Figure S1. A representative view of the four model output metrics for the historical alternative, plotted against the parameter range for the vertical anisotropy of the hydraulic conductivity of the alluvial formation. These include the error metric (sum of squared weighted residuals), energy objective (kWh), water quality risk objective (percent of cells not meeting the objective), and urban flooding objective (percent of cells not meeting the objective). Gray points represent all parameter sets, while colors represent behavioral parameter sets meeting the error threshold.
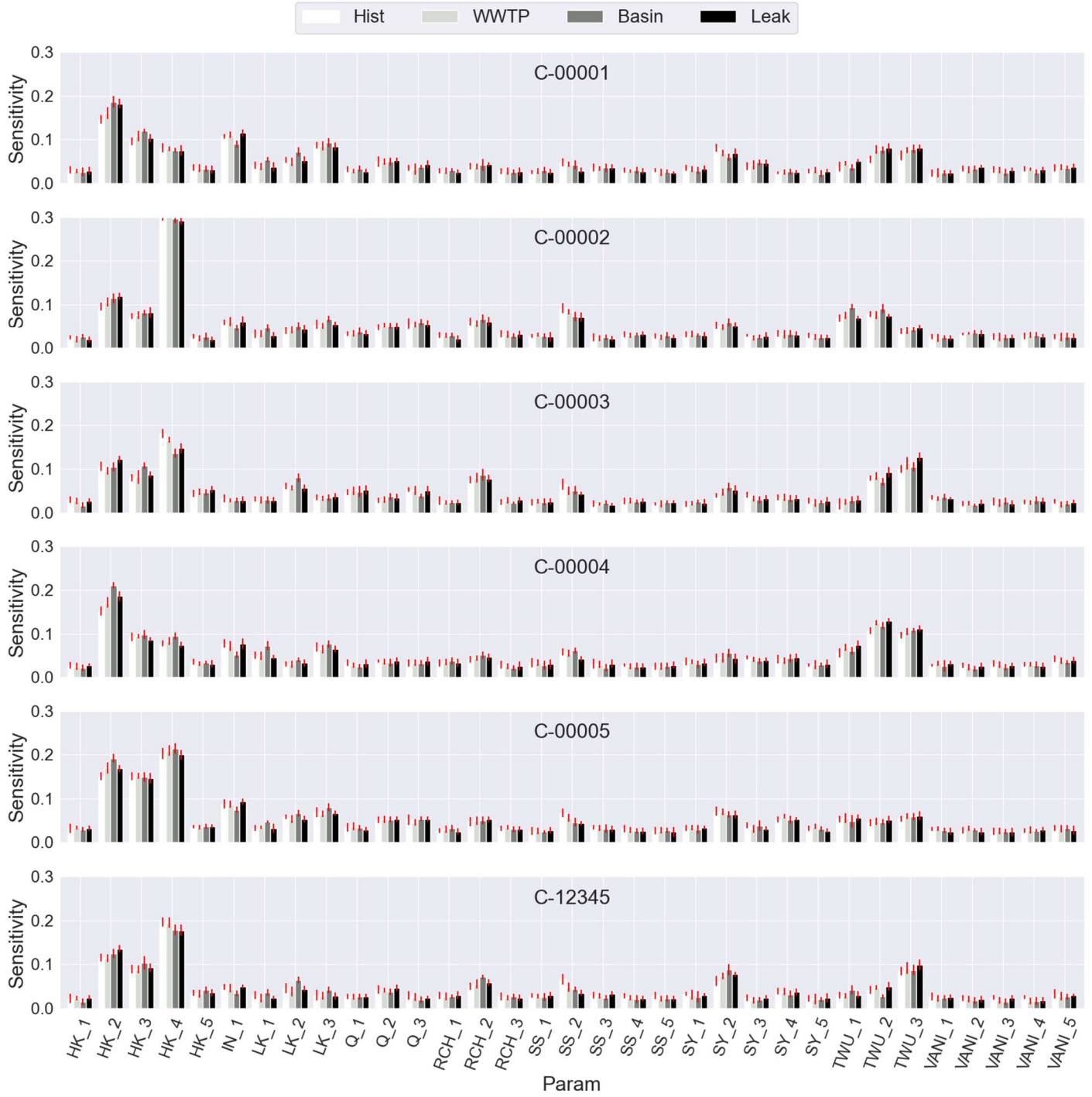
Figure S2. δ sensitivity of the water quality risk objective according to the 5,000 filtered samples for the 33 model parameters (columns). The sensitivity is shown by cluster (rows) and by the four alternatives from left to right (light to dark): historical, wastewater reuse, infiltration basins, and repair leaks.

