



# h2grow

Gateway National Recreation Area is comprised of 61% water. As a network of landmasses spread across a vast fluid terrain, GNRA has the unique opportunity to engage in and celebrate the potential of this aquatic landscape.

H2grOw is a conceptual systems design project that draws on techniques of floaters hydroponics<sup>1</sup>, exploring the possibilities of using water as a resource for planting, transportation, energy harnessing, food production and recreation. A fleet of mobile Hydro Pods, measuring 75' x 140', is deployed across Gateway's network of islands and peninsulas. Each pod is a hydroponic eco-system grown completely without soil. This new landscape is supported primarily on a pontoon ring structure, beneath which hangs a semi permeable membrane housing all essential nutrients.

Sorting Landscape: The principles of data sorting are applied to this large array of mobile landscape "particles", allowing for unlimited reconfigurations and combinatorial complexity. As all robust ecosystems depend on a balance of conditions to maintain a dynamic equilibrium, H2grOw provides a level of responsiveness suitable for the natural rhythms of Gateway. The landscape units self-sort and cluster to form diverse combinations of both similar and dissimilar plant species and environments.

Floyd Bennett Field, acting as the public and programmatic center of Gateway, is a microcosm of the entire network of islands in the park. The hardscapes of the existing field are flooded, allowing the Hydro Pods to circulate through the site. The newly formed water bound landmasses of FBF support a variety of recreational and cultural programs that are destinations along the vast circuit of ecologies that comprise Gateway.

<sup>1</sup>Hydroponics (literally "water working") refers to a method for growing plants in a nutrient solution without soil. The science of hydroponics proves that soil isn't required for plant growth but the elements, minerals and nutrients that soil contains are. A hydroponic solution provides the exact nutrients needed for plants in precisely correct ratios.  
Disclaimer: Almost any terrestrial plant will grow with hydroponics, but some will do better than others.