

## **Information for SMARTech Record**

**Title\*** – Integrated Decision Support Tool (iDST) Life Cycle Costing Module for Distributed Stormwater Control Measures (SCMs)

**Creator(s)\*** -

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**College, School, Department, Lab, or Center\*** – College of Engineering, School of Civil and Environmental Engineering, Grubert Group

**Description\*** - The data include an Excel-based life cycle cost model for distributed stormwater control measures and its user guide. This model is a module of the broader Integrated Decision Support Tool led by the Colorado School of Mines (<https://idst.mines.edu>) in collaboration with researchers at UC Berkeley, South Dakota School of Mines, Georgia Tech, and The Nature Conservancy. The purpose is to support customizable analysis of life cycle costs associated with distributed stormwater control measures in the United States, including a first-order estimate of environmental costs. The model includes various scenario analyses, including the ability to adjust the base year of analysis, but is based primarily on data available in 2018-2019.

**Abstract\*** - The life cycle costing (LCC) module for distributed stormwater control measures (SCMs) for the integrated decision support tool (i-DST) supporting analysis of green, grey, and hybrid stormwater infrastructure deployment in urban settings in the United States is an Excel workbook that allows for planning-level evaluation of costs and first-order environmental impacts of stormwater infrastructure. The LCC module provides inputs to the broader i-DST to enable cost-based analysis. Additionally, the LCC module is a standalone workbook and can be used independently.

**Subject/Keywords\*** -- stormwater, life cycle costing, green infrastructure, gray infrastructure, environmental impact

**Date data were made publically available\*** -- 18 May 2020

**Sponsorship** - This model was developed under a subaward of Assistance Agreement No. R836174 awarded by the U.S. Environmental Protection Agency to the Colorado School of Mines, the Nature Conservancy, and the University of California-Berkeley. It has not been formally reviewed by EPA. The views expressed in this document are solely those of the authors and do not necessarily reflect those of the agency. EPA does not endorse any products or commercial services mentioned in this publication.

**Publications related to dataset** – no publications to date (several are or will soon be under review)

\*These fields are required when submitting a dataset.

## **Information for README file**

**Name of contact person** – Emily Grubert

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**Format of data files** – Excel (model), PDF (User guide)

**Location where data were collected** – United States

**Time period during which data were collected** – 2018-2019

### **File Information –**

number of files: 3

File 1: Model; File name “iDST LCC calculator v1.0.xlsx”; file type = Excel workbook; description = Excel-based model of life cycle costs for distributed stormwater control measures in the US, including scenario analysis and process-based life cycle cost details for 16 types of stormwater control measure; research process stage = first release of a cost model

File 2: User Guide; File name “iDST LCC User Guide v1.0.pdf”; file type = PDF; description = 80 page PDF file containing details on how to use the model, how the model was developed, and references, notes, and descriptions for data contained within the model; process stage = first release of the user guide

File 3: README file

**Definitions of acronyms, site abbreviations, or other project-specific designations used in the data file names or documentation files** – iDST = Integrated Decision Support Tool; LCC = Life Cycle Costing

**Variable information** – described within the accompanying user guide

**Uncertainty, precision, and accuracy of measurements** – described within the accompanying user guide

**Environmental or experimental conditions** – n/a

**Method(s)** – described within the accompanying user guide

**Standards or calibrations that were used** – n/a

**Software** – Microsoft Excel (Mac and PC)

**Quality assurance and quality control that have been applied** – described within the accompanying user guide

**Limitations to reuse** – described within the accompanying user guide

**Date dataset was last modified** – 18 May 2020

**Related materials** – this model is a submodule of a to-be-released tool known as the Integrated Decision Support Tool (iDST), with details available at <https://idst.mines.edu>

**Data source** – described within the accompanying user guide

**Related Files** – User guide is entitled “iDST LCC User Guide v1.0” and is submitted in this package

**Any other important information about your data**