**GHOST DANCE 2.0 RANCH**

INTRO

*Brigadier George Crook, Department of the Platte was interviewed early in the Bannock War of 1878 by a reporter from the Omaha Herald:*

*Gen. Crook:…The buffalo is all gone, and an Indian can’t catch enough jack rabbits to subsist himself and family…What are they to do! Starvation is staring them in the face, and if they wait much longer they will not be able to fight…*

*Reporter: It seems to me that it would be cheaper to treat the Indians justly.*

*Gen. Crook: Of course it would be cheaper. All the tribes tell the same story. They are surrounded on all sides, the game is destroyed, or driven away, they are left to starve and there remains but one thing for them to do-fight while they can. Our treatment of the Indian is an outrage. (1)*

Today the outrage goes on and it isn’t limited to Native Americans: it applies to the environment and to the animal kingdom as well.

Western anthropocentric society in its expansion process tends to get rid of all species hampering its march. The American West history epitomizes this paradigm: in a short span, at the turn of the nineteenth century 70 million buffaloes were slaughtered, Native Americans were made captives and forced in reservations. Space had to be cleared for the human horde headed west.

Sarah Winnemucca, granddaughter of Captain Truckee, daughter of Chief Winnemucca, tells it this way: *“I was a very small child when the first white people came into our country. They came like a lion, and have continued so ever since, and I have never forgotten their first coming. My people were scattered at that time over near all the territory now known as Nevada”*.(2)

Sarah who would become an interpreter and an ambassador for the Numa, the Northern Paiutes, witnessed the coming of settlers, the harshness of life in reservations, the Bannock war and exile to Yakima. In her constant struggle to protect her people she went to Washington D.C., set up a school and wrote a book.

In the final chapter, recalling exile to Yakima, she wrote*: ”We traveled all day. It snowed all day long. We camped, and that night a woman became a mother; and during the night the baby died, and was put under the snow. The next morning the mother was put into the wagon. She was almost dead when we went into camp. That night she too was gone, and left on the roadside, her poor baby not even covered with snow. …At least we arrived in Yakima…At the end of the ten days we were turned over to Father Wilburn. …we were turned over to him as if we were so many horses or cattle….They had a kind of shed made to put us in. You know what kind of shed you make for your stock in winter time. It was of that kind.”*

*1. from Sarah Winnemucca of the Northern Paiutes\_Gae Whitney Canfield*

2. *from Life among the Piutes\_Sarah Winnemucca Hopkins*

ENVIRONMENTAL IMPACT

Native Americans were forced to live in reservations. Their nomadic habits, like those of the buffaloes” didn’t fit in a system where the land has to be parceled and sold.

Cities and cultivated land expand on a dramatic scale. We coined the term “sprawl” to depict the limitless, formless growth of cities to the detriment of the natural environment; and what about farming and our relationship with fellow animal species?

We tend to consider ourselves one step above: animals to us are either pets or food. When they are food, very few have the privilege to graze on green pastures, meanwhile the rest of them have a very short life of fattening in prison.

We need to rethink our way to inhabit the planet.

The land is not only ours, but we also share it with other species.

When we think about the environment we are usually concerned with the use of renewable energies, CO2 emissions, deforestation.

It’s not only that, but there is also more: we must consider the way we parcel the land is paving prairies to build parking lots and clearing forests to get bigger farms is an outrage too.

What if we imagine a place where humankind moves upward, towards the sky?

What if agriculture is carried on in a more efficient way in vertical farms?

These questions led to the “Ghost Dance 2.0 Ranch” idea.

Moving upward humankind’s place could somehow realize Wovoka’s vision, slightly different. The wasichus do not disappear, they just move closer to the sky, reducing their footprint on the planet.

A new kind of “reservation” concept arises, where humankind’s infrastructures are suspended above the ground to gain a much wider availability of the land. The ranch/reservation concept overturns the meaning of the term reservation pushing it towards preservation: it conveys the value of freedom opposed to segregation, and the Native belief that the land does not belong to anyone.

The Numas would act a major role in the project. Transforming the concept of reservation, the ranch is intended to be operated by Natives. It would offer a place to work, teach and study.

All the food produced in the Ranch would be used to feed the two populations living nearby: Pyramid Lake Reservation (Pop. 1.300) and Gerlach (Pop.201), along with visitors.

DESCRIPTION

As the way we know it, a ranch is an amount of land that supports livestock and horses. If we assume that we need a change of pace in the way we manage humankind’s relationship with food and fellow species, a ranch seems to be the ideal starting point.

The ranch is going to be a lab where zero waste food production is studied and tested, like in Burning Man, the idea behind the festival is “leave no trace”.

Recycling will be a very important activity at the ranch. It will concern both organic and inorganic waste. Recycling facilities are located below the ramp.

On the ground level a spiral ramp acts as a welcoming gesture inviting visitors.

The first section of the ramp is an earth berm.

As the ramp gains height, it becomes a shelter for animals. Livestock will be part of the Ranch, but no violence will be inflicted upon them. All trips will be made by horseback or by electric devices.

The ramp ends at Paiute terrace, which is the roof for the underneath laboratories. They go from traditional farming techniques to agro-biotechnologies, which focus on study and experiment all kind of options available for food.

The plaza is sheltered by a fog catcher, which water is used in the vertical farm. Meetings and festivals will take place on the shores of the central pond, as a reminder of the importance of Lake Lahontan.

From Paiute terrace a slanted elevator leads to the bunkhouse, which is an aerial housing ring.

The vertical farm above the bunkhouse produces fruit and vegetables in a closed, safe, zero waste circuit.

* Hydroponics uses 70% less water
* 1kg of lettuce needs 1 lt of water
* Aeroponic and hydroponic crops grow without soil
* No pesticides needed

A ramp on the outer surface of the vertical farm allows visitors to access the structure.

From Bunkhouse terrace elevators and stairs lead to Sarah Winnemucca Observatory, the uppermost level of the Ranch. From there it is possible to stare at the moon or watch Burning Man from distance during festival days.

EFACTORS

**ENERGY**

***Solar Panels***

Monocrystalline solar panels maximize energy production.

Solid metal structure prevents breakage and corrosion (condensation phenomena caused by extreme temperature range\_ day and night).

*SOLAR PANELS AREA: 2’912 sqm - 655 Kw*

***Wind Turbines***

Wind turbines integrated in the building structure.

*22 TURBINE (Radius: 2.3m) - 22 Kw*

***Bio-Mass Combustion***

Collect organic waste to produce power for the system.

***Geothermal***

Geothermal is used to regulate the temperature of the fish breeding water tanks, bunkhouse, labs, studios and vertical farm.

***Energy Storage***

The system is implemented with back-up batteries to collect excess energy in the daytime.

**WATER**

***Reverse Osmosis Filtration***

Reverse Osmosis Filtration system uses the water collected from the fog catcher. This filtration system removes all heavy metals, chemicals and all particles as small as .001 microns. Once water goes through an RO system it is referred to as “pure”.

***Fog Catcher***

A thin metal web collects the water particles in the air. It also acts as a huge shelter

*WATER COLLECTED FROM FOG CATCHER: 4625 L/ day, (excluded windy days)*

***Ice Production***

Low temperature Ice Vacuum Generation System works with a liquid ring water pump..

The order of magnitude for cost estimate is quite difficult. In terms of costs the investments are beyond 150million US Dollars. But benefits in a different level should be considered.

In the case of selection for the site prototype development, a scale model of the structure would be built, and a presentation would be made at Pyramid Lake to receive all kind of advises.