Coastal and Hydraulics Laboratory Supported Software – Licensing and Availability Statements
February 6, 2008

Purpose: A brief licensing and software availability statement is provided below for each of the Coastal and Hydraulics Laboratory(CHL)-supported software products covered under the Numerical Model Support Program (NMSP) and other software product(s) distributed and supported by CHL that are not yet included in the NMSP. In light of the current policy toward licensing of software on ACE/IT machines, the intent of these statements is to enable Corps users of CHL-supported software to have the following software products installed on their ACE/IT machines and provide a point of contact for each product should an access, usage or licensing issue arise. All statements are compiled here into a single composite document, with software products listed in alphabetical order.

ACES - Automated Coastal Engineering System

Type: Government/COTS

The ACES is a USACE sponsored microcomputer-based design and analysis system in the field of coastal engineering. The contents range from simple algebraic expressions both theoretical and empirical in origin, to numerically intense algorithms spawned by the increasing power and affordability of computers. The ACES package is interfaced via the Coastal Engineering Design and Analysis System (CEDAS) interface. The ERDC CHL distributes CEDAS and provides technical support for CEDAS usage by the USACE. Non-USACE users must obtain CEDAS from commercial sources.

Licensing: Restricted Government

The ACES package is interfaced via the Coastal Engineering Design and Analysis System (CEDAS) interface and is provided at no cost within the USACE. The USACE finances technical support via the Numerical Model Support Program. The ERDC CHL POC for technical support of ACES is Dr. Ernest Smith, 601-634-4030, Ernest.R.Smith@usace.army.mil. The ERDC CHL issues and tracks CEDAS licenses within the USACE. The ERDC CHL POC for licensing and distribution of CEDAS is Mr. Alan Cialone, (601) 634-3095, Alan.Cialone@usace.army.mil.

ADCIRC

Type: Government/COTS

ADCIRC (ADvanced CIRCulation) is a USACE-sponsored physics-based numerical model for simulating tidal circulation, storm surge, and other coastal processes. The ERDC CHL distributes ADCIRC via the Surface Water Modeling System (SMS) graphical user interface and visualization package and provides technical support to USACE users. Non-USACE users must obtain ADCIRC from commercial sources.

Licensing: Restricted Government

ADCIRC is provided at no cost within the USACE. The USACE finances technical support via the Numerical Model Support Program. The ERDC CHL issues and tracks SMS licenses within the USACE, which allows for tracking of the ADCIRC code. The ERDC CHL POC for ADCIRC technical support and HPC version of ADCIRC is David Mark, 601-634-2094, David.J.Mark@usace.army.mil. The ERDC CHL POC for licensing and distribution of SMS can be reached via e-mail at sms@usace.army.mil, by phone at (601) 634-4286, by fax at (601) 634-4208 or mail at ERDC SMS Support; ATTN: CEERD-HF-HG; Waterways Experiment Station; 3909 Halls Ferry Road; Vicksburg, MS 39180.

ADH

Type: Government

ADH (ADaptive Hydraulics) is a USACE sponsored physics based numerical model code used for simulating: estuarine and riverine processes such as river and tidal circulation, salinity/temperature/sediment transport, and other coastal and riverine processes (surface water applications); groundwater processes (subsurface applications); and Navier-Stokes processes (near field applications such as applications near structures). The ERDC CHL distributes the ADH shallow-water two-dimensional hydrodynamic portion of the code through the Surface Water Modeling System graphical user interface (SMS 10.0) and visualization package and provides technical support to the USACE. ADH is also downloadable at http://chl.erdc.usace.army.mil/chl.aspx?p=s&a=ARTICLES;703. Non-USACE users wishing to use the SMS version of ADH must obtain SMS 10.0 from commercial sources.

Licensing: Executables Not Restricted

The ADH executable is provided at no cost through the above download site. Users are requested to review the “ADH Terms and Conditions” tab at the download site. The USACE finances technical support for USACE users via the Numerical Model Support Program. The ERDC CHL POC’s for licensing and distribution of ADH are Jennifer Tate (surface water applications), 601 634 2511, Jennifer.N.Tate@usace.army.mil; Richard Stockstill (Navier-Stokes applications), 601 634 4251,

Richard.L.Stockstill@usace.army.mil; and Stacy Howington (groundwater applications using GMS), 601 634 2939, Stacy.E.Howington@usace.army.mil. The ERDC CHL POC for licensing and distribution of SMS can be reached via e-mail at sms@usace.army.mil, by phone at (601) 634-4286, by fax at (601) 634-4208 or mail at ERDC SMS Support; ATTN: CEERD-HF-HG; Waterways Experiment Station; 3909 Halls Ferry Road; Vicksburg, MS 39180.