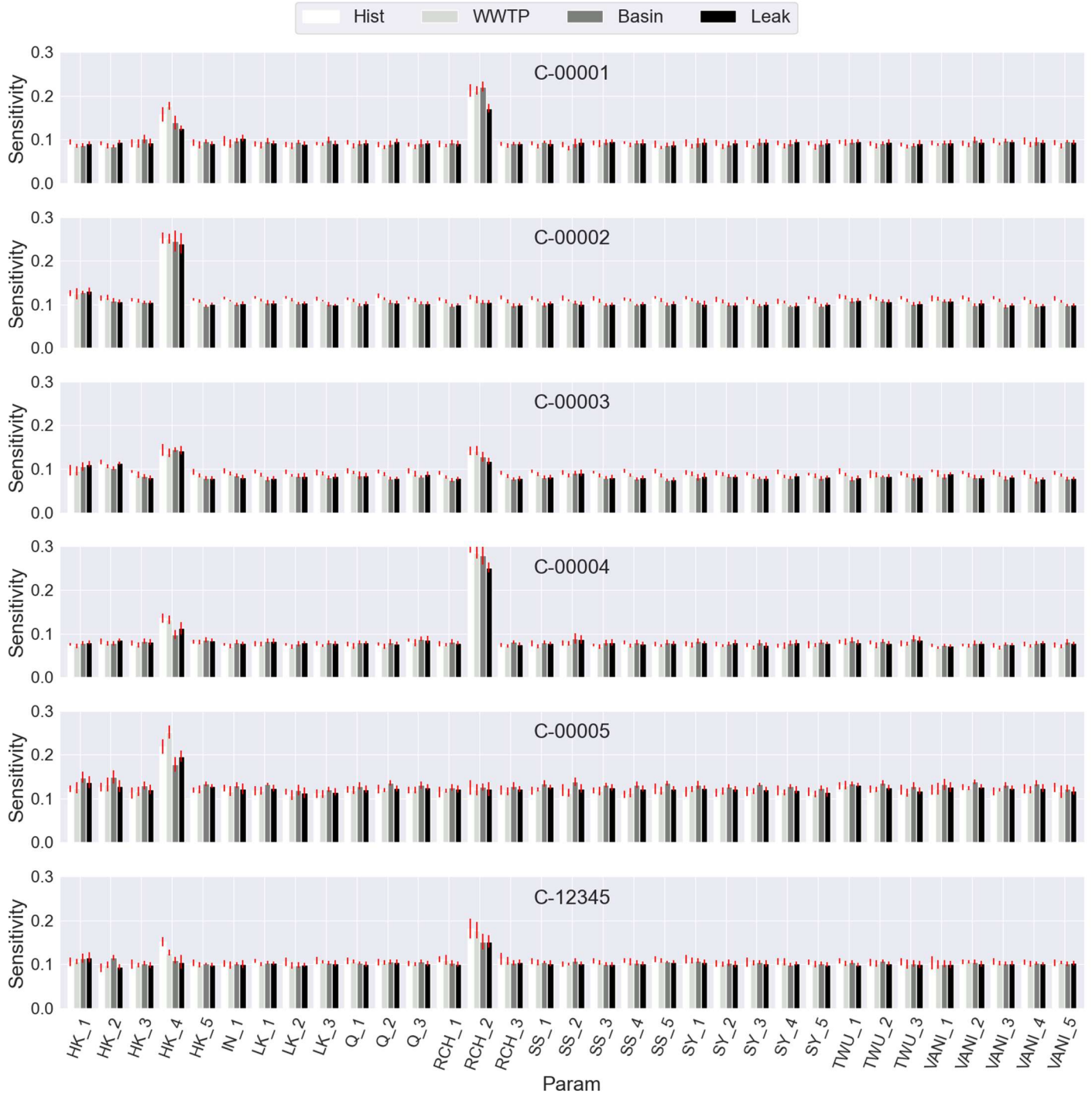**Figure S3.** δ sensitivity of the urban flooding risk objective according to the 5,000 filtered samples for the 33 model parameters (columns). The sensitivity is shown by cluster (rows) and by the four alternatives from left to right (light to dark): historical, wastewater reuse, infiltration basins, and repair leaks.