Layer Name: RFAtlasStations, StationMeanData.shp

Layer Type: Point

Status: Complete

Geog. Extent: Islands of Hawaiʻi, Kahoʻolawe, Kauaʻi, Lānaʻi, Maui, Molokaʻi and Oʻahu

Projection: Geographic Coordinate System

Datum: World Geodetic System 1984 (WGS84)

Description: Raingages used in the Rainfall Atlas Analysis on the main Hawaiian Islands. Includes mean rainfall data values and uncertainty values.


History: As part of the Rainfall Atlas project, a large effort was made to improve station coordinates. Coordinates were updated from the Old Hawaiian Datum, and multiple sources (including the GIS layer produced by DLNR in 1997) and methods were used to correct discrepancies and errors in locations. We acknowledge that there are probably still many errors in the dataset, but these are the most accurate and up-to-date coordinates at this time.


Attributes: Points

SKN State Key Number (unique identifying number for each station)
Name Name of raingage station*
Lat_DD Latitude in decimal degrees
Lon_DD Longitude in decimal degrees
LatDeg Latitude degrees (DMS – degree-minute-seconds – format)
LatMin Latitude minutes (DMS format)
LatSec Latitude seconds (DMS format)
LonDec Longitude degrees (DMS format)
LonMin Longitude minutes (DMS format)
LonSec Longitude seconds (DMS format)
NorthingY UTM Zone 4 (Meters) Northing (Y) coordinates
EastingX UTM Zone 4 (Meters) Easting (X) coordinates
ElevFT Elevation in Feet
ElevM Elevation in Meters
Observer Station observer name
MinYear Minimum year on record (year established)**
MaxYear Maximum year on record (year discontinued)**. “Present” means the MaxYear is ≥ 2007.
NumMosWith Number of months (out of 12) with a mean value
JanAvgIN Mean January rainfall in inches (if mean is missing, value is -9999)
FebAvgIN Mean February rainfall in inches
MarAvgIN Mean March rainfall in inches
AprAvgIN Mean April rainfall in inches
MayAvgIN Mean May rainfall in inches
JunAvgIN Mean June rainfall in inches
JulAvgIN Mean July rainfall in inches
AugAvgIN Mean August rainfall in inches
SepAvgIN Mean September rainfall in inches
OctAvgIN Mean October rainfall in inches
NovAvgIN Mean November rainfall in inches
DecAvgIN Mean December rainfall in inches
AnnAvgIN Mean Annual rainfall in inches, sum of monthly values. Only has a value if all 12 months have a value (otherwise no mean is calculated, -9999)
JanAvgMM Mean January rainfall in millimeters (mm) (if no mean, value is -9999)
FebAvgMM Mean February rainfall in mm
MarAvgMM Mean March rainfall in mm
AprAvgMM Mean April rainfall in mm
MayAvgMM Mean May rainfall in mm
JunAvgMM Mean June rainfall in mm
JulAvgMM Mean July rainfall in mm
AugAvgMM Mean August rainfall in mm
SepAvgMM Mean September rainfall in mm
OctAvgMM Mean October rainfall in mm
NovAvgMM Mean November rainfall in mm
DecAvgMM Mean December rainfall in mm
AnnAvgMM Mean Annual rainfall in mm, sum of monthly values. Only has a value if all 12 months have a value (otherwise no mean is calculated, -9999)
JanSD_in January uncertainty values in inches (if there is no mean for this month, the uncertainty will also be -9999). Converted from variance values by taking the square root.
FebSD_in February uncertainty values in inches
MarSD_in March uncertainty values in inches
AprSD_in April uncertainty values in inches
MaySD_in May uncertainty values in inches
JunSD_in June uncertainty values in inches
JulSD_in July uncertainty values in inches
AugSD_in August uncertainty values in inches
SepSD_in September uncertainty values in inches
<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OctSD_in</td>
<td>October uncertainty values in inches</td>
</tr>
<tr>
<td>NovSD_in</td>
<td>November uncertainty values in inches</td>
</tr>
<tr>
<td>DecSD_in</td>
<td>December uncertainty values in inches</td>
</tr>
<tr>
<td>AnnSD_in</td>
<td>Annual uncertainty values in inches (annual uncer. is not the sum of the monthly uncer., it is the square root of the sum of the monthly variances).</td>
</tr>
<tr>
<td>JanSD_mm</td>
<td>January uncertainty values in mm (if there is no mean for this month, the uncertainty will also be -9999)</td>
</tr>
<tr>
<td>FebSD_mm</td>
<td>February uncertainty values in mm</td>
</tr>
<tr>
<td>MarSD_mm</td>
<td>March uncertainty values in mm</td>
</tr>
<tr>
<td>AprSD_mm</td>
<td>April uncertainty values in mm</td>
</tr>
<tr>
<td>MaySD_mm</td>
<td>May uncertainty values in mm</td>
</tr>
<tr>