Beach-fx

Type: Government

Beach-fx is a USACE sponsored graphical interface (GUI) application for evaluating the physical performance and economic benefits and costs of shore-protection projects, particularly, beach nourishment along sandy shores. The ERDC CHL distributes Beach-fx and provides technical support for Beach-fx usage for the USACE.

Licensing: Restricted Government

Beach-fx is provided at no cost within the USACE. The USACE presently finances technical support via reimbursable projects funded by the requesting office. The ERDC CHL issues and tracks Beach-fx licenses within the USACE. The ERDC CHL POC for licensing and distribution of Beach-fx is Mark Gravens, 601-634-3809, Mark.B.Gravens@usace.army.mil.

BMAP - Beach Morphology Analysis Package

Type: Government/COTS

BMAP is a USACE sponsored graphical user interface (GUI) application for the analysis, manipulation, and archival of beach profile data. The ERDC CHL distributes BMAP and provides technical support for BMAP usage for the USACE. Non-USACE users must obtain BMAP from commercial sources.

Licensing: Restricted Government

BMAP is provided at no cost within the USACE. The USACE finances technical support via the Numerical Model Support Program. The ERDC CHL POC for technical support of BMAP is Mark Gravens, 601-634-3809, Mark.B.Gravens@usace.army.mil.
BMAP is distributed via the Coastal Engineering Design and Analysis System (CEDAS) interface. The ERDC CHL distributes CEDAS and provides technical support for CEDAS usage by the USACE. The ERDC CHL POC for licensing and distribution of CEDAS is Mr. Alan Cialone, (601) 634-3095, Alan.Cialone@usace.army.mil.

BOUSS-2D

Type: Government/COTS

BOUSS-2D is a Boussinesq-type nearshore wave propagation model, designed for wave modeling for navigation, ports and harbors, and fluid-structure interaction projects. The ERDC CHL distributes BOUSS-2D via the Surface Water Modeling System (SMS) and provides technical support for the USACE users. Non-USACE users must obtain BOUSS-2D from commercial sources.

Licensing: Restricted Government

BOUSS-2D is provided at no cost within the USACE. The USACE finances technical support via the Numerical Model Support Program. The ERDC CHL POC for technical support of BOUSS-2D is Dr. Zeki Demirbilek, 601-634-2834, zeki.demirbilek@usace.army.mil. The ERDC CHL POC for licensing and distribution of SMS can be reached via e-mail at sms@usace.army.mil, by phone at (601) 634-4286, by fax at (601) 634-4208 or mail at ERDC SMS Support; ATTN: CEERD-HF-HG; Waterways Experiment Station; 3909 Halls Ferry Road; Vicksburg, MS 39180.

CADET - Channel Analysis and Design Evaluation Tool

Type: Government/COTS

CADET predicts deep-draft channel accessibility based on an acceptable level of risk for different wave, ship, and channel combinations by modeling the uncertainty in these parameters using Gaussian and Rayleigh distributions. CADET includes the vertical motions due to squat, heave, pitch, and roll, but not horizontal motions due to winds, currents, and waves (surge, sway, and yaw). The ERDC CHL distributes CADET and provides technical support for CADET usage for the USACE. Non-USACE users must obtain CADET from commercial sources.

Licensing: Restricted Government

CADET is provided at no cost within the USACE. The USACE finances technical support via the Numerical Model Support Program. The ERDC CHL issues and tracks CADET licenses within the USACE. The ERDC CHL POC for licensing and distribution of CADET is Dr. Michael J. Briggs, 601-634-2005, Michael.J.Briggs@usace.army.mil.

