



Devotech Group of Companies

## **DEVOTECH iDAS v12.2**

Document version: 01

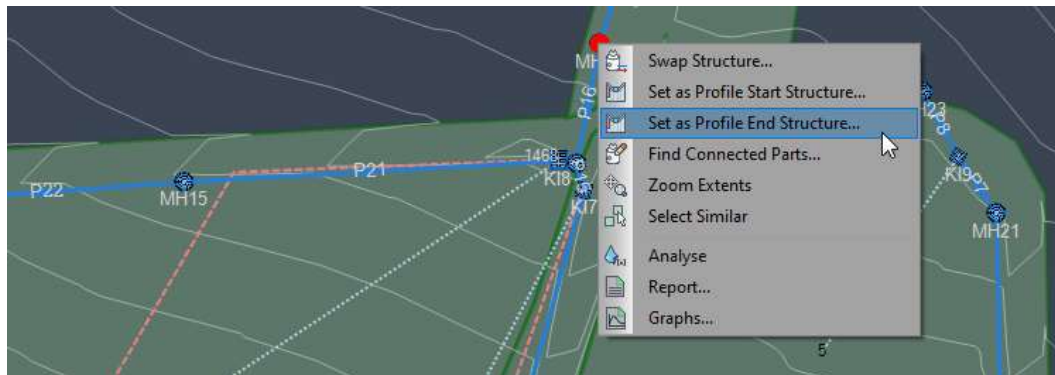
DEVOTED TO ENGINEERING EXCELLENCE

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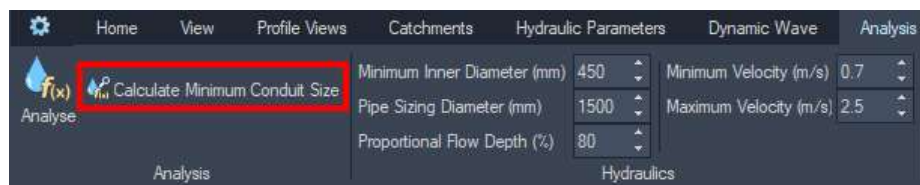
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## NEW FEATURES

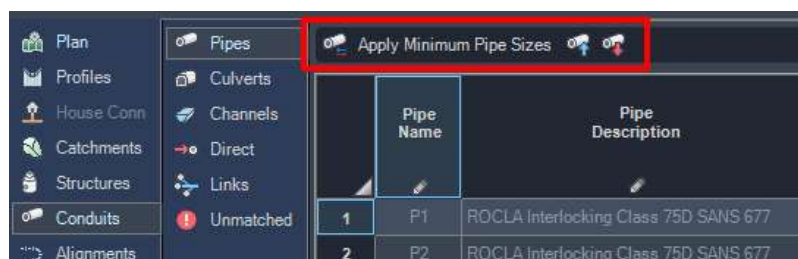
- Civil 3D 2016-2022 support
- Added the option to add profile End Structure from Plan View:



- Added Security test for access to the DefaultMapping.map file
- Project Information is saved when closing manager
- Upgraded Swap Pipes and Swap Structures dialogs
- Upgraded Create House Connection dialog
- Upgraded Create HC Reference Network dialog
- Convert old style Raingages to Unit Rainfall curves when opening older drawings
- Added the option to calculate the minimum conduit sizes for stormwater and sewer networks



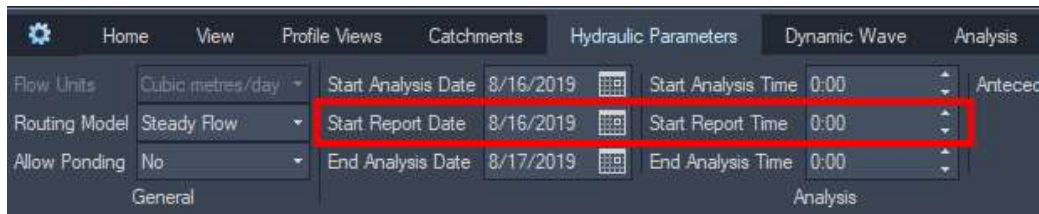
- Added Apply Minimum Pipe Sizes, Increase Pipe Diameter and Decrease Pipe Diameter commands



