

FLOW Narrative Description:

FLOW is a full-circle landscape systems design that collects, diverts, remediates, oxygenates and filters water on FlyRANCH. FLOW Utilizes the philosophy of Permaculture which is a set of design principles centered on whole systems thinking, simulating, or directly utilizing the patterns and resilient features observed in natural ecosystems. It uses these principles in a growing number of fields from regenerative agriculture, rewilding, and community resilience. Site selection for FLOW would be determined using best practices in Landscape Architecture including LiDAR Technology merged with oral histories of local people. This proposal does not attempt to place the prototype but suggests usage of the systems in general terms. Both my training in landscape architecture and permaculture preclude me from assuming location or placement. Final placement will be determined through critical analysis, citizen engagement processes, Flyranch scientists and consultation of the following individuals with whom I have a professional rapport:

*Dr. Lynn Paxson, AIA Native American Professor of Architecture Iowa State University
Ian Lipskey, Senior Hydrologist at eDesign Dynamics, NYC
Penny Livingston-Stark, Permaculture Designer and Regenerative Design Institute*

FLOW is a full-circle integrated sustainable landscape systems design intended to be a co-creative process from visioning to site implementation. The systems design are comprised of two primary components, one linear and the other a counter-point. The Raincatchment Cape is the linear form and offers opportunity to create a water-harvesting system for on-site ag production. The Biodynamic Flowform is a dynamic earthwork that provides for water filtration, oxygenation and oasis. These forms both utilize solar-voltaic landscape fabrics that provide electricity, up-cycle waste, harvest water and provide food.

FLOW takes as its case study, Running Fence, which was both immense in scale and process. Running Fence was 18 feet (5.5 meters) high and 24.5 miles (39.4 kilometers) long. The art project consisted of 42 months of collaborative efforts, 18 public hearings, three sessions at the Superior Courts of California, the drafting of a 450-page Environmental Impact Report and the temporary use of the hills, the sky and the ocean at California's Bodega Bay. Imagine Running Fence as an ecological systems design, you have FLOW.

FLOW utilizes three landscape installations, Biodynamic flowforms, The Raincatchment Cape and Bioform with is a combination form utilized as a small outdoor classroom/ gathering space.

Biodynamic Flowforms are green infrastructure used to filtrate and oxygenate water at collection “key-points” in Keyline Grading Systems Design. They take their biomorphic form from the concrete channels created by John Wilkes and used in Biodynamic Farming. However, the materiality of the forms and their landscape setting differ as they are designed to be an integrated into raingarden and bioswale installations using HugelKulture to create their mounded berms. Like Wilke’s Flowforms, the water running into the forms becomes oxygenated and “structured” by the Biodynamic Flowforms as they too simulate a stream “eddy” in a natural creek. Additionally, Biodynamic Flowforms share the infiltration benefits of typical green infrastructure bioswales, which filter water using native riparian plant material, and act as an elegant site-scale form of public art.

The Raincatchment Cape is a photo-voltaic landscape fabric that forms the “Running-Fence-Like” linear form through the landscape of FlyRanch. In places where the existing water flow is acceptable, the Raincatchment Cape follows existing dendritic water-flow patterns. Fashioned after a Cape, and operating to direct water-flow like soil erosion control fabric, the Raincatchment Cape is anchored to the land from its center, which is set into existing water collecting crevices on the site and anchored as shown in the drawings below. The center of the fabric form is reinforced in rubber and the centermost ovals in this drawing are open, allowing water to flow down the cape-form along the contour/crevice. In places water run-off needs to be diverted, the Raincatchment cape is built into HugelKulture berms that re-direct waterflow into the Key-lines following Keyline Drainage patterns. At Key-Points, The Raincatchment Cape abuts Biodynamic Flowforms the second form in the FLOW earthwork.

FLOW Technologies:

FLOW utilizes existing technologies from Biodynamic Agriculture and Permaculture Design including Flowforms, HugelKulture, and Keyline Drainage. It also utilizes best practices in landscape architecture for stormwater remediation including rain gardens and biocell for collecting water for maximum infiltration. Finally, FLOW takes Bio-Engineering Methods, the most environmental stream bank stabilization used by the Army Corps of Engineers and combines its use with the other technologies creating a systems design that layers six proven environmental design solutions for water

remediation. Finally, Fly Ranch utilizes landscape fabrics that are conceptually photovoltaic allowing this systems design built to remediate and collect water to also create electricity for use in night time illumination or for storage in battery cell banks.

Activities Supported by FLOW:

FLOW has an impact on all five systems listed in the design guidelines, energy, water, food, shelter, and regeneration. However its focus is on water and water cycling. As described the landscape fabrics used in the design are able to create energy but their primary use is to allow for FLOW's integrated systems design to be visible to the visitor as a means of uncovering the natural flow patterns of site hydrology as a vibrant work of public art able to be used for educational and even workforce development. Flow supports food production in its use of HugelKulture. the intent of the artist is to use LiDAR Technology as well as native oral histories of place to develop the prototype. In this process, an inventory of former agricultural uses and crops that are appropriate to this landscape will be identified. The designer is certified in permaculture and has a master's degree in horticulture to support food-systems design in alignment with FLOW. FLOW supports shelter tangentially and is meant for small outdoor classroom spaces as shown on Board One in the Bioform illustration. Finally, FLOW supports and celebrates regeneration, allowing food waster, cut brush materials and other biomass to be up cycled in the HugelKulture berms. Finally, the bioengineering methods can support the efforts of plant community regeneration and the irradiation of non-native plant species.

FLOW generates no waste. The materials used in the design are mostly able to be found on-site with the exception of the landscape fabrics used in the Raincatchment Cape and Biodynamic Flowforms. Cortez steel is utilized in the bioform for the overhead structure. Rammed Earth and Adobe provide structural forms for the creation of the Biodynamic Flowforms and Raincatchment Cape where Hugelculture is not feasible. Vegetative plantings will be developed with input from the scientist on staff, indigenous communities and the Gerlach and Norther Warsaw County Residents.

Community Engagement, Workforce Development and Economic Opportunity:

The artist submitting FLOW is a twenty-year veteran Landscape Architect Academic and public artist certified in Permaculture specialized in integrated food-systems design and citizen engagement. Diverse outreach projects in underserved and indigenous communities include work for The Catawba Tribe of South Carolina, The Northern Ponca, The Coeur d'Alene, and The United Houma of Louisiana. The intent of this work

is to provide community engaged co-creative design and implementation process including workforce training to visitors and the indigenous people who call this landscape HOME.

In honoring the indigenous peoples of this landscape, FLOW integrates several landscape technologies from indigenous farming with the intent to develop collaboration with the local tribal councils to integrate traditional crops and means of agriculture production that would include hands-on development of the prototype with local tribal peoples. In exchange, the project would offer permaculture and green infrastructure training to tribal communities involved as a means of community-building between FlyRANCH and tribal leaders. FLOW is a public artwork that works for the public, providing food, economic development through workforce and educational programming.

FLOW is a combination Performance Art, Educational Programming, Ecological Design, Engaged Public Art culminating in a full circle design that includes hands-on art-making that creates and celebrates collective ecological and cultural histories of PLACE. Projects on the third page of the submittal are a sample of the designer's work in over forty communities. Educated in traditional universities, the artist was a part of the Detroit Urban Farming Movement in the late 1990s. Influential community teachers, such as Grace Lee Boggs, author of Living for Change, a spiritual awakening and re-education process that values co-creative ritual as a critical means of place-making.