Cascade

Type: Government/COTS

Cascade is a regional-scale simulation model for calculating coastal sediment transport, morphology change, and sand bypassing at inlets and along barrier islands. Cascade simulates shoreline change relative to regional morphologic constraints. The evolution of multiple interacting coastal projects and morphologic features and pathways, such as those associated with inlets and adjacent beaches can be simulated effectively from seasons to centuries. Cascade, Version 1 calculates wave-induced longshore sediment transport rates, shoreline change, tidal inlet shoal volume evolution, natural bypassing, and the fate of coastal restoration and stabilization projects. It is intended for regional applications in support of planning and engineering decisions. The ERDC-CHL distributes Cascade in the Surface-water Modeling System (SMS) and provides technical support for USACE users. Non-USACE users must obtain Cascade and SMS from commercial sources.

Licensing: Restricted Government

Cascade is provided at no cost within the USACE. The USACE finances technical support via the Numerical Model Support Program. The ERDC- CHL issues and tracks Cascade licenses within the USACE. The ERDC-CHL POC for licensing and distribution of Cascade is Mr. Kenneth Connell, 601-634-2840, Kenneth.J.Connell@usace.army.mil.

CEM - Coastal Engineering Manual Professional Version
Type: Manuals and Handbooks
Report Number: EM 1110-2-1100

The Coastal Engineering Manual (CEM) provides a single, comprehensive technical document that incorporates tools and procedures to plan, design, construct, and maintain coastal projects. This engineering manual includes the basic principles of coastal processes, methods for computing coastal planning and design parameters, and guidance on how to formulate and conduct studies in support of coastal flooding, shore protection, and navigation projects. New sections are being added on navigation and harbor design, dredging and disposal, structure repair and rehabilitation, wetland and low-energy shore protection, risk analysis, field instrumentation, numerical simulation, the engineering process, and other topics.

Licensing: Restricted Government

The CEM Professional version is Windows-based software produced by Veri-Tech under a CRADA with ERDC. As such, it is available at no charge to the Corps of Engineers, but it is necessary to obtain a software key to unlock it after it has been installed. The ERDC-CHL issues and tracks software keys for USACE users. The ERDC-CHL POC for software keys is Ms. Holley Messing, 601-634-2010, Holley.J.Messing@usace.army.mil.

CGWAVE

Type: Government/COTS

CGWAVE is a Mild-Slope Equation type wave propagation model, valid for all water depths, for modeling waves in port, harbor, and marina projects. The ERDC CHL distributes CGWAVE via the Surface Water Modeling System (SMS) and provides technical support for the USACE users. Non-USACE users must obtain CGWAVE from commercial sources.

Licensing: Restricted Government

CGWAVE is provided at no cost within the USACE. The USACE finances technical support via the Numerical Model Support Program. The ERDC CHL POC for technical support of CGWAVE is Dr. Zeki Demirbilek, 601-634-2834, zeki.demirbilek@usace.army.mil. The ERDC CHL POC for licensing and distribution of SMS can be reached via e-mail at sms@usace.army.mil, by phone at (601) 634-4286, by fax at (601) 634-4208 or mail at ERDC SMS Support; ATTN: CEERD-HF-HG; Waterways Experiment Station; 3909 Halls Ferry Road; Vicksburg, MS 39180.

CH3D

Type: Government

CH-3D and the related CH-3D-SED are USACE sponsored physics based numerical model codes used for simulating estuarine and riverine processes such as river and tidal circulation, salinity/temperature/sediment transport, and other coastal and riverine processes. The ERDC CHL distributes CH-3D and CH-3D-SED to the USACE through requests to the ERDC POC and provides technical support to the USACE. Non-USACE users must obtain the code from commercial sources.

Licensing: Restricted Government

CH-3D and CH-3D-SED are provided at no cost within the USACE. The USACE finances technical support via the Numerical Model Support Program. The ERDC CHL

tracks users within the USACE. The ERDC CHL POC for licensing and distribution of CH-3D and CH-3D-SED is Phu Luong, 601 634 4472, Phu.V.Luong@usace.army.mil

CMS - Coastal Modeling System

Type: Government/COTS

The Coastal Modeling System (CMS) is a group of interacting wave, circulation, sediment transport, and bed-morphology change models centered around a two-dimensional (2-D), depth-averaged finite volume circulation model. The CMS is designed for application at coastal inlets and adjacent beaches and estuaries where the tide, wind, rivers, and waves may force water and sediment motion. This model is easy to set up and conducts efficient calculation of coastal processes in 2-D and 3-D modes with either implicit or explicit solution schemes. The ERDC-CHL distributes CMS in the Surface-water Modeling System (SMS) and provides technical support for USACE users. Non-USACE users must obtain CMS from commercial sources.

