Reconciled Landscape

Urban watershed framework plan, Conway, AR, USA

Main author
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Project data
Project group: Landscape, urban design, transportation infrastructure and public utilities
Client: City of Conway
Project background: Public commission
Planned start: July 2018

Summary and appraisal of the project by the jury
This project reconstitutes the wetland corridors lost to a previous generation of urban expansion. The new zones of green connectivity act as flood management and water filtration zones. The project crosses city boundaries, involving local and regional governments. To address different regulatory frameworks, it is structured as a toolkit of possible interventions. Each governing body can work within the kit of parts to implement the framework plan within existing policies. The water design aims to slow, soak, and spread urban runoff through landscape systems. It does so through retrofitting to the existing urban fabric such as permeable paving and lakeshore stabilization.

The jury commended the project’s approach to a common problem: the loss of coastal permeability. Working here with a freshwater site, the project’s group of collaborators has developed a highly transferable approach. The project is seen more as common-sense additions to existing patterns of development. For example, its suburban areas remain suburban but do more to treat water and foster habitats than development as usual. As such, the project trades radicality for applicability, generating a toolkit of possibilities that could be implemented quickly with real, local impact.

Statements on the sustainability of the project by the author
Developing sponge city
More than a rhizomatic plan than a master plan, soft infrastructural retrofits are value-added to conventional hard engineered infrastructure to remediate the city’s five polluted and flood-prone headwater streams. The Urban Watershed Framework Plan’s adaptive infrastructural components include green streets, water treatment art parks, urban eco-farms, conservation neighborhoods, parking gardens, lake aeration, vegetative harvesters, floating bio-mats, and a city greenway to improve riparian corridors. They combine the six ecologically-based water treatment technologies to create new rain terrains. Given funding challenges, political will, and complexity, the plan operates evolutionarily through modulated retrofits that are incremental, contextual, redundant, and successful, the vocabulary of resilience.

A transferable urban design vocabulary for resilience
The project’s design tools and planning vocabulary provide communities with a transferable resilience framework to restore urban watersheds though urban design. The challenges in implementing resilience or risk-based decision-making in urban systems include the lack of a common language of assessment, and the loss of coastal permeability. Working here with a freshwater site, the project’s group of collaborators has developed a highly transferable vocabulary of resilience.

The plan employs the Ecosystem Services Concept and the 17 ecological services provided by healthy ecosystems to improve the ability of communities to remedy stressors that adversely affect the resilience of urban systems. Design that enables stakeholders to steward urban watersheds
The three-year collaborative planning process with the City was supported by resources and technical assistance from Metropolitan (Central Arkansas) regional planning authority and Arkansas government agencies including its Gariep & Fish Commission, Natural Resources Commission, and Department of Environmental Quality. Additional funding came from the Arkansas General Assembly, Lake Conway Property Owners Association, and area institutions like the University of Central Arkansas that built demonstration projects. A critical early-building block was the founding of the Lake Conway Point Remove Watershed Alliance in 2015. LCPRWA is a multisector stakeholder coalition with elected officers and bylaws to administer water management projects and the plan throughout the larger watershed.

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Image 1: Cities are fragmented whereas ecosystems are continuous. The framework plan addresses water management problems in the 42mi2 (108 km2) suburban area through four city water interface strategies developed in the plan. Reaveraged, rooted, clustered, and connected wetlands are configured according to providing opportunities shaping downtown, suburban, erosion, or flood terrains.

Image 2: One of six adaptive infrastructure components constituting the framework plan. A multiresponse modular soft and hard infrastructure, and modular technologies to enhance lake ecology. To satisfy anglers who desire lake fishing, and waterfront property owners who do not want flooding, structures are created to control water flow, flood storage, and provide new habitat for fish and fauna. A portfolio of floating live roofs and habitat islands expand useful waterfront.


Image 4: Adaptive infrastructure.

Image 5: Green streets and parks.

Image 6: Cisterns to develop rainwater.