

Full Metric List (10/28)

Default values for "include_metrics" parameter in drcdm/param/param.py

```
[ 'ref_q_tasmax', 'mean_tasmax', 'monthly_mean_tasmax', 'tasmax_q99p9',
  'tasmax_q50', 'annual_txx', 'annual_5day_max_tasmax', 'annual_tasmax_ge',
  'annual_tasmax_le', 'tmax_days_above_q', 'tmax_days_below_q', 'ref_q_tasmin',
  'ref_q_tasmin', 'annual_tnn', 'mean_tasmin', 'monthly_mean_tasmin',
  'annual_5day_min_tasmin', 'annual_5day_max_tasmin', 'annual_tasmin_le',
  'annual_tasmin_ge', 'first_date_below', 'last_date_below', 'chill_hours',
  'growing_season', 'tmin_days_above_q', 'tmin_days_below_q', 'ref_pr_Q',
  'total_pr', 'mean_pr', 'monthly_pr', 'annual_pxx', 'annual_pr_ge',
  'wettest_5yr_total', 'annual_max_nday_pr', 'annual_cwd', 'annual_cdd',
  'annual_JJA_cdd', 'pr_q50', 'pr_q95', 'pr_q99p9', 'pr_days_above_non_zero_q',
  'pr_days_above_q', 'pr_sum_above_q', 'mean_tas', 'monthly_mean_tas',
  'annual_cooling_deg_days', 'annual_heating_deg_days', 'annual_growing_deg_days'
]
```

Tasmax Metrics

Metric Name	Description
ref_q_tasmax	Maximum temperature Q^{th} quantile within the reference dataset. Used to calculate tmax_days_above_q and tmax_days_below_q.
mean_tasmax	Annual and seasonal (DJF, MAM, JJA, SON) mean daily maximum temperature.
monthly_mean_tasmax	Monthly mean daily maximum temperature.
q99p9_tasmax	99.9th percentile of daily maximum temperature.
median_tasmax	Median of daily maximum temperature.
annual_txx	Annual maximum value of daily maximum temperature.
5day_max_tasmax	Maximum 5-day running mean of daily maximum temperature.
annual_tasmax_ge	Perecent of days per year with daily maximum temperature greater than or equal to a threshold.
annual_tasmax_le	Percent of days per year with daily maximum temperature less than or equal to a threshold.
tmax_days_above_q	Percent of days per year with daily maximum temperature above the reference quantile threshold.
tmax_days_below_q	Perecent of days per year with daily maximum temperature below the reference quantile threshold.

Tasmin Metrics

Metric Name	Description
ref_q_tasmin	Minimum temperature Q^{th} quantile within the reference dataset. Used to calculate tmin_days_above_q and tmin_days_below_q.
annual_tnn	Annual minimum value of daily minimum temperature.
annual_mean_tasmin	Annual mean daily minimum temperature.
monthly_mean_tasmin	Monthly mean daily minimum temperature.
5day_min_tasmin	Minimum 5-day running mean of daily minimum temperature.
5day_max_tasmin	Maximum 5-day running mean of daily minimum temperature.
annual_tasmin_le	Number of days per year with daily minimum temperature less than or equal to a threshold.
annual_tasmin_ge	Number of days per year with daily minimum temperature greater than or equal to a threshold.
first_date_below	Number of days after August 1st when daily minimum temperature falls below a threshold.
last_date_below	Number of days prior to August 1st when daily minimum temperature falls below a threshold.
chill_hours	Total number of hours per season/year with temperature below a chill threshold. Calculated using Baldocchi and Wong (2008) method
growing_season	Number of days between the last occurrence of a minimum temperature at or below threshold in the spring and the first occurrence of a minimum temperature at or below threshold in the fall
tmin_days_above_q	Number of days per year with daily minimum temperature above the reference quantile threshold.
tmin_days_below_q	Number of days per year with daily minimum temperature below the reference quantile threshold.

Precipitation Metrics

Days in which less than 1mm of precipitation fell are by default set to 0mm of precipitation.

Metric Name	Description
ref_pr_Q	Precipitation Q^{th} quantile within the reference dataset. Used to calculate pr_days_above_q and related metrics.
annual_mean_pr	Annual mean daily precipitation.
monthly_pr	Monthly total precipitation.
annual_pxx	Annual maximum daily precipitation.
annual_pr	Annual total precipitation.

Metric Name	Description
annual_days_pr_ge_thresh	Number of days per year with precipitation greater than or equal to a threshold.
wettest_5year_total	Wettest consecutive 5-year total precipitation.
annual_nday_pr	Maximum precipitation sum over n consecutive days (n-day precipitation extreme).
annual_cwd	Annual maximum number of consecutive wet days.
annual_cdd	Annual maximum number of consecutive dry days.
annual_JJA_cdd	Maximum number of consecutive dry days in JJA (summer).
median_pr	Median daily precipitation.
pr_q95	95th percentile of daily precipitation.
pr_q99p9	99.9th percentile of daily precipitation.
pr_days_above_non-zero_q	Number of days per year with precipitation above a quantile threshold. Quantile threshold calculated by excluding days with zero precipitation.
pr_days_above_q	Number of days per year with precipitation above the reference quantile threshold.
pr_sum_above_q	Total precipitation sum above the reference quantile threshold.

Mean Temperature Metrics

These metrics are computed when tasmax and tasmin are provided and the compute_tasmean parameter is set to True.

Metric Name	Description
mean_tasmean	Annual and seasonal mean daily mean temperature.
monthly_mean_tas	Monthly mean daily mean temperature.
annual_cooling_deg_days	Annual cooling degree days (sum of degrees above a base temperature).
annual_heating_deg_days	Annual heating degree days (sum of degrees below a base temperature).
growing_deg_days	Growing degree days, used to estimate plant development rates.

Other Variable Metrics

Default metrics when the provided variable is not "tasmax", "tasmin", "pr", or "tas".

Metric Name	Description
mean	Annual and seasonal mean
monthly_mean	Monthly mean
annual_max	Annual maximum value