

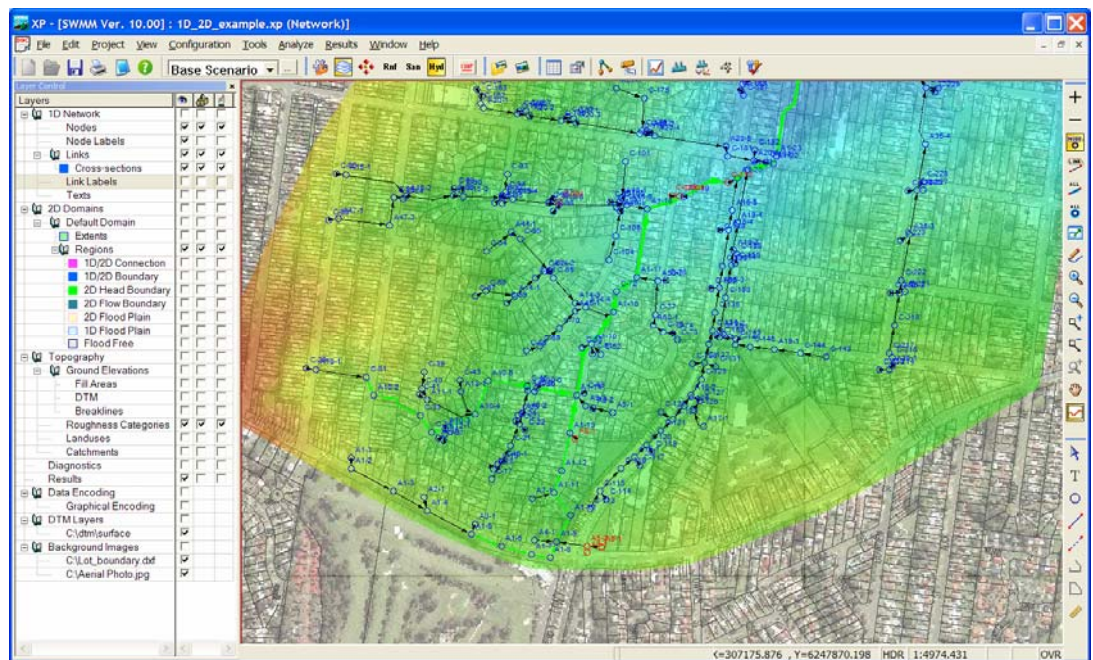
QUARTERLY NEWSLETTER

RELEASE OF XP-SWMM VERSION 10

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XP Software announces the latest release of its flagship product - XP-SWMM. "Version 10 represents a major upgrade," according to Sudesh Mudaliar, Vice President for Product Development. "Its key features include enhanced GIS integration and 3-D graphics for dynamic simulations of model results. The 3-D graphics will assist the modeler in presenting results to management, decision makers and the public."



Improved Features

In a continuing effort to respond to user's needs, we have enhanced the power of many of XP-SWMM's popular features. In Version 10 you will find improvements in:

- *XP-Tables* – users have additional power to build and format field and to create customized fields.
- *Improved Link Vertex Management* – bends in conduits and channels are represented as vertices. Version 10 allows the vertices to be imported and exported using XPX scripting.
- *GIS Module in base package* – now all users will have the ability to integrate GIS data into their models.
- *BMP& LID in Runoff and Hydraulics Layer* – this feature allows users to analyze storage and treatment options in the hydraulics layer without having to pass data through interface files.
- *Default object prefix* – this feature allows users to customize prefixes for new nodes and links. Labels for new objects will be incremented using the user's prefixes.



RELEASE OF XP-SWMM VERSION 10

New Features

We have added several new features to help users build more powerful and realistic models. These include:

- *GIS Layer Management* - a new layer control panel opens in the default setting. This tool allows users to manage the viewing and editing of their 1D and 2D layers. It also allows the association of shape and MID/MIF files to XP-SWMM's new polygons.
- *3-D Perspective View* - this new tool allows users to visualize flow in the network from any perspective.
- *Ruler Tool* - allows for easy extraction of lengths, areas and perimeters from the XP-SWMM plan view. These measurements can be added to your project database.
- *ECW file reading* - XP-SWMM can read this proprietary format that is used for very large aerial photos.
- *Timed Backup* - users can specify the time period for automatic backup of their XP-SWMM project files.
- *DTM Builder* - this feature allows the modeler to create a Digital Terrain Model directly from elevation data in the model. The DTM is used to create perspective view, drape geo-referenced images, obtain ground elevations for nodes and develop cross sections.
- *2-D Dynamic Modeling* - this new feature is discussed in the article on Page 3.

