

Linking Urban Design and Ecology

Community Update

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Baltimore Ecosystem Study: BES



Why?

The way we design the built environment not only affects the ecology of a city, but also affects the way we see and interact with nature.

- The street infrastructure interacts with the topography of a site. Urban sites are re-graded to facilitate movement of people and vehicles. This changes the way water, plants and animals flow through urban landscapes. Paved surfaces also prevent water from permeating into the soil, while storm sewer lines speed rain water directly into streams and bays rather than filtering more slowly through riparian systems and wetlands.
- Building type and density differ from place to place and change over time. The resulting patchwork of trees, lawns, paved surfaces and bare soil greatly affects plant, animal and hydrological interactions.
- The layout of streets, buildings and open spaces affects the way people see and interact with ecological processes in daily life, and provides different degrees of access to natural, socio-economic and cultural resources.

How?

- Urban Design is one of the key research areas in the BES because it links hydrology, plant ecology and social ecology.
- We integrate design with scientific research, and exchange information with interested parties in metropolitan Baltimore.
- We are developing urban design models based on the three BES science frameworks: watersheds, patch dynamics, and human ecosystems.
- We conduct Urban Design studios at Columbia University's Graduate School of Architecture, Planning, and Preservation in partnership with BES scientists, The Parks and People Foundation, and Baltimore City Planning.



Watershed 263 Urban Design Map

How can we link urban design decisions to ecosystem science?

Municipal policy makers, real estate developers and private individuals make decisions which affect the physical design of the built environment. Most current designs are based on assumptions about what a city should be and what it should look like. Baltimore has a legacy of many ideas about the city, from a trading port, to an industrial city, to the service, biomedical and entertainment center of today. The Urban Design Working Group of BES is striving to design new urban models for Baltimore based in urban ecosystem science. These new urban models will help to form a new civic imagination for Baltimore through public participation in examining new designs.

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