

PACKAGE ID - 001248IBMPC00 USWM

KWIC TITLE - Urban Sustainability Water Module

AUTHORS - Mills, J.
LMITCO, ID (United States)

Jacobson, J.
LMITCO, ID (United States)

Alford, D.
University of Utah (United States)

LIMITATION CODE -COPY **AUDIENCE CODE** - LIM

COMPLETION DATE - 09/18/1998 **PUBLICATION DATE** - 09/18/1998

DESCRIPTION - Most urban areas are experiencing substantial growth rate. In order to support the growth and still maintain the high quality of life currently available in these areas, government planners, and developers and general stakeholders are very interested in a product that will allow them to experiment with different development scenarios to determine the best path forward. One of the biggest concerns is the amount of water that will be available as the growth continues. This software package will allow them as a group to input their ideas and get a visual view of the results, immediately. They will be able to watch the water resources as they are consumed by the increasing growth in residential, commercial and industrial areas.

PACKAGE CONTENTS - Software Abstract; Media Directory; Media Includes Source Code, Executable Module; User's Guide, Installation Program, Documentation on Media is is Microsoft Help Editor;

SOURCE CODE INCLUDED? - Yes

MEDIA QUANTITY - 5 3.5 Diskettes

METHOD OF SOLUTION - Urban Sustainability: Water Module will be a PC Based software program that allows urban planners, developers, and general stakeholders to evaluate different scenarios of urban development and observe the effects on water availability for future generations. The Water Module is one of several intended modules; the others perceived are Air Quality, Land Use and Urban Health. The Water Module will be developed around the System Dynamics philosophy and incorporate feedback loops and causal effects. This software package is designed to be a learning tool for the stakeholders to highlight the effects to the entire system changing certain parameters and assumptions. This tool should be used in conjunction with other urban planning tools to help planners and developers.

COMPUTER - IBM PC

PACKAGE ID - 001248IBMPC00 USWM

OPERATING SYSTEMS - Windows 95, Windows 98 or Windows NT

PROGRAMMING LANGUAGES - Borland Delphi 3.0 (75%). Vensim DSS32 (25%)

SOFTWARE LIMITATIONS - This program is designed for a single user.
(Future versions will be multi-user over a network).

SOURCE CODE AVAILABLE (Y/N) - Y

UNIQUE FEATURES - This program uses system dynamics as its basis for simulating the complex interactions between the parameters that drive an urban hydrology system. The system is designed for use on a desktop system and to display results in a format that doesn't require a degree in water hydrology. The program allows multi-scenario, multi-attribute simulations of urban planning scenarios and provides instant feedback on the outcomes. The program is designed with a user-friendly Graphic User Interface (GUI) for easy manipulation of the parameters.

RELATED SOFTWARE - None

OTHER PROG/OPER SYS INFO - The package consists of an executable file, a vensim model, and several database files. The main program is an executable program and uses an .EXE extension. Supporting files: the Vensim model uses a .VFM extension and is a binary file. The database files use three extensions: .DB, .PX, and .YGO. The program does require the installation of Borland's Database engine (BDE). None of the software used in development of this package has any royalties associated with the end products.

HARDWARE REQS - 486 processor, 16 MB RAM, 5 MD Free Space on Hard Drive. (System can be run from a floppy drive but performance will be slow)

TIME REQUIREMENTS - The program is designed for immediate operation. A user can run the preloaded simulation upon starting the program. The pre-loaded simulation will give the user an immediate basic understanding of the program and its functions. However, it will probably take at least an hour of program manipulation for the user to become familiar with all the features of the program.

ABSTRACT STATUS - Released as is 10/15/1998

SUBJECT CLASS CODE - R

KEYWORDS -

COMPUTER PROGRAM DOCUMENTATION
U CODES
FLUID FLOW
HYDROLOGY

EDB SUBJECT CATEGORIES -
990200

E S T S C
ENERGY SCIENCE & TECHNOLOGY SOFTWARE CENTER
SOFTWARE ABSTRACT

PAGE 3

DATE 03/12/2002

PACKAGE ID - 001248IBMPC00 USWM

SPONSOR - DOE/DP

PACKAGE TYPE - AS - IS