- Added Parcel Selection for house connections
- Improved performance when loading water networks



- Replaced Civil 3D findshortestnetwork path which was slow with in-house developed functions = major speed improvement
- Disable/enable Kerby button from catchments with appropriate run-off methods
- Improved Civil 3D drawing update time when updating networks from iDAS
- Introduced Report Start Date and Time for all pipe network types



- Added function to set Pipe Bedding Class for selected pipes

Plan

Profiles

House Conn

Catchments

Structures

Conduits

Alignments

Library

Mappings

Reports

Graphs

BOM

Excavation Depth Increments (m)

1.0

Calculate

Export BOM

Excavation Parameters

Excavation Volume (m³)

Excavation Volume Summary (m³)

Excavation Length (m)

Excavation Length Summary (m)

Pipes and Structures

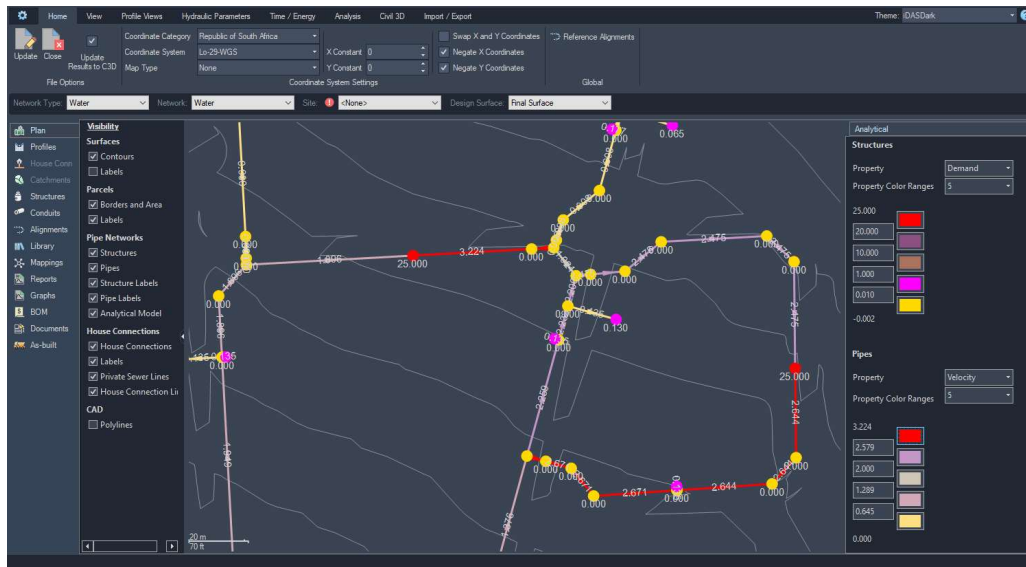
	Pipe name	Part Size	Reference Surface	Bedding Class	Side Allowance (mm)
1	P1	525mm Class 75D	Final Surface	Class C	300.000
2	P2	525mm Class 75D	Final Surface	Class D	300.000
3	P3	525mm Class 75D	Final Surface	Class A	300.000
4	P4	525mm Class 75D	Final Surface	Class A	300.000
5	P5	525mm Class 75D	Final Surface	Class A	300.000
6	P6	525mm Class 75D	Final Surface	Class A	300.000
7	P7	525mm Class 75D	Final Surface	Class A	300.000
8	P8	525mm Class 75D	Final Surface	Class A	300.000
9	P9	525mm Class 75D	Final Surface	Class A	300.000
10	P10	525mm Class 75D	Final Surface	Class A	300.000
11	P11	525mm Class 75D	Final Surface	Class A	300.000

Bedding Class...