Licensing: Restricted Government

CMS is provided at no cost within the USACE. The USACE finances technical support via the Numerical Model Support Program. The ERDC- CHL issues and tracks CMS licenses within the USACE. The ERDC-CHL POC for licensing and distribution of CMS is Mr. Kenneth Connell, 601-634-2840, Kenneth.J.Connell@usace.army.mil.

FATE Models

The FATE models are provided at no cost within the USACE. The USACE finances technical support of the FATE models via the Numerical Model Support Program.

SSFATE - Suspended Sediment FATE

Type: Government

SSFATE is a USACE-sponsored model for representing suspended sediment transport from dredging operations. SSFATE is no longer the recommended model for representing suspended sediment transport from dredging operations; it has been replaced by PTM.

Licensing: Discontinued

STFATE - Short Term FATE

Type: Government

STFATE is a USACE-sponsored model for representing sediment and constituent transport processes during open-water placement from a single barge or hopper dredge placement. STFATE 5.0 is available on-line (open-access). STFATE 6.0 is being integrated into the SMS.

Licensing: None required for 5.0. A SMS license will be required for 6.0.

The ERDC POC for distribution of STFATE 5.0 is Dr. Paul Schroeder, 601-634-3709, Paul.R.Schroeder@usace.army.mil. The ERDC-CHL POC for technical support and distribution of STFATE 6.0 is Dr. Joe Gailani, 601-634-4851, Joseph.Z.Gailani@usace.army.mil.

MDFATE - Mid Term FATE

Type: Government

MDFATE is a USACE-sponsored model for representing sediment and constituent transport processes during multiple ocean placements from barge or hopper dredge. MDFATE 1.0 is available on-line (open-access). MDFATE is being replaced in FY09 by MPFATE, which will be available within SMS.

Licensing: None required for MDFATE 1.0. A SMS license will be required for MPFATE.

The ERDC POC for distribution of MDFATE 1.0 is Dr. Paul Schroeder, 601-634-3709, Paul.R.Schroeder@usace.army.mil. The ERDC-CHL POC for technical support and distribution of MPFATE will be Jarrell Smith, 601-634-4310, Jarrell.Smith@usace.army.mil.

LTFATE - Long Term FATE

Type: Government

LTFATE is a USACE-sponsored model for representing erosion and transport from offshore dredged material placement sites (ODMPS). LTFATE 1.0 is available on-line (open-access). LTFATE 3.0 is being integrated into SMS.

Licensing: None required for 1.0. SMS license will be required for 3.0.

The ERDC-CHL POC for technical support and licensing and distribution of LTFATE 1.0 and 3.0 is Dr. Joe Gailani, 601-634-4851, Joseph.Z.Gailani@usace.army.mil.

GENESIS - Generalized Model for Simulating Shoreline Change

Type: Government/COTS

GENESIS is a USACE sponsored graphical user interface (GUI) application for the analysis of long-term shoreline evolution. The ERDC CHL distributes GENESIS and provides technical support for GENESIS usage for the USACE. Non-USACE users must obtain GENESIS from commercial sources.

Licensing: Restricted Government

GENESIS is provided at no cost within the USACE. The USACE finances technical support via the Numerical Model Support Program. The ERDC CHL POC for technical support of GENESIS is Mark Gravens, 601-634-3809, Mark.B.Gravens@usace.army.mil. GENESIS is distributed via the Coastal Engineering Design and Analysis System (CEDAS) interface. The ERDC CHL distributes CEDAS and provides technical support for CEDAS usage by the USACE. The ERDC CHL POC for licensing and distribution of CEDAS is Mr. Alan Cialone, (601) 634-3095, Alan.Cialone@usace.army.mil.

