Desert Bloom
Planting a Paradigm Shift

A desert bloom is a phenomenon that occurs in deserts across the globe. Usually occurring in the early spring time when rainfall in an otherwise arid environment is unusually high, the perfect combination of climatic conditions allows for the simultaneous blooming of a number of desert plant species. The result not only elicits a beautiful landscape but the proliferation of many other species of insects and animals. Like the symbolic solar flowers atop the proposed dwellings in Desert Bloom, our design strives to create a space in which conditions are perfect for both humans and the environment to blossom and thrive.

Energy + Shelter

Desert Bloom proposes two structural forms with an accompanying land management plan for Fly Ranch. The proposed structures provide shelter and energy for the various users of the site, while offering dynamic and flexible programming opportunities for reciprocity and regeneration. Both structures are inspired by the landscape; they mimic biological adaptations, as well as methods used by native peoples that have adapted to the extreme desert climate.

Microgrids are small scale power grids which can function independently of or in collaboration with the traditional main power grid (macrogrid). A microgrid consists of distributed generation (solar PV, wind turbines, etc.), a load (consumers), energy storage (batteries), and control devices to enable the system to work with the macrogrid or independently.

555kWh/month of solar energy produced by each dwelling

- 600kWh/month of solar energy produced by the Hub
- ~4,675 kWh/month estimated peak demand baseline per 50 people
- ~7-8 dwellings number of required dwellings to meet peak demand

Desert Bloom: Planting a Paradigm Shift

Potential Spatial Arrangements

Clusters
Energy Efficiency
Varied Experience

South Facing
East-West Views

Concept Flow Diagram

Upper Flower
Solar Flower
Dome Structure
Bottom Fruit
Bull Thistle

Transmit
Combine
Separate
Modify
Transform

Living
Meditation
Gathering
Maker Space
Greenhouse
Learning
Tools & Equipment
Restrooms
Water
Storage
Food

Microgrid
Main Grid
Community Use

The small and large structures’ forms are taken from a plant found on Fly Ranch – the bull thistle (Circium vulgare). Like the bull thistle, the buildings are spherical in shape, display a logarithmic spiral, use the sun to harvest energy, and are introduced to the landscape by humans.