Name	Conduit Factors					Conduit Results							End of Simulation Conditions					
	Conduit Factor Flag	Number of Barrels	Entrance Loss	Exit Loss	Sediment Depth	Diameter, in	Length ft	Shape	Roughness	Conduit Slope	Upstream Invert Elevation ft	Downstream Invert Elevation ft	Final Cross-section Area (ft ² , m ²)	Final HGL (DS) (ft, m)	Final HGL (US) (ft, m)	Final Flow (ft ³ /s, m ³ /s)	Final Hydraulic Radius (ft, m)	Final Velocity (ft/s, m/s)
45		1.00	6.350	1.000	0.000	15.0	45.000	Circular	0.0130	0.40000	917.910	917.730	0.181	917.878	918.187	0.235	0.158	1.234
44		1.00	1.000	1.204	0.000	15.0	154.000	Circular	0.0130	1.79000	917.730	914.980	0.085	915.166	917.878	0.255	0.095	3.000
43		1.00	6.379	1.000	0.000	15.0	182.000	Circular	0.0130	1.80000	914.980	911.700	0.111	911.845	915.166	0.307	0.113	2.758
42		1.00	1.000	1.000	0.000	15.0	325.000	Circular	0.0130	3.20000	911.700	901.300	0.080	901.453	911.845	0.327	0.092	4.060
41		1.00	1.000	3.337	0.000	15.0	325.000	Circular	0.0130	2.80000	901.300	892.200	0.091	892.407	901.453	0.347	0.099	3.807
40		1.00	3.337	1.094	0.000	15.0	274.000	Circular	0.0130	1.08000	892.200	889.240	0.134	889.451	892.407	0.367	0.128	2.737
39		1.00	1.064	1.150	0.000	15.0	285.000	Circular	0.0130	1.08000	889.240	886.160	0.137	886.363	889.451	0.388	0.129	2.838
38		1.00	1.150	2.885	0.000	15.0	205.000	Circular	0.0130	4.49000	885.430	876.230	0.096	876.353	885.599	0.408	0.102	4.248
114		1.00	2.885	2.885	0.000	18.0	11.085	Circular	0.0130	32.49000	876.230	872.630	0.091	872.959	876.353	0.463	0.091	5.107
113		1.00	6.580	1.010	0.000	27.0	249.987	Circular	0.0130	2.56000	872.630	866.230	0.439	866.967	872.959	2.066	0.225	4.709
112		1.00	1.010	1.310	0.000	27.0	234.381	Circular	0.0130	2.40000	866.230	860.855	0.386	861.302	866.967	2.090	0.213	5.415
111		1.00	1.310	1.400	0.000	27.0	84.245	Circular	0.0130	1.67000	854.476	853.070	0.591	854.027	854.875	2.110	0.209	3.571
104		1.00	1.000	1.000	0.000	15.0	12.027	Circular	0.0130	0.56000	853.070	853.003	0.991	853.809	854.027	2.134	0.376	2.154
154		1.00	1.000	1.000	0.000	15.0	5.000	Circular	0.0130	10.00000	855.000	850.000	0.000	849.203	849.203	0.000	0.000	0.000
110		1.00	1.397	3.890	0.000	30.0	81.000	Circular	0.0130	3.93000	848.930	846.530	0.380	847.244	849.203	1.782	0.196	4.684
103		1.00	3.890	4.477	0.000	30.0	38.000	Circular	0.0130	0.76000	846.530	846.240	1.117	846.765	847.244	1.805	0.401	1.616
102		1.00	4.477	1.000	0.000	30.0	218.000	Circular	0.0130	0.51000	846.240	845.130	0.727	845.540	846.765	1.828	0.308	2.514
101		1.00	1.010	1.000	0.000	48.0	154.489	Circular	0.0130	0.51000	845.130	844.343	0.680	844.727	845.540	1.840	0.258	2.708
35		1.00	1.010	1.009	0.000	48.0	405.113	Circular	0.0130	0.51000	844.343	842.281	0.625	842.667	844.727	1.853	0.244	2.965
34		1.00	1.028	1.010	0.000	48.0	399.992	Circular	0.0130	0.51000	842.281	840.244	0.629	840.631	842.667	1.868	0.245	2.969
33		1.00	1.000	1.028	0.000	48.0	420.004	Circular	0.0130	0.51000	840.244	838.106	0.632	838.492	840.631	1.882	0.246	2.978
32		1.00	1.002	1.000	0.000	48.0	350.003	Circular	0.0130	0.51000	838.106	836.323	0.642	836.761	838.492	1.896	0.248	2.955
31		1.00	1.030	1.002	0.000	48.0	349.994	Circular	0.0130	0.51000	836.323	834.541	0.716	834.809	836.761	1.911	0.266	2.669
30		1.00	1.120	1.030	0.000	48.0	379.971	Circular	0.0130	2.13000	834.541	826.448	0.392	826.807	834.809	1.923	0.178	4.911
29		1.00	1.080	1.120	0.000	48.0	380.084	Circular	0.0130	0.76000	826.448	824.166	0.569	824.529	826.807	1.936	0.230	3.402
28		1.00	1.015	1.080	0.000	48.0	265.006	Circular	0.0130	0.76000	824.166	822.153	0.575	822.521	824.529	1.949	0.232	3.389
27		1.00	1.023	1.015	0.000	48.0	250.002	Circular	0.0130	0.76000	822.153	820.254	0.584	820.613	822.521	1.961	0.234	3.361
26		1.00	1.791	1.023	0.000	48.0	514.741	Circular	0.0130	0.76000	820.254	816.344	0.569	816.725	820.613	1.975	0.230	3.473
24		1.00	1.185	1.791	0.000	48.0	234.787	Circular	0.0130	0.76000	816.344	814.560	0.613	814.911	816.725	1.989	0.241	3.243
23		1.00	1.000	1.000	0.000	48.0	400.838	Circular	0.0130	0.76000	814.560	811.600	0.688	811.947	814.911	2.003	0.244	3.142