GMS - Groundwater Modeling System

Type: Government/COTS

The Department of Defense (DoD) Groundwater Modeling System (GMS) is a USACE developed comprehensive software package that helps expedite groundwater evaluations, surface water groundwater interactions and environmental cleanups. This graphical subsurface modeling environment incorporates a suite of numerical modeling programs that allow engineers and others involved in hydrodynamic modeling to visualize project sites, evaluate cleanup alternatives, and predict their effectiveness. It provides tools for every phase of a groundwater simulation including site characterization, model development, post-processing, calibration, and visualization. GMS provides an integrated graphical environment for performing subsurface flow, contaminant fate/transport, and efficacy and design of remediation system evaluation studies. The current version of GMS provides a complete interface for the codes FEMWATER, WASH123D, ADH, MODFLOW2000, MODPATH, MT3DMS, RT3D, ART3D, SEAM3D, UTCHEM,

MODAEM, SEEP2D, and UTEXAS4 as well as the parameter estimation codes PEST and UCODE.

Licensing: Restricted Government

GMS is provided at no cost within the USACE, DoD, DOE, EPA, NRC, and their on-site contractors. The USACE finances technical support via the Numerical Model Support Program. The ERDC CHL distributes GMS, issues and tracks GMS licenses, and provides technical support for GMS usage within the USACE. GMS is distributed via Internet download, which includes the full program, tutorial files, documentation, and supported model executables. Non-USACE users must obtain GMS from commercial sources. The ERDC CHL POC for licensing and distribution of GMS can be reached via e-mail at GMS@usace.army.mil, by phone at (601) 634-4286, by fax at (601) 634-4208 or mail at U.S. Army Groundwater Modeling Technical Support Center, ATTN: CEERD-HF-HG; Waterways Experiment Station; 3909 Halls Ferry Road; Vicksburg, MS 39180. Home page: *http://chl.erdc.usace.army.mil/software/gms*.

GSSHA

Type: Government/COTS

Gridded Surface Subsurface Hydrologic Analysis (GSSHA) is a USACE developed watershed analysis and management tool that has the ability to simulate the movement of water, sediment and associated constituents across watershed-scale areas. The model is capable of simulating streamflow generated by excess runoff, saturated source areas, exfiltration, and groundwater discharge to streams. It is also capable of simulating soil moistures and groundwater levels at the grid scale as well as wetland hydraulics, storm drainage networks in urban areas, tile drainage networks in agricultural areas, and inundation from storm surge in coastal areas. GSSHA is included and distributed in the Watershed Modeling System (WMS).

Licensing: Restricted Government

GSSHA is provided at no cost within the USACE. The USACE finances technical support via the Numerical Model Support Program. The ERDC CHL distributes GSSHA as part of the WMS and from the CHL web site, http://chl.erdc.usace.army.mil/gssha, and provides technical support within the USACE. Non-USACE users must obtain WMS from commercial sources. The ERDC CHL POC for GSSHA is Aaron Byrd who can be reached via e-mail at Aaron.R.Byrd@usace.army.mil, by phone at (601) 634-2473, by fax at (601) 634-4208 or mail at ERDC CHL; ATTN: CEERD-HF-HG (Aaron Byrd); Waterways Experiment Station; 3909 Halls Ferry Road; Vicksburg, MS 39180.

HEC6-WES

Type: Government

HEC-6W is a USACE sponsored command line computer program for the computation of scour and deposition in riverine and reservoir environments. The program uses the original HEC-6 program as a basis, with the addition of improved bed sorting and armoring routines. The ERDC CHL distributes HEC-6W and provides technical support for USACE users.

Licensing: None Required

HEC-6W is provided at no cost within the USACE. The USACE finances technical support via the Numerical Model Maintenance Program. The ERDC CHL issues HEC-6W within the USACE. The ERDC CHL POC for distribution of HEC-6W is Charlie Little, (601) 634-3070, Charles.D.Little@usace.army.mil.

LOCKSIM

Type: Government/COTS

LOCKSIM is a numerical flow model for evaluation of navigation locks. The ERDC CHL distributes LOCKSIM and provides technical support for LOCKSIM usage for the USACE. Non-USACE users must obtain LOCKSIM from commercial sources.

Licensing: None required

LOCKSIM is provided at no cost within the USACE. The USACE finances technical support via the Numerical Model Support Program. The ERDC CHL issues LOCKSIM within the USACE. The ERDC CHL POC for distribution of LOCKSIM is Richard Stockstill, 601-634-4251, Richard.L.Stockstill@usace.army.mil

PTM - Particle Tracking Model

Type: Government/COTS

PTM is a Lagrangian particle tracking model specifically designed to monitor the pathway and fate of sediment sources generated by human activity (dredging, placement operations, ship passage, etc). The ERDC CHL distributes PTM via the Surface-water Modeling System (SMS) and provides technical support for the USACE users. Non-USACE users must obtain PTM from commercial sources.

