

# COASTAL RESERVOIR

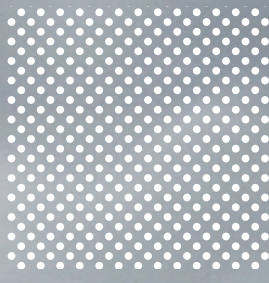
## GATHERING WATER, ENERGY AND BIODIVERSITY

Coastal Reservoir stands as a new paradigm for creating power and water at the coast: the atmosphere of southern California is bound together with its landscapes in a resource-harvesting cycle—an integrated energy ecology. Great pillars of steel and mesh once again punctuate the horizon—recalling the rigs and derricks of an oil-hungry past—but now as symbols of a clean, sustainable energy and water generation. Though driven by wind and waves, this is not a kinetic sculpture. Though modular and floating, the assembled structure is stable and durable. Coastal Reservoir leverages the subtle but continuous shifts in the environment. From the undulating water levels, the shifting daily and seasonal weather patterns, the invisible migrations of seeds.

### SCULPTURE: SOLID & VOID

The total dynamism of an environment is carried in its atmosphere—its temperature, its pressure, its humidity, its chemistry. In Coastal Reservoir, we imagine carving into this volume of air to reveal these properties. With a geometric slices, we cleave the volume into a solid, contained in the red A-shaped steel pillars; and a void, framed and filled by the V-shaped mesh funnels.

Coastal Reservoir sits beyond the breakwater, parallel to the beach. It is a structure that dominates its section of the horizon, but its appearance is constantly changing. Heavy steel, ghostly mesh, and framed void are in continuous play. In summer mornings, it appears as a slender radiant band; in winter months, the morning sun breaks the form into three distinct volumes. At mid-day, the mesh enclosures glow green from the interior vegetation. As the sun sets, the back-lit pillars emerge and the meshes dissolve in shadow. When fog rolls in, the entire structure is obscured, its fuzzy corners merging with the atmosphere. At night, lacey shadows of the up-lighted interior vegetation play across and through the mesh scrims.



### ATMOSPHERE



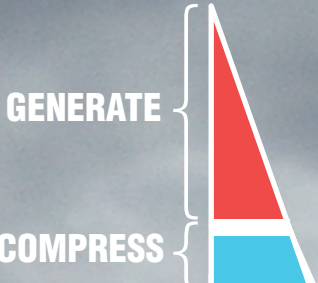
### SOLID

### VOID

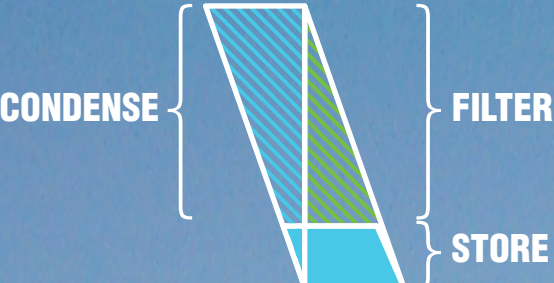


### OSCILLATE EXTRACT

Coastal Reservoir generates power, water and nature by manipulating the natural properties of the surrounding atmosphere. Quite literally, it gathers its resources out of thin air.



