

InfoWorks WS Advances

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Additions and Improvements

- **Cumulative Flow link result**
- **Multi-component reservoirs**
- **Optimiser Control Fields**
- **Improved simulation performance**

Cumulative Flow link result

- The **Cumulative Flow** result reports the total flow that has passed through the link from the start of the simulation to the present timestep (value is flow direction dependent).

Grid Results [Pipe] - Leakage Incident>Leakage Locator						
01/10/1998 00:00:00						
	From Node ID	To Node ID	Suffix	Headloss per Unit Distance (m/km)	Velocity (m/s)	Cumulative Flow (l)
▶	K104	K400207	1	0.06	-0.06	0.00
	K157	K400135	1	0.35	-0.15	0.00
	K400008	K400268	1	0.01	-0.01	0.00
	K400009	K400008	1	0.00	-0.00	0.00
	K400010	K400009	1	0.00	0.00	0.00
	K400010	K400239	1	0.00	-0.01	0.00
	K400011	K400184	1	0.00	0.00	0.00
	K400012	K400011	1	0.00	0.01	0.00
	K400012	K400074	1	0.00	0.00	0.00
	K400013	K400266	1	0.01	-0.01	0.00
	K400014	K400093	1	0.00	0.00	0.00
	K400015	K400114	1	0.00	0.00	0.00

Grid Results [Pipe] - Leakage Incident>Leakage Locator						
01/10/1998 23:50:00						
	From Node ID	To Node ID	Suffix	Headloss per Unit Distance (m/km)	Velocity (m/s)	Cumulative Flow (l)
▶	K104	K400207	1	0.06	-0.06	-140415.20
	K157	K400135	1	0.42	-0.16	-600469.19
	K400008	K400268	1	0.01	-0.01	-7964.82
	K400009	K400008	1	0.00	-0.00	-3780.75
	K400010	K400009	1	0.00	0.00	1599.05
	K400010	K400239	1	0.00	-0.01	-10736.85
	K400011	K400184	1	0.00	0.01	2399.45
	K400012	K400011	1	0.00	0.01	3594.60
	K400012	K400074	1	0.00	0.00	603.26
	K400013	K400266	1	0.01	-0.02	-10460.77
	K400014	K400093	1	0.00	0.00	298.88
	K400015	K400114	1	0.00	0.00	896.64

Multi-component reservoirs

- During simulation, heads of all component reservoirs are set simultaneously to the same value except when one or more is isolated by pipe or valve closures.

Reservoir Group - Treatment Res

Object Group Definition | User | Hyperlinks | Notes

Definition

Object Group ID: Treatment Res

Asset ID:

X (m): 452120.71 #D

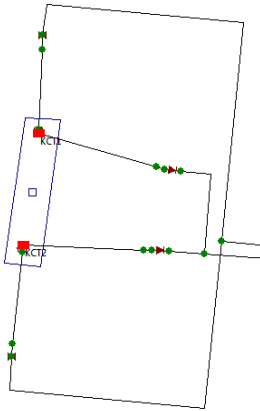
Y (m): 158344.77 #D

Node ID
▶ KCT1
KCT2
*

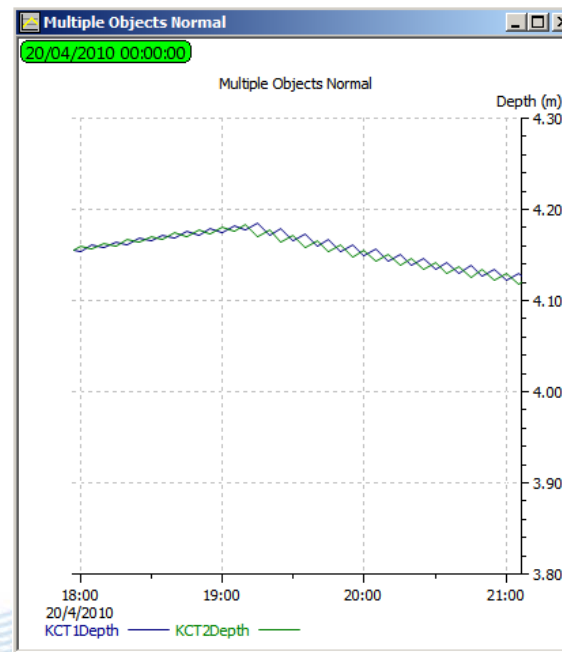
Multicomponent Reservoir

OK Cancel Apply Help

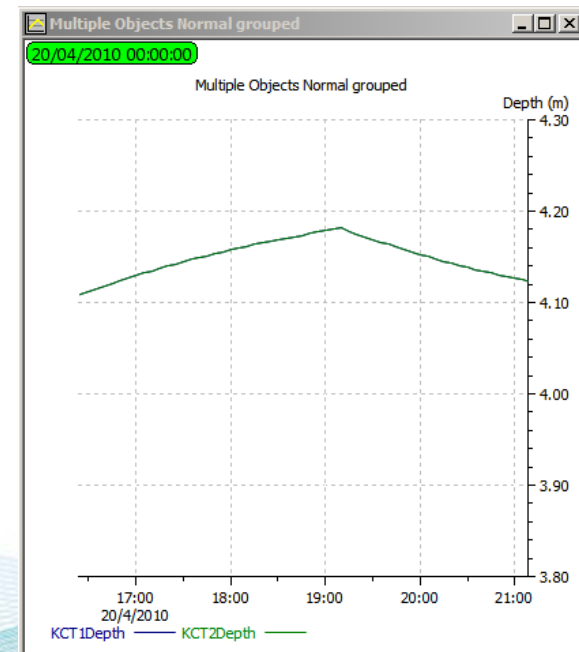
Multi-component reservoirs



Ungrouped



Grouped



Optimiser Control Fields

- Max off time - the target maximum time for which the pump can be switched off
- Time since last change - time at start of simulation since previous state change (from on to off, or from off to on)
- Max/Min flow volume fields - used to define target minimum and maximum volume of flow through pump over a given period of time.
- Delay profile change option is used to specify the duration from the start of the simulation before the optimiser is allowed to make any changes to profiles.

Optimiser Control Fields

Previous parameters

The screenshot shows the 'Optimiser Controls' dialog box for 'Pump Station - KCH2PMP.KCH20001.1'. The 'Optimiser' checkbox is unchecked. The 'Max Switches' field is empty. The 'Min Off Time (mins)' and 'Min On Time (mins)' fields are also empty. The 'Optimiser Controls' section is the only active area.

Field	Value
Optimise	<input type="checkbox"/>
Max Switches	
Min Off Time (mins)	
Min On Time (mins)	

New parameters

The screenshot shows the 'Optimiser Controls' dialog box for 'Pump Station - KKR1PMPFR.KKR1PMPT0.1'. The 'Optimiser' checkbox is checked. The 'Max Switches' field is set to 8. The 'Min Off Time (minutes)' and 'Min On Time (minutes)' fields are both set to 30. The 'Maximum Flow Volume' section includes 'Max Flow Volume (l)', 'Max Period Length', 'Max Initial Volume (l)', and 'Max Period Start'. The 'Minimum Flow Volume' section includes 'Min Flow Volume (l)', 'Min Period Length', 'Min Initial Volume (l)', and 'Min Period Start'. The 'Time since last change (minutes)' field is empty.

Field	Value
Optimise	<input checked="" type="checkbox"/>
Max Switches	8
Min Off Time (minutes)	30
Min On Time (minutes)	30
Max Off Time (minutes)	
Time since last change (minutes)	

Section	Field	Value
Maximum Flow Volume	Max Flow Volume (l)	
	Max Period Length	
	Max Initial Volume (l)	
	Max Period Start	
Minimum Flow Volume	Min Flow Volume (l)	
	Min Period Length	
	Min Initial Volume (l)	
	Min Period Start	

Improved simulation performance

- Derived results such as minimum and maximum results are now calculated in the simulation rather than during post processing.