Licensing: Restricted Government

PTM is provided at no cost within the USACE. The USACE finances technical support via the Numerical Model Support Program. The ERDC CHL POC for technical support of PTM is Dr. Zeki Demirbilek, 601-634-2834, zeki.demirbilek@usace.army.mil. The ERDC CHL POC for licensing and distribution of SMS can be reached via e-mail at sms@usace.army.mil, by phone at (601) 634-4286, by fax at (601) 634-4208 or mail at ERDC SMS Support; ATTN: CEERD-HF-HG; Waterways Experiment Station; 3909 Halls Ferry Road; Vicksburg, MS 39180.

RMAP

Type: Government/COTS

The Regional Morphology Analysis Package (RMAP) is an integrated set of calculation tools developed to manipulate, analyze, visualize, and archive data on shoreline position, beach profile, and channel cross-section in a georeferenced environment. RMAP supports engineering and science applications on a desktop computer without need for specialized GIS software. Capabilities extend from generation of spatially referenced shoreline change maps (including aerial photography and shapefile overlays) to a suite of data manipulation tools, including smoothing, translation, cut and fill, and two-dimensional empirical eigenfunction analysis. RMAP is intended for regional-scale applications in support of planning and engineering decisions. The ERDC-CHL distributes RMAP in the Coastal Engineering Design and Analysis System (CEDAS) and provides technical support for USACE users. Non-USACE users must obtain RMAP from commercial sources.

Licensing: Restricted Government

RMAP is provided at no cost within the USACE. The USACE finances technical support via the Numerical Model Support Program. The ERDC-CHL issues and tracks RMAP licenses within the USACE. The ERDC-CHL POC for technical support of RMAP is Dr. Andrew Morang, 601-634-2064, Andrew.Morang@usace.army.mil. RMAP is distributed via the Coastal Engineering Design and Analysis System (CEDAS) interface. The ERDC CHL distributes CEDAS and provides technical support for CEDAS usage by the USACE. The ERDC CHL POC for licensing and distribution of CEDAS is Mr. Alan Cialone, (601) 634-3095, Alan.Cialone@usace.army.mil.

SAM (and SAMwin)

Type: Government/COTS

SAMwin is a USACE sponsored graphical user interface (GUI) to the SAM Hydraulic Design Package for Stable Channels. The ERDC CHL distributes SAMwin and provides technical support for SAM usage for the USACE. Non-USACE users must obtain SAMwin from Owen Ayres & Associates.

Licensing: Restricted Government

SAM is provided at no cost within the USACE. The USACE finances technical support via the Numerical Model Support Program. The ERDC CHL distributes and tracks SAMwin distribution within the USACE. The ERDC CHL POC for licensing and distribution of SAMwin is Steve Scott, 601-634-2371, Steve.H.Scott@usace.army.mil.
The technical support mailbox for SAMwin is: sam@usace.army.mil.
The SAM/SAMwin web page is: http://chl.erdc.usace.army.mil/sam.

SBEACH - Numerical Model for Simulating Storm-Induced Beach Change

Type: Government/COTS

SBEACH is a USACE sponsored graphical user interface (GUI) application for simulating storm-induced two-dimensional cross-shore beach change. The ERDC CHL distributes SBEACH and provides technical support for SBEACH usage for the USACE. Non-USACE users must obtain SBEACH from commercial sources.

Licensing: Restricted Government

SBEACH is provided at no cost within the USACE. The USACE finances technical support via the Numerical Model Support Program. The ERDC CHL POC for technical support of SBEACH is Mark Gravens, 601-634-3809, Mark.B.Gravens@usace.army.mil. SBEACH is distributed via the Coastal Engineering Design and Analysis System (CEDAS) interface. The ERDC CHL distributes CEDAS and provides technical support for CEDAS usage by the USACE. The ERDC CHL POC for licensing and distribution of CEDAS is Mr. Alan Cialone, (601) 634-3095, Alan.Cialone@usace.army.mil.