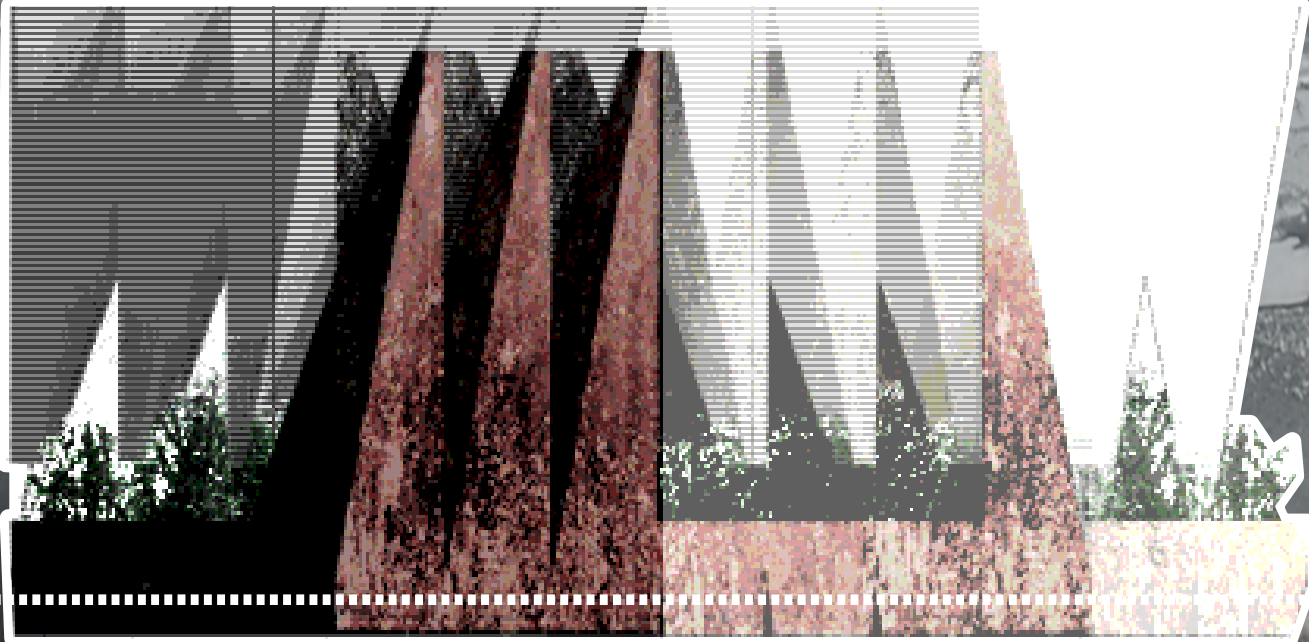
Atmosphere has a local pressure: the steel pillars trap a volume of air that is cyclically pressurized and displaced by the surrounding wave action to drive a bi-directional fan turbine.



Atmospheres hold water as vapor and condensate: the mesh funnels filter atmospheric fog to precipitate fresh water onto the platform below.



Atmospheres move: the Forest block at the center of each island will be established but unmanaged—as any new island, open to colonization by seeds carried on wind and wing.



COASTAL RESERVOIR

### FOG COLLECTION

### ENERGY PRODUCTION

### CLOUD FOREST

### CHANNEL ISLANDS

### LONG BEACH OIL PLATFORMS

### CHANNEL ISLANDS

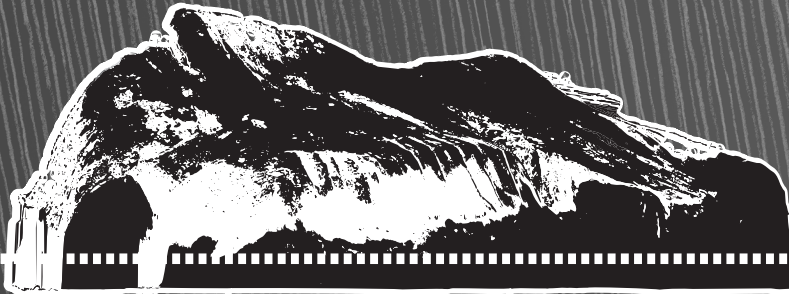
### THUMS ISLANDS

### COASTAL RESERVOIR

### SANTA BARBARA CHANNEL OIL PLATFORMS

### ISLAND GENEALOGY

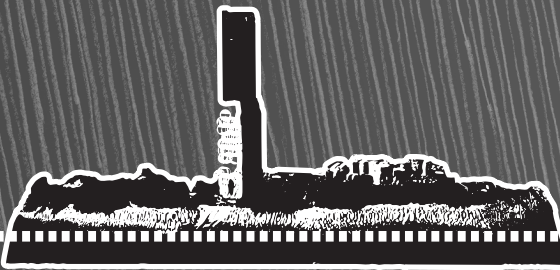
### CHANNEL ISLANDS



### CLOUD FOREST

### LITTORAL ECOLOGY

### THUMS ISLANDS



### ENERGY PRODUCTION

### PLANTED BUFFER COLONIZED SEAWALL

### OFFSHORE OIL PLATFORMS



### ENERGY PRODUCTION

### ARTIFICIAL REEF

The ocean around Santa Monica is full of machines of energy extraction—the man-made THUMS islands near Long Beach, the oil platforms off the Santa Barbara and Los Angeles coasts. This area is also home to the Channel Island, home of unique and rare ecologies.