CLASIC Tool Overview

https://clasic.erams.com/
https://www.waterrf.org/clasic

Our Vision for the Tool

The Community-enabled Lifecycle Analysis of Stormwater Infrastructure Costs (CLASIC) is a user-informed screening tool that utilizes a life cycle cost (LCC) framework to provide feasibility analysis of stormwater infrastructure, including green, hybrid green-gray, and gray infrastructure scenarios.

The goal of the CLASIC decision support system is to develop a robust and peer-reviewed LCC framework for stormwater infrastructure alternatives that can accommodate regional and smaller scale variations for integrated planning at a municipal scale.

Expected users of the CLASIC tool include managers and operators of regulated stormwater systems (e.g., municipalities, counties, cities, and utilities), consultants, academics, and others.

The CLASIC tool integrates Multiple-Criteria Decision Analysis (MCDA), which enables consideration of co-benefits for green infrastructure.

This tool does not provide site-specific design of green or gray infrastructure, comparisons of BMPs (best management practices) and GI (green infrastructure) based on location within a sub-catchment or optimization of design.

Inputs

The tool is hosted on a cloud-based web platform, so it is fully interfaced with GIS and includes interaction with national databases to upload data for the modeled area at a community level. Users have the option to automatically upload data from national databases (e.g., census, national land cover database, PRISM climate database, digital elevation models, etc.) or to upload their own data sets. Simulation of climate scenarios is based on Multivariate Adaptive Constructed Analogs (MACA) method.

Outputs

There are three main components to the stormwater life cycle cost tool outputs:

- Life cycle costs (LCC)
- Triple bottom line (TBL) benefit analysis
  - Assesses value of co-benefits (environmental, social, and financial)
- Performance
  - Volume reduction / peak runoff reduction
  - Pollutant load reduction (sediments, nutrients, and fecal indicator bacteria)

Green and Gray Stormwater Management Practices Included in CLASIC Tool

Rain Garden / Bioretention	Extended Detention Basin	Green Roof
Sand Filter	Wet Pond	Permeable Pavement
Infiltration Trench	Wetland Channels	Vegetated Buffer
Vegetative Swale	Stormwater Harvesting	Grass Strip
	Storage Vault/Tunnel	Rooftop Disconnection

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April 2021

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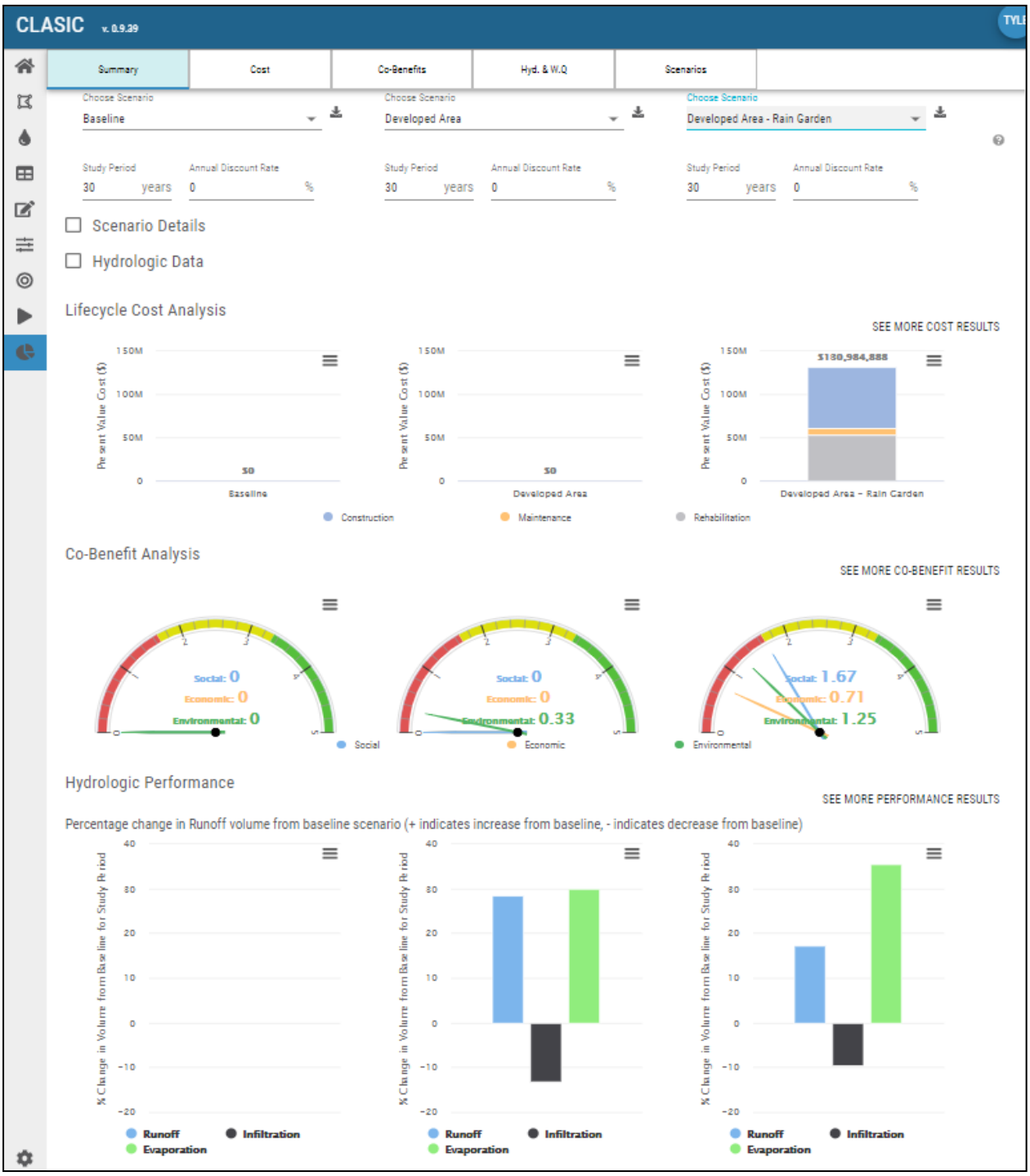
Dashboard of Stormwater Life Cycle Cost Tool Output (Summary Tab)

This is an example of the output summary dashboard.



This online stormwater tool enable users to evaluate scenarios of green and gray infrastructure to inform decision making based on preferences to achieve regulatory compliance, volume reduction, water quality improvements, life cycle cost, and/or social and environmental benefits.

For further questions or suggestions, please contact:
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April 2021