SMS - Surface Water Modeling System

Type: Government/COTS

SMS is a USACE developed graphical user interface (GUI) and visualization package for numerical hydraulic and sedimentation models that provides a comprehensive environment for one-, two-, and three-dimensional hydrodynamic modeling. SMS

includes 2D finite element, 2D finite difference, 3D finite element and 1D backwater modeling tools that support the USACE-ERDC developed and supported models TABS-MD (GFGEN, RMA2, RMA4, SED2D-WES), ADCIRC, ADH, CGWAVE, STWAVE, M2D, HIVEL2D, and HEC-RAS. SMS also includes a generic model interface, which can be used to support models which have not been officially incorporated into the system.

Licensing: Restricted Government

SMS is provided at no cost within the USACE. The USACE finances technical support via the Numerical Model Support Program. The ERDC CHL distributes SMS, issues and tracks SMS licenses, and provides technical support for SMS usage within the USACE. Non-USACE users must obtain SMS from commercial sources. The ERDC CHL POC for licensing and distribution of SMS can be reached via e-mail at sms@usace.army.mil, by phone at (601) 634-4286, by fax at (601) 634-4208 or mail at ERDC SMS Support; ATTN: CEERD-HF-HG; Waterways Experiment Station; 3909 Halls Ferry Road; Vicksburg, MS 39180.

STWAVE

Type: Government/COTS

STWAVE (STeady State spectral WAVE) is an easy-to-apply, flexible, robust, half-plane model for nearshore wind-wave growth and propagation. The ERDC CHL distributes STWAVE and provides technical support for the USACE.

Licensing: No license required in stand-alone mode. Government restricted license for versions in CEDAS and SMS.

STWAVE is provided at no cost within the USACE. The USACE finances technical support via the Numerical Model Support Program. The ERDC CHL POC for distribution and technical support of STWAVE is Jane Smith, 601-634-2079, Jane.M.Smith@usace.army.mil. STWAVE is distributed via the Coastal Engineering Design and Analysis System (CEDAS) interface. The ERDC CHL distributes CEDAS and provides technical support for CEDAS usage by the USACE. The ERDC CHL POC for licensing and distribution of CEDAS is Mr. Alan Cialone, (601) 634-3095, Alan.Cialone@usace.army.mil. STWAVE is also distributed as part of the SMS. The ERDC CHL POC for licensing and distribution of SMS can be reached via e-mail at sms@usace.army.mil, by phone at (601) 634-4286, by fax at (601) 634-4208 or mail at ERDC SMS Support; ATTN: CEERD-HF-HG; Waterways Experiment Station; 3909 Halls Ferry Road; Vicksburg, MS 39180.

TABS-MD

Type: Government/COTS

The TABS Multi-Dimensional Modeling System (1D/2D), TABS-MD, is a set of generalized finite element numerical models (three major models and several utility programs) used to solve open-channel flow, sedimentation, and water quality problems. TABS-MD is suitable for use in describing depth averaged hydraulic behavior of rivers, reservoirs, wetlands, estuaries and bays and predicting the effects of water resources projects on those systems. The three major uncoupled models of TABS-MD are: RMA2, for hydrodynamics; RMA4, for water quality constituent transport, and SED2D for transport of cohesive or a representative grain size of noncohesive sediments and their deposition, erosion, and formation of bed deposits. TABS-MD models are interfaced and supported within the Surface Water Modeling System (SMS) graphical user interface.

Licensing: Restricted Government

TABS-MD is provided at no cost within the USACE. The USACE finances technical support via the Numerical Model Support Program. The ERDC CHL distributes TABS-MD in executable form as part of the SMS and provides technical support within the USACE. Non-USACE users must obtain the public release of TABS-MD executables from commercial sources. The ERDC CHL POC for TABS-MD is Barbara Donnell who can be reached via e-mail at Barbara.P.Donnell@usace.army.mil , by phone at (601) 634-2730, by fax at (601) 634-4208 or mail at ERDC CHL; ATTN: CEERD-HF-HG (Barbara Donnell); Waterways Experiment Station; 3909 Halls Ferry Road; Vicksburg, MS 39180.

TABS-MDS (same as RMA10-WES)

Type: Government

TABS-MDS (Multi-Dimensional Sediment) is a USACE sponsored physics based numerical model code used for simulating estuarine and riverine processes such as river and tidal circulation, salinity/temperature/sediment transport, and other coastal and riverine processes. TABS-MDS is the USACE version of RMA-10. The ERDC CHL distributes TABS-MDS through requests to the ERDC POC and provides technical support to the USACE. Non-USACE users must obtain the RMA-10 version from commercial sources.