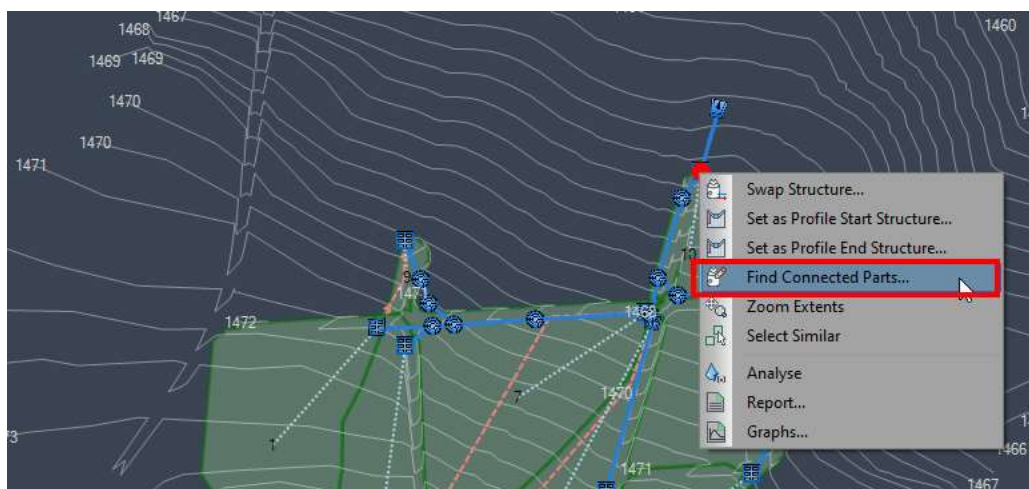
- Streamlined subcatchment workflow. User only needs to specify smaller subcatchments, and the rest will be auto allocated based on the C/CN of the main catchment
- Added Catchment Link line to visually inspect catchment connectivity. Line drawn from centroid of catchment to inlet structure.



- Added Analytical model for water networks



- Added the function “Find Connected Parts” in plan layout when a structure is selected. It can be used to find connectivity issues



- Bill of material (BOM) can be exported

Excavation Parameters		Pipe name	Part Size	Reference
Excavation Volume (m³)	1	P1	525mm Class 75D	F
Excavation Volume Summary (m³)	2	P2	525mm Class 75D	F

- Added Bends for BOM

## IMPROVEMENTS

- Fixed issue with analysis where pipe or structure Descriptions had multiline text
- Water pipes show number in the grid first column
- Fixed issue with Minor Loss
- Fixed issue with Report Status
- Fixed issue with Head Loss Dialog
- Added exclamation mark for negative values
- Removed exclamation mark for negative demand for water
- Ignore raingages in old sewer drawings when analysis is run
- Fixed issue with catchment tabs and hydrology methods from old drawings
- Fixed incorrect unit display in analysis report
- Fixed issue where House Connection or Catchment tabs was greyed out
- Fixed tooltip descriptions on TP108 analysis (Curve Types)
- Changed Subcatchments, Flow Paths and Inlets to Auto Subcatchments, Auto Flow Paths and Auto Inlets
- Changed number of decimals on subcatchment areas
- Added Heading for Hydrograph subcatchments
- Fixed issue with catchment grid not updating
- Fixed issue where channel side slope was not saved or applied (also added right-click option)
- Disable network dropdown when network type = none
- Resolved issue where structure display is not updated after mapping update
- Updated Capacity Velocity and Capacity Flow to also reflect the proportional flow depth used
- Updated issue where Impervious CN number was not used correctly until the user selected the catchment (Hydrograph method)
- Fixed issue with Channel side slopes reset after analysis
- Fixed issue where hydraulic accuracy was not updated during analysis
- Improved the Minimum Pipe Size algorithm
- Improved Graphs performance
- Fixed issue where EPASWMM rainfall depths were not saved in site
- Improved catchment graphics and selections
- Updated iDAS Help file for iDAS v12
- Updated some training videos for iDAS v12

Storm 13a Storm Water Network Analysis (iDAS 10, 11)		Storm 13b Storm Water Network Analysis (iDAS 12)	
00:38 Specify Manning's roughness	16:48 Report	00:36 Specify direct inflows	08:54 Reports
02:42 Design data	17:39 Graphs	01:12 Hydraulic parameters	10:28 Pipe capacity calculation
05:09 Analysis dates	19:52 Export report	03:56 Dynamic Wave options	12:05 Export results to Excel
05:23 Time steps	20:09 Export graph	04:22 Analysis settings	12:53 Export branch to Excel
06:04 Dynamic Wave options	20:14 Analysis errors	05:42 Losses	13:49 HGL and EGL
06:30 Pipe design rules	21:28 View results in plan layout	07:10 Analyse	14:26 Graphs
08:12 Losses		07:30 Invalid roughness error	16:33 Update results in C3D
11:08 Analyse		07:40 Specify Manning's roughness	
14:30 Pipe capacity calculation		08:18 Error codes	
Storm 13a-Storm Water Network Analysis (iDAS 10, 11)		Storm 13b-Storm Water Network Analysis (iDAS 12)	

