

## FAQ – updated 17.12.2024

Q: I think that the Evaporation loss could be better evaluated with "Runoff Quantity Continuity", rather than "Flow Routing Continuity" in Table 9.

A: Yes, true. Changed in Version 1.1.

Q: Another thing to be improved in Table 9 is that you speak about "CSO\_river", which is "CSO\_overflow" in EPASWMM. Somebody could get confused.

A: Yes, true. Changed in Version 1.1.

Q: Could it be that the LID control for the soakaway LID is missing in the inp-file?

A: Yes, true. We updated the SWMM file and uploaded it as 'Case\_study\_20241121.inp'.

Q: Area allocated to access road LIDs. Can any area between 0 and the maximum area allocated? Or only the maximum?

A: For access road LID any area in the range of zero and maximum value can be implemented. For example, for "Permeable pavement" in subcatchment ".385", contestants can implement any area between 0 and 68 m<sup>2</sup>. Updated in Version 1.2.

Q: After installing LIDs, must the sub-catchment characteristics be updated? Theoretically, when you install a LID, which is fully permeable and occupies a certain area, you should decrease the sub-catchment area, change imperviousness and maybe width. Since you don't mention this aspect in the battle guidelines, I assume that you are neglecting it. Am I correct?

A: Yes, this assumption is correct. For the combat, the change in the subcatchment characteristics can be neglected. Updated in Version 1.2.

Q: Performance evaluation: You say: "Performance evaluation for each team is based on seven indicators, each contributing to a ranking system." Can you be more specific? Will all indicators be summed up to a single one, by assuming equal weights? Will the ranking be performed like in the wdsa2024 battle (team ranking calculated on each indicator and then sum of the rankings to obtain a global ranking: the lowest win)?

A: The overall team ranking will be evaluated and ranked through "The Technique for Order Preference by Similarity to Ideal Solution (TOPSIS)" (for more information, refer to Chakraborty (2022), by using all seven performance indicators. Thereby,  $v_j^*$  and  $v_j^-$  represent the highest and lowest score of all participating teams for each performance indicator, respectively. The best score for cost is the lowest value, while the best score for all other indicators it is the highest value. If all teams would have the same value, the worst value is then 0 (no improvement or change compared to the initial state). Updated in Version 1.2.

Chakraborty, S. (2022). "TOPSIS and Modified TOPSIS: A comparative analysis." Decision Analytics Journal 2: 100021. <https://doi.org/10.1016/j.dajour.2021.100021>.

Q: There is an oversight in your temp2018 file. There are more lines than expected, as some lines of December 2019 from hour 0 to hour 13 are repeated.

A: Yes, true. We updated the temp2018 file and uploaded it as temp2018\_20241125.inp'.

Q: I have a question about TOPSIS. Indeed, there are a few version of this algorithm and the paper you are quoting is a comparative analysis of two versions. Can you tell me which version you are going to use for the final ranking, the original or the modified

A: We will use the original TOPSIS with all weights equal to 1.