Licensing: Restricted Government

TABS-MDS is provided at no cost within the USACE. The USACE finances technical support via the Numerical Model Support Program. The ERDC CHL tracks users within

the USACE. The ERDC CHL POC for licensing and distribution of TABS-MDS is Gary Brown, 601 634 4417, Gary.L.Brown@usace.army.mil

WISWAVE

Type: Government

WISWAVE is a second-generation numerical wave hindcast model developed for the U. S. Army Corps of Engineers ERDC CHL by Dr. Donald Resio. ERDC CHL maintains this model and uses it to support wave hindcasting studies for the Wave Information Studies (WIS) and related projects. WIS maintains a website containing twenty or more years of hindcasted wave information for all the U. S. coastlines. Successful wave hindcasts using a numerical wave hindcast model require accurate input wind fields over a large geographic area in addition to accurate bathymetric information and appropriate input conditions. Wave hindcasts using WISWAVE are usually run at ERDC CHL.

Licensing: Government

The USACE finances technical support via the Numerical Model Support Program. The ERDC CHL POC for WISWAVE is Barbara Tracy; phone: 601 634-2400; email: Barbara.A.Tracy@usace.army.mil

WMS - Watershed Modeling System

Type: Government/COTS

The Department of Defense (DoD) Watershed Modeling System (WMS) is a USACE developed graphical user interface (GUI) and visualization package that integrates hydrology, hydraulics, and water quality to help civil engineers and others involved in hydrodynamic modeling make informed decisions about watershed management. A variety of watershed models are available, each requiring different input data in a structured format. The models utilize digital terrain data to delineate watershed and sub-basin boundaries and compute geometric parameters used in hydrologic modeling. Digital elevation, land use, and soil data can be analyzed to determine watershed boundaries, stream networks, and hydrologic parameters necessary for model construction. WMS allows the incorporation of other sources of data, such as imagery and radar rainfall estimates, into the modeling process. Model results can be analyzed in a number of ways including traditional plotting of outflow hydrographs, color contouring of spatial results, animation of spatial data over time, and export of results in standard formats, including GIS formats. Currently, WMS provides an interface for the following hydrologic and hydraulic models: Rational Method, TR-20, TR-55, HEC-1, NFF, HSPF, HEC-HMS, HEC-RAS, CE-QUAL-W2, and GSSHA.

Licensing: Restricted Government

WMS is provided at no cost within the USACE. The USACE finances technical support via the Numerical Model Support Program. The ERDC CHL distributes WMS, issues and tracks WMS licenses, and provides technical support for WMS usage within the USACE. Non-USACE users must obtain WMS from commercial sources. The ERDC CHL POC for licensing and distribution of WMS can be reached via e-mail at WMS@usace.army.mil, by phone at (601) 634-4286, by fax at (601) 634-4208 or mail at ERDC WMS Support; ATTN: CEERD-HF-HG; Waterways Experiment Station; 3909 Halls Ferry Road; Vicksburg, MS 39180. Home Page: *http://chl.erdc.usace.army.mil/wms*

WASH123D

Type: Government

WASH123D is a USACE developed first-principle, physics-based finite element numerical model that simulates water flow and contaminant transport in a watershed system that can be conceptualized as a combination of 1-D stream-river networks, 2-D overland regimes, and 3-D subsurface media. WASH123D is included and distributed in the Groundwater Modeling System (GMS).

Licensing: Restricted Government

WASH123D is provided at no cost within the USACE. The USACE finances technical support via the Numerical Model Support Program. The ERDC CHL distributes WASH123D as part of the GMS and provides technical support within the USACE. WASH123D is not currently available to Non-USACE users. The ERDC CHL POC for WASH123D is Dr. Pearce Cheng who can be reached via e-mail at Hwai-Ping.Cheng@usace.army.mil , by phone at (601) 634-3699, by fax at (601) 634-4208 or mail at ERDC CHL; ATTN: CEERD-HF-HG (Dr. Pearce Cheng); Waterways Experiment Station; 3909 Halls Ferry Road; Vicksburg, MS 39180.