

Martin Felsen and Sarah Dunn, UrbanLab (Chicago, IL)

Collaborators

UrbanLab (Sarah Dunn + Martin Felsen with Ananth Robert Sampathkumar, Carlos Bayod, Ana Torres); Gensler (Elva Rubio, Jerry McElvain, Jay Longo, Nicole Pechardscheck, Chang Min Lyu, Patty Mayle); Chandra Goldsmith Landscape Architect; Conservation Design Forum (Jay Womack, Gerould Wilhelm, David Yocca); Atelier Ten Environmental Designers (Paul Stoller); Andre Chaszar Structural Engineer.

Water

The Calumet community fought to save Hegewisch Marsh because they clearly understood its ecological and cultural importance. Considering that Calumet's regional wetlands feed the Calumet River, which in turn, feeds 20% of the world's fresh water, we can easily understand that the community saved even more than a single marsh. Our project explores water efficiency in the Calumet region, and establishes methods of efficiently growing clean water for the regional, and in turn, the world's water system.



LOOP²

Our project strengthens both the ecological and social diversity that defines the Calumet region. To this end, we propose to remediate a small piece of Calumet's landscape by setting into motion a series of sustainable environmental LOOPS. These LOOPS include a Wetland Filtration LOOP, a Green Roof Wetland Trough LOOP, a Landscape Wetland LOOP, a Water Reclamation LOOP, a Bio-filter Community Swim Hole LOOP, a Recycled Materials LOOP, Natural Light + Air Courtyard LOOPS and High Performance Ventilation LOOPS.

Wetland Filtration LOOP

Water on the site, and from adjacent streets and parking lots (including the Ford parking lot across Torrence Avenue), is drawn through wetland waterways planted with native plants and into a series of water collection bio-swales. Native plants naturally remove contaminants, suspended solids, hydrocarbons and nutrients from the water. Water entering the collection bio-swale at the northeast corner of the Ford Calumet Environmental Center building is pumped by an aeroturbine to the roof of the building to be further cleaned by green roof filtration wetland troughs.



Green Roof Wetland Trough LOOP

Water on the green roof is used to grow native plantings and cultivate invertebrate species in order to attract birds, visitors and people from the community. The green roof is designed with specific attractors for the community such as urban farming plots, learning gardens and a bio-filtered swim hole. A series of ramps, stairs and pathways smoothly connect interior spaces of the building with exterior green roof programs. Water slowly moving through the green roof wetland troughs eventually drips through interior “straws” and into a clean water marsh at the southwest corner of the new building.

Landscape Wetland LOOP

As water moves through the site, extensive native prairie and aquatic plantings help oxygenate the water and provide a habitat for zooplankton and invertebrates. Our goal is to establish a zero wastewater system. We propose that all water on both sides of Torrence Avenue shall remain on site, and become part of the LOOP filtration system.