How to get Version 10

Current users with active subscriptions will receive a CD by mail but if you are anxious to start making use of the new functionality of Version 10, a link to the download will be sent to you. Version 10 will be available in mid November 2006. Please contact our sales staff if you have any questions.

PARENT COMPANY NEWS



XP Software's parent company, Cardno Limited, has announced that XP Software was one the most improved business units for fiscal year 2004/2005. During this period, XP Software's contributions to the performance of Cardno doubled over the previous year.

Cardno Limited is a multidisciplinary professional services organization with an operating track record extending over 60 years. It is headquartered in Queensland, Australia. The Cardno group of companies provides professional services associated with the planning, design, and delivery of physical and social infrastructure. Services include consulting engineering, management and environmental services as well as, international development work.

Cardno International is a publicly traded company. Its stock is listed on the Australian Stock Exchange. The total market capitalization is over \$200 million Australian. More information may be found at www.cardno.com.au.

HYDRODYNAMIC MODELING IN 2 DIMENSIONS WITH XP-SWMM

Fully two-dimensional (2D) models have been widely used for modeling river and coastal hydraulics and recently have become a viable practical option for modeling urban floods. As a stormwater management tool, 2D models are more accurate and produce results that are far more readily accepted and understood by managers, decision makers and other stakeholders.

Recent events in the United States and the world have revealed the need for comprehensive flood models. Now with XP-SWMM Version 10, users have all the tools needed to predict the extent duration of flooding to assess the ability of technologies and management practices to mitigate flooding.

Description

The 2D modeling package is based on the TUFLOW program developed by WBM Oceanics Australia and The University of Queensland. TUFLOW has been the subject of extensive testing and validation. It is specifically orientated towards establishing the flow patterns in coastal waters, estuaries, rivers, floodplains and urban areas where the flow patterns are essentially 2D in nature and would be awkward to represent using a 1D model.

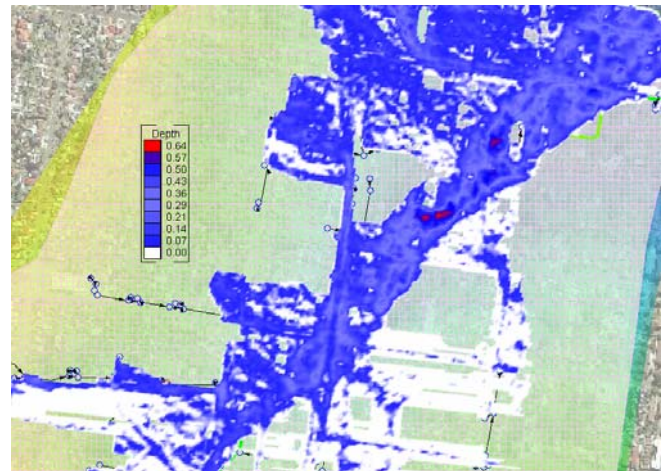
XP-SWMM has incorporated the TUFLOW engine into a user-friendly graphical interface which walks the user through preprocessing of input data and the calculation of the model. All of XP-SWMM's familiar tools for generating tables, graphs, and animations are available for reviewing, analyzing and presenting model results. New 2D and 3D animation tools make it easy to present results to managers and decision makers.

