Nature Based Solutions: Can we really use gray to build green?

Why? Federal funding increasingly incentivizes Nature Based Solutions



NATURE BASED SOLUTIONS: Sustainable planning, design, environmental management, and engineering practices that weave natural features or processes into the built environment to build more resilient communities.



NATURE BASED SOLUTIONS are approaches to problems ...which mimic characteristics of natural features, including habitats, but are created by human design, engineering, and construction.



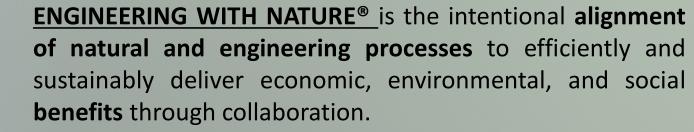
NATURE BASED SOLUTIONS: Project solutions that are motivated and supported by nature and that may also offer environmental, economic, and social benefits, while increasing resilience.



NATURAL INFRASTRUCTURE is an area or system that is either naturally occurring or naturalized and then intentionally managed to provide multiple benefits for the environment and human well-being.



EWN Engineering With Nature ®





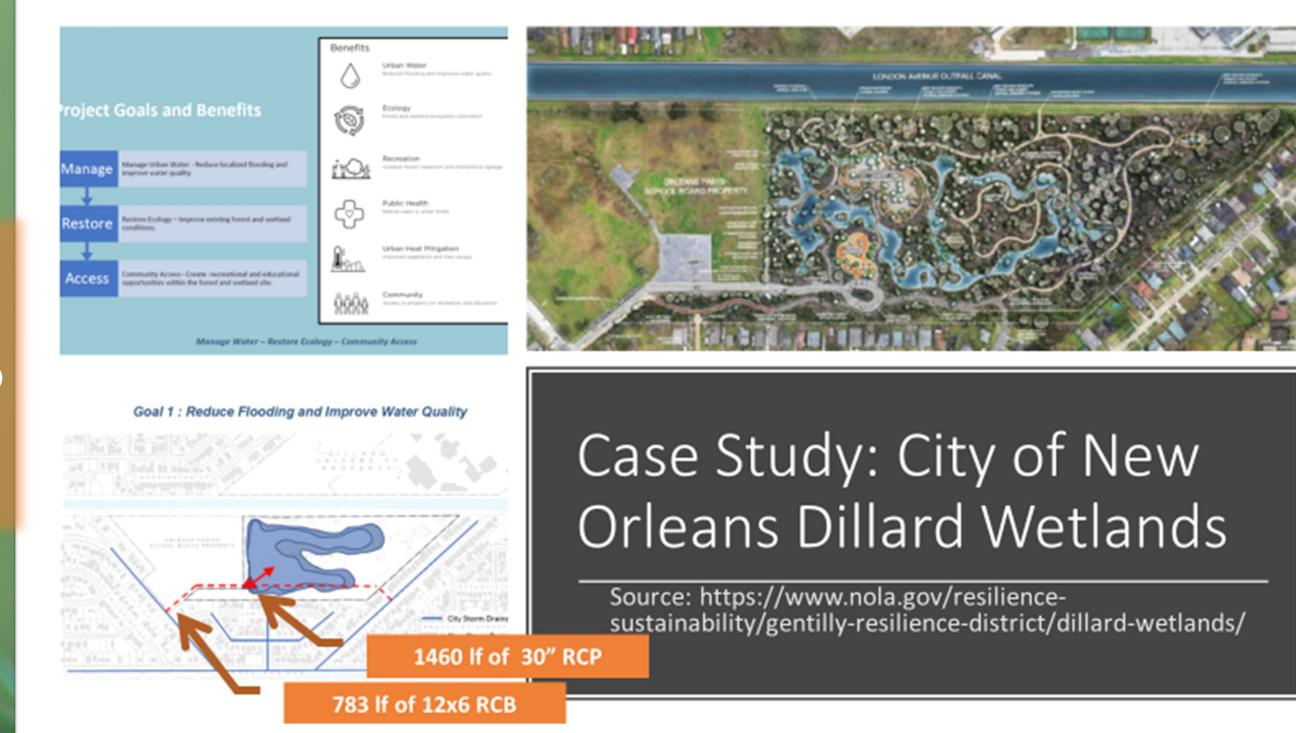


ECOSYSTEM SERVICE BENEFITS are the contributions the project provides to an ecosystem that benefits the environment and human populations such as air quality, water filtration, and recreation space [FEMA Policy FP-108-024-02]



GREEN INFRASTRUCTURE is "the range of measures that use plant or soil systems, permeable pavement or other permeable surfaces or substrates, stormwater harvest and reuse, or landscaping to store, infiltrate, or evapotranspirate stormwater and reduce flows to sewer systems or to surface waters." [Water Infrastructure Improvement Act of 2019]

Yes! Concrete drainage products are a critical link to enable Nature **Based Solutions!**





Case Study: Lubberland Creek Culvert Replacement

- Engineering objective: Reduce upstream flooding, eliminate overtopping of road during frequent storm events.
- Environmental Objectives: Restore tidal fluctuation to upstream wetlands, restore critical glass eel migration route.
- Source:

https://www.nature.org/enus/about-us/where-wework/united-states/newhampshire/stories-in-newhampshire/journey-of-the-glass-



