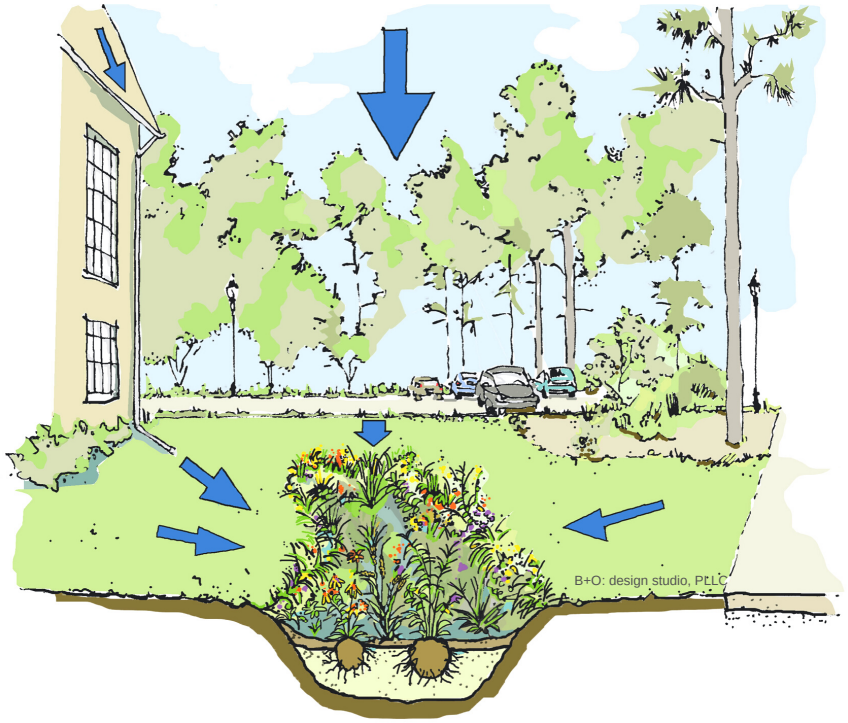
North Carolina has experienced extreme flooding since 2016, causing damage to infrastructure, our vulnerable communities and economy.

NATURE-BASED STORMWATER STRATEGIES

are *effective and economical* approaches to reduce flooding and improve water quality. Nature-based Stormwater Strategies *mimic natural water flow* throughout a site to slow and absorb rain and reduce runoff.



Nature-based Stormwater Strategies are:

EFFECTIVE

Nature- based strategies reduce flooding, improve water quality, recharge groundwater and help balance economic development with natural resource management.

ECONOMICAL

Using low impact development (LID) practices in place of conventional ones can save up to 80% in capital costs, according to a 2007 U.S. Environmental Protection Agency report.

ADVANTAGEOUS

According to a 2018 U.S. Army Corps of Engineers report, LID practices capitalize on the existing landscape to manage stormwater at its source, while providing social, economic and environmental benefits.

ADAPTABLE

Nature-based strategies can be incorporated on all types of land uses including new development, retrofit projects, roadways, and working lands.

SENSIBLE

Nature-based strategies have been applied to projects in N.C., like Market at Colonnade in Raleigh, and it is used throughout the country.

Nature-based Stormwater Strategies:
effective and economical approaches for a climate-ready future

Nature-based Stormwater Strategies work for:

New Development

Incorporating nature-based strategies early into the design phase of new projects yields the most effective application of their use.

Permeable pavement infiltrates rain to reduce runoff in New Hanover County.

Existing Development

Most retrofit techniques are relatively inexpensive and include disconnecting impervious surfaces and promoting infiltration.

The addition of a rain garden to existing development increases market value and reduces runoff.

Roadways

Nature-based strategies may result in more resilient transportation infrastructure and reduce long-term maintenance costs.

Roadside stormwater infiltration techniques collect rain to reduce runoff.

Working Lands

Replicating and restoring natural hydrology on farm and forest lands is an effective large-scale solution to flooding and water quality impairments.

Restored wetlands at North River Wetlands Preserve filter and absorb runoff before it reaches the river.

Why use Nature-based Stormwater Strategies?

"We saved about $2 million in development costs on 100 lots by not installing curbing and by using natural areas as infiltration basins and not having to excavate for wet ponds."

Burrows Smith, developer River Bluffs

"By implementing [low impact development] principles and practices, water can be managed in a way that reduces the impact of built areas and promotes the natural movement of water within an ecosystem or watershed."

U.S. Environmental Protection Agency

"These projects maintain working land drainage while providing habitat and clean water. This balance is critical because a man's drainage is just about the most important thing that there is."

Mac Gibbs, former director Hyde County Cooperative Extension

"Restoring or maintaining pre-development hydrology directly addresses the root cause of most impairments in N.C. What separates low impact development (LID) from traditional methods is that LID works, LID works everywhere, and LID meets all Federal and State stormwater requirements."

Mike Randall, retired N.C. Division of Energy, Mineral and Land Resources