A powerful feature of XP-SWMM with 2D is its ability to dynamically link to any 1D (quasi-2D) model in an integrated fashion. The user sets up the model as a combination of 1D network domains linked to 2D domains as single model.

Applications

XP-SWMM with 2D is ideal for:

- Analyzing Trouble Spots in an Existing 1D Network – simulating surface flooding, its flow path and its recession after the storm.
- Analyzing Tidal Surges, Dambreaks and Breaches on 1D Storm/Sewer Networks – the impact of surface flooding on an existing 1D network can be simulated far more accurately.
- Analysis of Dual Drainage – modeling of a road/subdivision design is enhanced with the ability to interactively simulate the surface flows in 2D and the 1D stormwater/sewer network.
- Analysis of Broad Surface Drainage – perfect application to design and analyze drainage of carparks, commercial sites, golf courses, etc.
- Analyzing impact of Flooding of non-connected 1D models – ideal for analyzing the impact of cross surface flooding on adjacent non-connected 1D models such as parallel rivers, drainage canals (eg DERM), irrigation systems, etc.
- Analyzing impact of 1D conveyance structures connecting two or more floodplains – ideal for analyzing the impact of a bridge, culvert or channel design in handling flow between two floodplains.
- Flood Hazard Mapping – A perfect tool to map the extents of surface flooding (depth and velocity) that can be used to develop emergency response procedures and to design engineering solutions to mitigate the impact of the flooding.



How to get 2D

2D is also available from mid November as an add-on to any XP-SWMM Version 10 license. Contact XP Software at:

www.xpsoftware.com

Products

XP-SWMM

XP-Storm

XP-Flood

XP-12D

XP- Viewer

XP-RatHGL

XP-Culvert

Services

Onsite
Training

Internet-
based
Training

Public
Workshops

Custom
Integration

Sub-
consulting

About XP Software

XP Software has provided civil engineers and municipalities with award-winning software for hydrology, drainage, water supply and water-quality applications since 1970. A pioneer in dynamic hydraulic software in Australia, XP Software currently maintains offices worldwide. Our flagship product, XP-SWMM is the only economical software package that provides all the major hydrology methods to allow you to estimate your storm water inflows, waste water, dry weather and infiltration flows. XP Software also develops XP-Storm for total stormwater system design analysis, XP-Culvert for culvert and pond modeling and XP-Flood for floodplain management. XP Software offers ongoing public training workshops, in-house training, and online training to accelerate professional growth.

To Contact us

XP Software

Call for a local representative:

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Email inquiries to: info@xpsoftware.com

www.xpsoftware.com

Upcoming Public Workshops. Improve skills and proficiency.

November 17-18, 2005: Atlanta, GA, USA

Intermediate level workshop

This workshop has been structured to provide introductory and intermediate level instruction on storm and wastewater modeling with XP-SWMM and XP-Storm.

November 22-23, 2005: Sydney, NSW, Aus

Intermediate level workshop

This workshop has been structured to provide introductory and intermediate level instruction on storm and wastewater modeling with XP-SWMM and XP-Storm.

Nov 30-Dec 1, 2005: Vancouver, BC, Can

Intermediate level workshop

This workshop has been structured to provide introductory and intermediate level instruction on storm and wastewater modeling with XP-SWMM and XP-Storm.

December 2, 2005: Vancouver, BC, Can

Advanced level workshop

Experienced users of XP-SWMM will learn how to further improve efficiency and explore advanced features of XP-SWMM and XP-Storm.

December 6-7, 2005: Brisbane, Qld, Aus

Intermediate level workshop

This workshop has been structured to provide introductory and intermediate level instruction on storm and wastewater modeling with XP-SWMM and XP-Storm.

February 9-10, 2006: Orlando, FL, USA

Advanced level workshop

Experienced users of XP-SWMM will learn how to further improve efficiency and explore advanced features of XP-SWMM and XP-Storm.

**Online and in-house training is also available.
Accredited for continuing education units in most areas.**

Please also visit us at these tradeshow:

WEFTEC '05, October 30—November 2, 2005: Washington DC, USA

Civils 2005, November 22-24, 2005: London, England

CHI, February 23-24, 2006: Guelph, Canada

4th Int Conf on Water Sensitive Urban Design, April 3-7, 2006: Melbourne, Australia