



*Supplement of*

**Assessing the cumulative impact of on-farm reservoirs on modeled surface hydrology**

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## Supplemental Material

Table S 1–SWAT+ parameters tested in sensitivity analysis. Parameters are ordered from most to least important.

|    | Parameter | Description                                                         | Range    |
|----|-----------|---------------------------------------------------------------------|----------|
| 1  | CN2       | SCS runoff curve number                                             | 35–95    |
| 2  | SOL_AWC   | Available water capacity (mm/mm)                                    | 0.01–1   |
| 3  | ESCO      | Soil evaporation compensation coefficient                           | 0.01–1   |
| 4  | PERCO     | Percolation coefficient (fraction)                                  | 0–1      |
| 5  | CANMX     | Maximum canopy storage (mm)                                         | 0–100    |
| 6  | EPCO      | Plant uptake compensation factor                                    | 0.01–1   |
| 7  | REVAP_CO  | Groundwater “revap” coefficient                                     | 0.02–0.2 |
| 8  | ALPHA_BF  | Base flow recession constant (days)                                 | 0.01–1   |
| 9  | BF_MAX    | Baseflow rate when the entire area is contributing to baseflow (mm) | 0.1–2    |
| 10 | SURLAG    | Surface runoff coefficient                                          | 0.05–24  |