 11,880 liters of water per day. Each tank can store 6,000 liters of water and a 161.4586 sq ft net produces 330 liters of water per day, which represents a storage capacity of about 15 days, with counting the water used to irrigate the soil, about 50 liters of water per day. After two weeks storage the structure can provide 150 000 liters of water.

IMPACT

The excess water is diverted by the pressure through pipes with small holes and supplies the dry ground with water. Part of this water is stock in recyclable terracotta jars as water sources for animals and birds. In the long term, this will change the first sediment layers: Due to the constant humidity, vegetation can take place and take roots in the earth despite the high heat and dry nature. The anchored roots mean that the vegetation is not blown away by the wind and a new biotope can be created, even if the installation is dismantled again.The increase in vegetation and the regression of the Playa will allow a better air quality as well as an enriched soil will again be able to store carbon.

Furthermore, it can also be used for an inhabited place: the water is kept for drinking and the full sanctuary can provide a base of 150,000 liters of water to festivalgoers, or 2 liters of water per day for 11,000 people for 1 week. Once the festivalgoers leave the water returns more abundantly to the growing vegetation.

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| MATERIALS | COMPAGNIES | QUANTITIES | PRICES |
| Net fog | Aqualonis  Germany | 5812,51sq ft  (36 nets) | 404 000 dollars |
| Bentonite | 3D Printers WASP | 187034 gal |  |
| Curtain | Compagny Northern Nevada | 5274,32 sq ft | Free (recyclable) |
| Irrigation system | Compagny Northern Nevada | 1181ft+1in | 400 dollars |
| Terracotta jaars | Garbage dump  Northern Nevada | 108 jaars | Free (recyclable) |