

WiNGS Planning Consequence Simulation Data Dictionary

Simulation Output Column Naming Conventions

Simulation output column names follow a specific formula to indicate the type of data they contain. The general format is:

[hardened_state]_[simulation_type]_[cost_type]_[metric]

- **[hardened_state]**
 - **base:** Results given the base hardened state of the asset, this could be UH, TH, CC, or UG.
 - **if_cc_mit:** Results for scenario where covered conductor mitigation applied to asset.
 - **if_ug_mit:** Results for scenario where undergrounding mitigation applied to asset.
- **[simulation_type]**
 - **all_sim:** All simulations -- Costs from wildfire, PSPS, and PEDS summed by asset for each simulation year.
 - **wf_sim:** Wildfire simulation only
 - **psps_sim:** Public Safety Power Shutoff simulation only
 - **peds_sim:** Protective Equipment Device Settings simulation only
- **[cost_type]**
 - **total_cost:** The total of all costs related to simulation events, and not a subset of the total cost such as costs only related to safety, reliability etc.
 - **safety_cost:** Only safety costs related to simulation events
 - **financial_cost:** Only financial costs related to simulation events
 - **reliability_cost:** Only reliability costs related to simulation events

- **[metric]**
 - **per:** percentiles of annual cost, stored as string containing key value pairs for the following percentiles: 0, 25, 50, 75, 90, 95, 98, 99, 99.5, 99.6, 99.8, 99.9, 100 (max).
 - **mean:** mean annual cost, stored as float.

Hardened States and Mitigation Types

WINGS Planning output data categorizes hardening states into four levels, listed below in order of what SDGE considers least to most effective in reducing wildfire risk:

- **UH:** Unhardened, no mitigation applied
- **TH:** Traditional Hardening mitigation applied
- **CC:** Covered Conductor mitigation applied
- **UG:** Undergrounding mitigation applied

Column Specifications

Column Name	Description	Example Value
<u>ASSET INFORMATION</u>		
globalid	Span identifier (string)	123e4567-e89b-12d3-a456-426614174000
upstreamardfacilityid	Segment identifier (string)	123-456
hardened_state	Hardened state (string)	UH
<u>ALL SIMULATIONS (WILDFIRE + PSPS + PEDS)</u>		
base_all_sim_total_cost_per	Base, all simulations annual total cost percentiles (string)	'{25: 0.0, 50: 0.0, 75: 0.0, 90: 0.0, 95: 0.0, 98: 0.0, 99: 0.0, 99.5: 0.0, 99.6: 0.0, 99.8: 21.1, 99.9: 122.5, 100: 16754.3}'

base_all_sim_total_cost_mean	Base, all simulations annual total costs mean (float)	1234.56
if_cc_mit_all_sim_total_cost_per	If CC mitigation applied, all simulations annual total cost percentiles (string)	'{25: 0.0, 50: 0.0, 75: 0.0, 90: 0.0, 95: 0.0, 98: 0.0, 99: 0.0, 99.5: 0.0, 99.6: 0.0, 99.8: 21.1, 99.9: 122.5, 100: 16754.3}'
if_cc_mit_all_sim_total_cost_mean	If CC mitigation applied, all simulations annual total cost mean (float)	1234.56
if_ug_mit_all_sim_total_cost_per	If UG mitigation applied, all simulations annual total cost percentiles (string)	'{25: 0.0, 50: 0.0, 75: 0.0, 90: 0.0, 95: 0.0, 98: 0.0, 99: 0.0, 99.5: 0.0, 99.6: 0.0, 99.8: 21.1, 99.9: 122.5, 100: 16754.3}'
if_ug_mit_all_sim_total_cost_mean	If UG mitigation applied, all simulations annual total cost mean (float)	1234.56

WILDFIRE SIMULATION ONLY

base_wf_sim_total_cost_per	Base, wildfire simulation annual total costs percentiles (string)	'{25: 0.0, 50: 0.0, 75: 0.0, 90: 0.0, 95: 0.0, 98: 0.0, 99: 0.0, 99.5: 0.0, 99.6: 0.0, 99.8: 21.1, 99.9: 122.5, 100: 16754.3}'
base_wf_sim_total_cost_mean	Base, wildfire simulation annual total costs mean (float)	1234.56
if_cc_mit_wf_sim_total_cost_per	If CC mitigation applied, wildfire simulation annual	'{25: 0.0, 50: 0.0, 75: 0.0, 90: 0.0, 95: 0.0, 98: 0.0, 99: 0.0, 99.5: 0.0, 99.6:

	total cost mean (string)	0.0, 99.8: 21.1, 99.9: 122.5, 100: 16754.3}'
if_cc_mit_wf_sim_total_cost_mean	If CC mitigation applied, wildfire simulation annual total cost mean (float)	1234.56
if_ug_mit_wf_sim_total_cost_per	If UG mitigation applied, wildfire simulation annual total cost percentiles (string)	'{25: 0.0, 50: 0.0, 75: 0.0, 90: 0.0, 95: 0.0, 98: 0.0, 99: 0.0, 99.5: 0.0, 99.6: 0.0, 99.8: 21.1, 99.9: 122.5, 100: 16754.3}'
if_ug_mit_wf_sim_total_cost_mean	If UG mitigation applied, wildfire simulation annual total cost mean (float)	1234.56

PSPS SIMULATION ONLY

base_pspss_sim_total_cost_per	Base, PSPS simulation annual total costs percentiles (string)	'{25: 0.0, 50: 0.0, 75: 0.0, 90: 0.0, 95: 0.0, 98: 0.0, 99: 0.0, 99.5: 0.0, 99.6: 0.0, 99.8: 21.1, 99.9: 122.5, 100: 16754.3}'
base_pspss_sim_total_cost_mean	Base, PSPS simulation annual total costs mean (float)	1234.56
if_cc_mit_pspss_sim_total_cost_per	If CC mitigation applied, PSPS simulation annual total cost percentiles (string)	'{25: 0.0, 50: 0.0, 75: 0.0, 90: 0.0, 95: 0.0, 98: 0.0, 99: 0.0, 99.5: 0.0, 99.6: 0.0, 99.8: 21.1, 99.9: 122.5, 100: 16754.3}'
if_cc_mit_pspss_sim_total_cost_mean	If CC mitigation applied, PSPS simulation annual total cost mean (float)	1234.56

if_ug_mit_psp_s_sim_total_cost_per	If UG mitigation applied, PSPS simulation annual total cost percentiles (string)	'{25: 0.0, 50: 0.0, 75: 0.0, 90: 0.0, 95: 0.0, 98: 0.0, 99: 0.0, 99.5: 0.0, 99.6: 0.0, 99.8: 21.1, 99.9: 122.5, 100: 16754.3}'
if_ug_mit_psp_s_sim_total_cost_mean	If UG mitigation applied, PSPS simulation annual total cost mean (float)	1234.56

PEDS SIMULATION ONLY

base_peds_sim_total_cost_per	Base, PEDS simulation annual total costs percentiles (string)	'{25: 0.0, 50: 0.0, 75: 0.0, 90: 0.0, 95: 0.0, 98: 0.0, 99: 0.0, 99.5: 0.0, 99.6: 0.0, 99.8: 21.1, 99.9: 122.5, 100: 16754.3}'
base_peds_sim_total_cost_mean	Base, PEDS simulation annual total costs mean (float)	1234.56