

SLIDE, (aka Firescape) La Crescenta Foothills, Southern California

Fire. Flood. Mudslides. These three components of L.A.'s extreme weather cycle create a deadly combination. Fire clears vegetation from Southern California's steep canyons, leaving them vulnerable to flash floods and perilous mudslides. For most of the 20th century, City, State, and Federal agencies have attempted to control these natural processes as communities sprawled deeper and deeper into once-uninhabitable canyons. But as this infrastructure, designed to restrain nature, comes to the end of its 50-year lifespan, the opportunity arises to re-think the city's relationship with this extreme environment, and to re-imagine the role landscape architecture can have in shaping it.

Our office used that opportunity to develop a rigorous, research-based project. The goal of this research was to both challenge and expand the internal design culture of the office and to conduct work that could improve the quality of life in Southern California. The result is 'SLIDE: A Resilient Strategy for Stabilizing Mudslides in Los Angeles'.

The 2009 Station Fire, which ravaged a 252-square-mile area of Southern California's La Crescenta foothills, and sparked multiple catastrophic mud slides was the result of severe climatic conditions, cyclical weather cycles, and an outdated, aging infrastructure. This project attempts to deconstruct both the meteorological disaster and the infrastructure that failed to contain it in hope of identifying a more landscape-driven approach. In particular, the project proposes the use of waste management systems, landscape interventions, and the differences between local and regional approaches to devise a more resilient infrastructure for communities prone to fire and mudslides.

Currently, following a mudslide, trucks clean out debris basins and then haul away the debris to landfills, at a rate of half a million cubic yards per year. This expensive solution carries a huge carbon footprint, and is also spatially unsustainable: the 1,365-acre La Puente Landfill, where so much of this debris has been trucked over the years, is now full. As such, this project utilizes the debris as a reusable material, capable of being reorganized, and redistributed to help stabilize the hillsides; mitigating future disasters. In other words, this project proposes 'hacking' into the natural processes of mudslides and wildfires to generate a new 'landform infrastructure' that reuses the material these events produce.

The project proposes the installation of a network of oversize gabion cage structures throughout the hillsides. The cage walls, made of varying aperture sizes, slows the slide of debris and traps the rock and soil at different rates throughout the year, while allowing water to filter through. After 15-20 years of extreme weather, this intervention would result in a network of micro-basins along the foothills, linking the canyons together in a single, dynamic system of extreme weather mitigation.

As such, this process creates a closed loop system capable of supporting, and generating, multiple forms of urbanism within close proximity to disaster zones in the wilderness. During periods of clement weather, this new infrastructure of mud, rock and steel would become the armature for new recreational and habitat opportunities, turning devastation into an asset for the local foothill communities. This new geology of mountain-making acts as a hybrid infrastructure of both natural and synthetic interactions aimed at re-thinking extreme weather and the space it creates.

This investigation allows us to fundamentally re-think the relationship between the city and the edge of nature from one of danger and contention to one of symbiosis and opportunity. By challenging the nature of mudslide infrastructure, this project also challenges the role of the landscape architect/designer to move beyond the purely aesthetic and engage with the systems and processes that support urban and natural life.