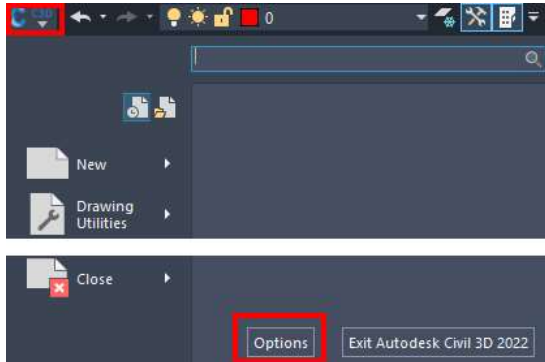
## KNOWN ISSUES

### Water analysis Error 305

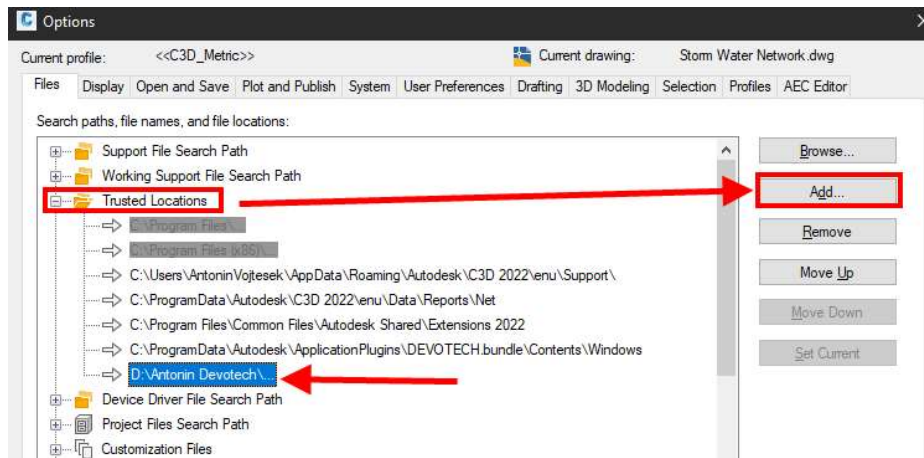
Some computers give an Error 305 when running water analysis.

Possible solutions:

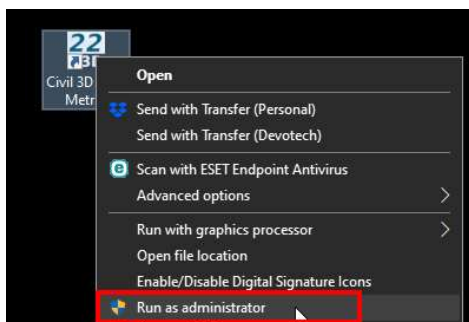
1. Make sure that the user has the right privileges to the location where the drawing is saved.
2. Set the folder where the drawing is saved as a **trusted location**. Open Civil 3D **Options**:



Select the **Trusted Location** folder, click on **Add** and browse to the folder where the drawing is saved. If you want to include the selected folder as well as its **subfolders**, you must add three dots “...” at the end of the folder path:

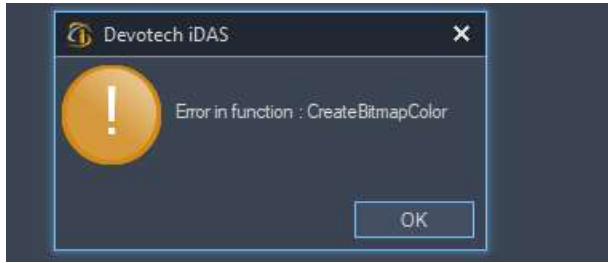


3. Run Civil 3D as **administrator** (right click on the Civil 3D icon and use the **Run as administrator** command)

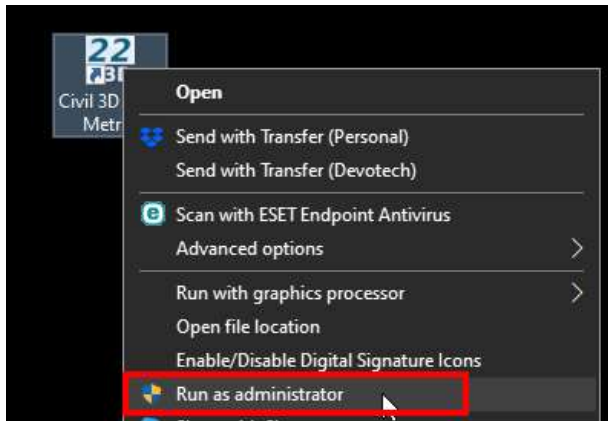


## Error in function: CreateBitmapColor

If you get the following error when opening the Pipe Manager:



close Civil 3D and start it up as **administrator** (right click on the Civil 3D icon and use the **Run as administrator** command)



## Incorrect coordinate system causes crash

Using the incorrect coordinate system with coordinates that falls outside of the coordinate system extents causes Devotech iDAS to crash. Watch this video for details:

<https://www.devotechgroup.com/post/unhandled-exception-coordinate-system-conversion-failed>

## No backwards compatibility between iDAS 12 and older versions (10 or 11)

Any pipe networks which are opened in **iDAS 12.1 Pipe Manager** cannot be opened in iDAS 10 or 11 (Storm, Sewer and Water managers), because there is no backwards compatibility. We had to improve the mapping functionality and we could not make it backwards compatible.

## iDAS rename command had to be removed

We could not use the old rename command because of the name conflicts. We want to implement new rename functionality. In the meantime, you can use the workflows in these videos:

### Storm water, sewer and water reticulation networks:

<https://www.devotechgroup.com/storm-water-training?wix-vod-video-id=a8a76c0535a14ef39519d81c77e93b71&wix-vod-comp-id=comp-jck4lbf2>

### Bulk water networks:

<https://www.devotechgroup.com/bulk-water-training?wix-vod-video-id=2a53063bebf14e5e8880d5708eaff58d&wix-vod-comp-id=comp-jck6l0rb>



### Weir crest elevation cannot be adjusted in the iDAS Pipe Manager

The user must go to Civil 3D model space to adjust the weir crest elevation which is the same as a structure sump elevation.

### Orifice crest seems incorrect in the pond profile in iDAS Pipe Manager

This is just a graphical issue, the correct crest elevation is used for the analysis.

### iDAS Swap Pipes command and Swap Structures command delete user defined fields

If swap commands are used, then the **User Defined Fields** are deleted from the pipe or structure properties

### Grading command in the iDAS Pipe Manager does not work correctly if profile starts at Outfall

### Cannot set time series for direct inflow

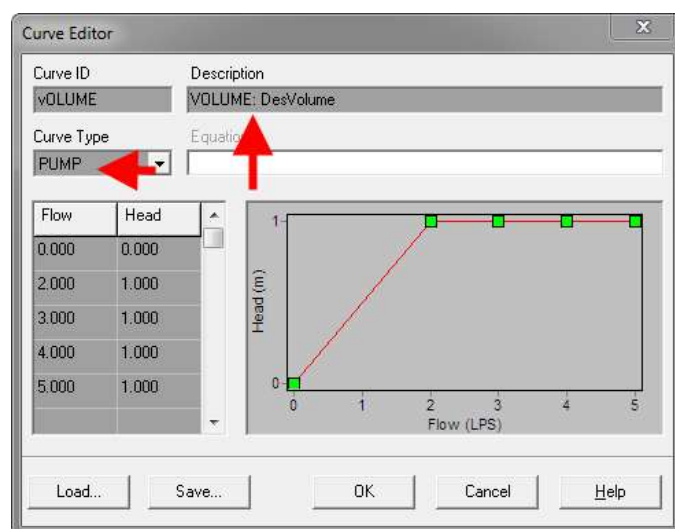
Direct inflow is used for the inflow from catchments when the Rational Method is used. The EPASWMM engine does not allow to specify multiple direct inflows with various time series, therefore we could not implement the time series for the direct inflow.

