

Playa Lubbock: One Square Mile

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Lubbock is dry. Population increases and the mechanical irrigation of cropland in the arid landscape have compromised the Ogallala Aquifer beneath the city. The natural ecology that serves to recharge the aquifer is also under threat. Misnamed "playas" by early explorers, these shallow tanks in an extremely flat landscape traditionally recharge the aquifer and serve as habitats for migrating birds. Today, urban and agricultural development erases these water bodies, while large scale and costly infrastructure engineering projects by the city drain the playas by way of deep pipelines. At the same time, water supply to the city of Lubbock is slowing and expensive.

This project seeks to restore the relationship of living space to natural ecology. A network of independent water retention landscapes are produced that combine combines technology, landscape and urban development by investing in visible infrastructure rather than hidden engineering.

The entire panhandle is laid out in a one square mile grid. Lubbock developed according to this division and its larger avenues still exist one mile apart from each other. Advances in agricultural practices quickly turned the political division of property into an economic opportunity. Today the space between urban and rural is divided pragmatically as real estate with no pretense of political ideals.

Examples include New Urbanist town-home subdivisions in an empty gridded panhandle space, and big box objects of consumption, at odds spatially, if not conceptually, with the panhandle grid. Most importantly, large scale infrastructure projects taking groundwater underground from one area of suburban Lubbock to another is expensive and troubling to the future ecology of this flat landscape.

Natural impediments do exist in and around Lubbock in the Playas that dot the eastern edge of the American West. These depressions in the land act as seasonal water detention sites, recharging the Ogallala Aquifer. This aquifer has served as the only reliable water source for some urban areas of the plains, and its level has dropped significantly over the past 50 years. It is not a viable water source for an urban population. More importantly, the aquifer is used to water crop circles for corn and hay, introduced to the land where no crops grow naturally. The aquifer served as a mechanical solution to water problems in the 1950's and 1960's, set in motion by the desire for permanent mastery of agriculture in an inhospitable landscape. Now the effects of that decision threaten the original goals of inhabiting the Plains states and the precise economy desired through modernization.

Small scale, compact residential and commercial space, planned at the corners, allows large scale landscapes instead of small parks and golf courses. Each development conceptualizes gray-water technology into the slope between commercial and residential space, accumulating in the aquifer recharging playas after a series of natural filters and tanks.

The system has the ability to absorb individual differences within a site while the overall structure is prototypical to other Midwest cities with increasing population demands and normative suburban development strategies.

