8-11-2026 2D Modeling Webinar - SMS 14 New Release Feature Highlights & Example Bridge and Culvert Applications

Chat pod comments, live responses, and some post webinar responses

Is the Applied Bridge Scour Training specific to SMS? Or is this 2D hydraulic modeling in general?

>> It is not specific to SMS/SRH-2D. It uses SMS/ SRH-2D and RAS 2D

Is the GPU processing (that reduces computation time) applicable to simulations run concurrently? Or does it work on one simulation at a time?

>> Test show yes

I mainly use SMS for the CMS-Wave/Flow Models. Is there a generalized report generator feature in SMS when not using SRH-2D?

>> Not currently.

Does the summary report show the mapped coverage layer or how the coverage is applied to the mesh?

>> Not really, it shows the material regions, but not the specific limits after they have been mapped to the mesh. We'll have to give this some thought.

Are there folders for scatter data?

>> Yes

I have difficulty getting the data extents I want when downloading from web. Is there a possibility to download within a polygon or to show the polygon in the map locator window?

>> There is a tool for that. It is the "Get Data" tool and appears on the bar between the project explorer and the graphics window.

I recently installed SMS 14.0.1, but the Undo and Redo features still don't work for Map Data. Is this a known limitation, or is there a setting I need to enable?

>> Yes, there is a setting. Go to Edit | Preferences and on the bottom right of the dialog you can enable the feature.

Can the number of side elements be specified for pier columns? (such as having only one column)

>> It is specified as the number of elements through the bridge rather than pier side elements

When you say 5-7 per span, is that including pier wrapping elements?

>> yes

So, if we define at lease 3/5 elements in the Structure Properties - Profile editor, will the SMS bridge hydraulic computation correctly account for the skew angle of the vertical abutment relative to the direction of flow?

>>Yes

Can V14.0.3 model a complex pier?

>> It does not yet support an option to automatically model an exposed foundation on a pier. Typically the pile cap can be integrated into the terrain.

Is there a way to do different pier widths within one pier group?

>> In one pier group, no, but you can have different pier definitions from one group to another.

Blending the 3D Structure mesh with surrounding mesh is tricky.

>> Agreed. This is something that we continue to work on. That is one of the challenges. We have clarified this in a tutorial and we are exploring other options.

Is there a new or specific protocol/tool in SMS 14.0.3 where pier protection structures can be accurately modeled for both hydraulics (SRH-2D) and scour?

>> No automated tool yet. We should discuss the protection structures you are using. This could be a future enhancement.

Is there an easier way to switch between storm events on an observation plot? Like if you're showing a 100 year storm event for multiple scenarios, then you want to show the 50 year event results that's a lot of clicks.

>> The easiest way would be to use the active dataset option in the plot data settings and then just click between data sets.

Does the latest version of SMS 14.0.1 have Hydraulic Toolbox 5.5.3 built in, so we can use the Hydraulic Toolbox features directly within SMS without installing Hydraulic Toolbox separately?

>> Yes

For modeling HY-8 culverts, is there a way to set multiple culverts on a single crossing (different sizes) with using the roadway station limits, or do these have to be separate BCs? when i tried this, i could not adjust the roadway stations separately, it just stacked the culverts.

>> The current tool for multiple culverts in a single 3D structure assumes that they are all identical and have the same slope. Adding variability for multiple culverts may be a future improvement. For now, it may be possible to define separate culverts so the geometry may be different, but with the current methodology it may be challenging to place them close together. We may take this into further consideration and come up with a workflow.

Is there a potential for SRH to support Rain on Grid ?

>> There is an internal version that is available for USBR, but the final version has not been made available for distribution in SMS yet.

Are all the white bank Areas on the slide 35 represented as holes in the mesh?

>> Yes, most are buildings.

When modeling 3d culverts do you used the upstream EGL option, similar to how HY-8 models culverts?

>> No, when using the 3D Structure Tool for culverts, the culvert computations are part of the 2D computations. The user does not have to specify any 1D boundary conditions.

What is best practice in modeling a long pier wall with exposed large pile cap and piles to best represent flow around the pier

>> Piers are normally represented as a hole in the mesh. (Like what Scott is showing)

>> An exposed pile cap can be more effort. It has to be incorporated into the bathymetry data on the mesh.

With the number of widening projects happening and the desire to extend existing culverts along different alignments, has there been any development in modeling culverts with bends in 2D?

>> There are no automated tools available for complex cases like this, but with some ingenuity and mesh editing, I believe two 3D Structures Culverts could be connected in series. Let me know if we can help you with this if you have a specific project in mind. All new developments start with a demonstrated need and application.