



IMAGE 1

Southern California's weather cycle of fire, floods, and mudslides highlight the limitations of static infrastructure designed to control natural processes. In 2013, our office saw this shortcoming as an opportunity to re-think the relationship with this extreme environment, and to re-imagine the role landscape architecture can have in shaping it.

SLIDE

A RESILIENT STRATEGY FOR STABILIZING MUDSLIDES IN LOS ANGELES

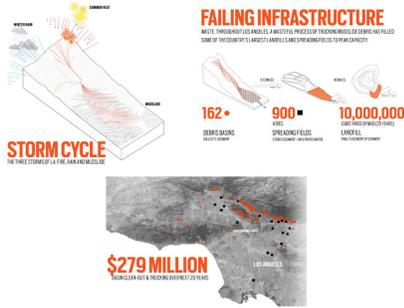


IMAGE 2

The research focused on three areas: examining the storm cycles of fire, rain, and mud slides; dismantling the failures of existing infrastructure; and projecting the financial costs of the current system.

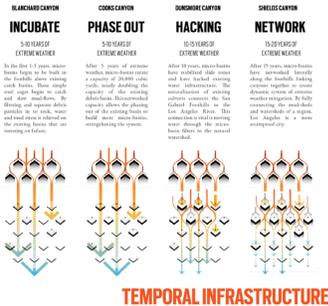


IMAGE 3

In contrast to the fixed and static infrastructure that currently attempts to control mega storms, this proposed landscape-based approach takes advantage of cyclical debris flows to create an ever more resilient system.

STEP 1: CREATE MICRO-BASIN

SLOW, FILTER. THE MICRO-BASIN SERVES TWO FUNCTIONS IN MITIGATING EXTREME WEATHER TO CREATE A NETWORKED, RESILIENT, AND ADAPTIVE SYSTEM.

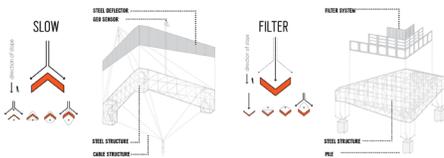


IMAGE 4

The establishment of this system begins with the siting of micro-basins; a simple gabion intervention. The micro basins serve two critical functions. When the micro basin's point upslope they slow and divert debris, reducing the overall impact of the debris flow on urbanized areas. When faced downslope, the micro basins both filter and collect debris, creating a more aqueous flow.

STEP 2: LET THE SYSTEM GROW

ACCUMULATE. THROUGH THE REPETITION OF EXTREME WEATHER EVENTS, THE MICRO-BASINS COLLECT AND GROW FROM DEBRIS, ALLOWING PROGRAM AND HABITAT TO EMERGE.

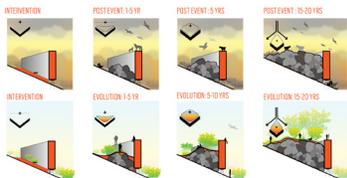


IMAGE 5

By creating a system that is made of re-used hillside materials primarily of rock and mud, the micro basins become opposite of the desolate concrete-capped catch basins that currently dot the edges of hillside communities; they become moments of thriving biodiversity and habitat.

IMAGE 6



The project understands that organic matter in debris flows are currently untapped community resources. By creating variation in the apertures of the micro basins, different materials can be harvested and reused. These materials could bring life to hillside tree farms, soil cropping operations, micro aquifers for firefighting, and gabion jersey barriers.



IMAGE 7

Five years after establishment, the micro basins aggregate at the canyon specific level, creating a landscape machine for processing debris flow and new shared recreational opportunities. Micro basins are sited strategically along hillside slopes to either slow or filter debris flow materials. On less steep slopes, the accretion of materials develops into vibrant lush landscape zones where campgrounds, hiking paths, tree farms, soil cropping zones, wildlife and geological research centers, and strategically located fire-fighting stations program the infrastructure while in a latent state.



IMAGE 8

Twenty years after establishment, multiple canyons with micro basin infrastructure systems laterally link together create a regional networked approach to soft and resilient infrastructure. Moving downslope 'Green Streets' are created along historical creek beds allowing a course for more aqueous flows to connect to their natural watershed such as the Verdugo Wash, which is a tributary to the Los Angeles River.



IMAGE 9

In its active state during extreme weather events, the micro basin network becomes a place of total infrastructure, where the whole hillside works a system to catch and slow debris.



IMAGE 10

In its latent state, during most of the year the micro basin network is the opposite of passive park, but rather a place of hybrid infrastructure and nature, where much less prescriptive programs emerge and the public nature of the space allows users to envision and create recreation possibilities.