New Unit Processes

**Membrane Bioreactor** - An MBR unit process has been added that supports BOD removal, nitrification/denitrification, excess biological phosphorus removal, and methanol addition. This allows the user to compare the capital and operating costs for both conventional activated sludge and MBR systems. The MBR cost analysis includes the costs of the screens, membranes, tanks, blowers, permeate and recirculation pumps, mixing equipment, energy, cleaning chemicals, and labor.

**Moving Bed Biofilm Reactor** - An MBBR unit process has been added that supports BOD removal and nitrification. The user can now compare the cost differences between the conventional and the media based process technologies. The MBBR cost analysis includes the costs of the screens, media, tanks, blowers, energy and labor.

**IFAS Reactor** - An IFAS reactor unit process has been added that supports BOD removal and nitrification. The user can now compare the cost differences between the conventional and the media based process technologies. The IFAS cost analysis includes the costs of the screens, media, tanks, blowers, energy and labor.

Updated Costs

The equipment database, units costs, and cost indices have all been updated to present day values.
Additional Features

**Detailed Cost Summary** - A detailed breakdown of the capital costs is prepared so that users can identify the contribution of each item included in the capital cost estimation.

**New Output Toolbar** - A new toolbar has been added to quickly access details of the unit processes’ cost estimates or the water quality of the various input and output streams.

**Larger Drawing Board** - The grid size of the drawing board has been increased from 8x5 to 30x20 so that larger, more complex layouts can be designed.

**Custom Connection Paths with Highlighting** - Customize the unit process connection paths for cleaner layouts. Hovering the mouse over a connection path will cause it to turn red to better highlight the connectivity especially in larger layouts.

**Custom Process Images** – To distinguish between similar processes or to make a more visual link between the actual plant and the CapdetWorks representation, the user can now replace the default process images with pictures of their actual unit processes.

+ much more.  

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