### Import INP to SSA does not import Surge Depth

If you import a INP file to SSA, it might not import the **Surcharge Depth**. This is a SSA bug. To avoid this issue, open any existing SSA file (file with SPF extension) and then import the INP file again. It seems that when any SPF file is opened (it can even be an empty file) it forces SSA to load all the components correctly and importing the INP file works as it should.

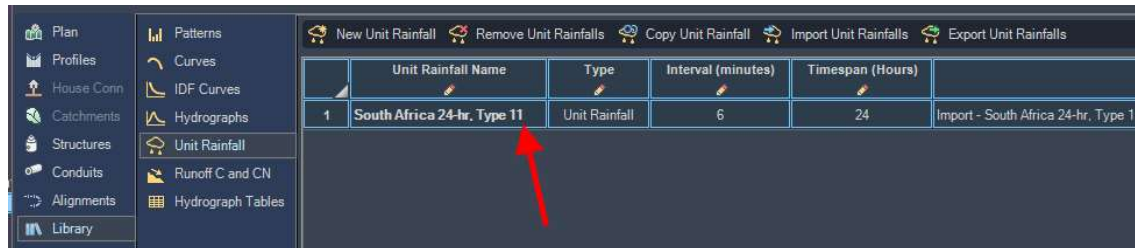
### Curve type is not correctly imported to EPANET

When importing INP file to EPANET v 2.00.12 and newer, the curve type is not correct, all the curves have PUMP as type. This is an EPANET bug. EPANET v 2.00.10 works as expected.



### Import library objects always adds number 1 at the end of the name

This behaviour changes the name of the imported object, e.g. Pattern, Curve, Hydrograph etc., therefore it does not match with the description. This behaviour is intentional to avoid issues with the duplicate names.



### Some icons are difficult to see on light themes

The icons were primarily developed for the dark theme therefore, the visibility might be sacrificed on light themes.

### Froude number is not calculated

Command Line:		Station: 0.000m		Elevation: 0.000m											
		Invert Elevation Start (m)	Cover Start (m)	End Station (m)	Invert Elevation End (m)	Cover End (m)	Length (3D) (m)	Slope (%)	Slope Ratio (1:x)	Maximum / Full Flow (1:Ratio)	Maximum / Full Depth (1:Ratio)	Design Velocity (m/s)	Design Flow (m³/s)	Froude Number	Hydraulic Gradeline Upstream
1	30	1,468.183	0.500	25.248	1,467.867	1.405	25.250	1.250	80.000	0.010	0.070	0.960	0.016	0.000	1,468.243
2	48	1,467.817	1.455	41.062	1,467.738	1.873	15.814	0.500	200.000	0.010	0.080	0.700	0.016	0.000	1,467.886
3	62	1,467.688	1.923	61.373	1,467.587	2.080	20.311	0.500	200.000	0.010	0.080	0.700	0.016	0.000	1,467.756
4	73	1,467.537	2.130	110.516	1,467.291	1.507	49.144	0.500	200.000	0.360	0.420	1.780	0.401	0.000	1,467.896
5	516	1,467.241	1.557	177.948	1,466.904	1.087	67.432	0.500	200.000	0.360	0.420	1.780	0.401	0.000	1,467.599
6	848	1,466.854	1.137	181.273	1,466.837	1.139	3.325	0.500	200.000	0.650	0.590	2.090	0.732	0.000	1,467.357
7	273	1,466.787	1.189	203.073	1,465.567	1.754	21.834	5.596	17.871	0.220	0.320	5.200	0.814	0.000	1,467.060
8	373	1,465.517	1.804	254.152	1,465.017	0.745	51.082	0.978	102.151	0.770	0.660	3.000	1.193	0.000	1,466.880

A light gray world map serves as a background for the contact information section. The map shows the outlines of the continents, with a focus on the regions where the contact details are provided: New Zealand, South Africa, and the Czech Republic.

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