<td>JunSD_mm</td>
<td>June uncertainty values in mm</td>
</tr>
<tr>
<td>JulSD_mm</td>
<td>July uncertainty values in mm</td>
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<tr>
<td>AugSD_mm</td>
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</tr>
<tr>
<td>SepSD_mm</td>
<td>September uncertainty values in mm</td>
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<tr>
<td>OctSD_mm</td>
<td>October uncertainty values in mm</td>
</tr>
<tr>
<td>NovSD_mm</td>
<td>November uncertainty values in mm</td>
</tr>
<tr>
<td>DecSD_mm</td>
<td>December uncertainty values in mm</td>
</tr>
<tr>
<td>AnnSD_mm</td>
<td>Annual uncertainty values in mm (annual uncer. is not the sum of the monthly uncer., it is the square root of the sum of the monthly variances).</td>
</tr>
<tr>
<td>CntJan</td>
<td>The number of years (values) that were used in the 30 year average for January (Up to 3 missing years were accepted. If this number is less than 27, the mean was not calculated and is given as -9999, missing)</td>
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<tr>
<td>CntOrigJan</td>
<td>The number of monthly values that were original data (not filled) between 1978 and 2007 for January</td>
</tr>
<tr>
<td>CntFeb</td>
<td>The number of years used in the 30 year average for February (the number of years with data between 1978-2007)</td>
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<tr>
<td>CntOrigFeb</td>
<td>The number of original values used in the February Mean</td>
</tr>
<tr>
<td>CntMar</td>
<td>The number of years used in the 30 year average for March</td>
</tr>
<tr>
<td>CntOrigMar</td>
<td>The number of original values used in the March Mean</td>
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<tr>
<td>CntApr</td>
<td>The number of years used in the 30 year average for April</td>
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<tr>
<td>CntOrigApr</td>
<td>The number of original values used in the April Mean</td>
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<tr>
<td>CntMay</td>
<td>The number of years used in the 30 year average for May</td>
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<tr>
<td>CntOrigMay</td>
<td>The number of original values used in the May Mean</td>
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<tr>
<td>CntJun</td>
<td>The number of years used in the 30 year average for June</td>
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<tr>
<td>CntOrigJun</td>
<td>The number of original values used in the June Mean</td>
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<tr>
<td>CntJul</td>
<td>The number of years used in the 30 year average for July</td>
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<td>The number of original values used in the July Mean</td>
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<td>CntAug</td>
<td>The number of years used in the 30 year average for August</td>
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<td>CntOrigAug</td>
<td>The number of original values used in the August Mean</td>
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<td>Variable</td>
<td>Description</td>
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<tr>
<td>CntSep</td>
<td>The number of years used in the 30 year average for September</td>
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<tr>
<td>CntOrigSep</td>
<td>The number of original values used in the September Mean</td>
</tr>
<tr>
<td>CntOct</td>
<td>The number of years used in the 30 year average for October</td>
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<tr>
<td>CntOrigOct</td>
<td>The number of original values used in the October Mean</td>
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<tr>
<td>CntNov</td>
<td>The number of years used in the 30 year average for November</td>
</tr>
<tr>
<td>CntOrigNov</td>
<td>The number of original values used in the November Mean</td>
</tr>
<tr>
<td>CntDec</td>
<td>The number of years used in the 30 year average for December</td>
</tr>
<tr>
<td>CntOrigDec</td>
<td>The number of original values used in the December Mean</td>
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<tr>
<td>DataSource</td>
<td>Summary of the data sources (Fill or NRFill refer to Eischeid method filling or Normal Ratio method filling). See report for more details.</td>
</tr>
<tr>
<td>StationSta</td>
<td>Station Status: Current, Discontinued, or Virtual</td>
</tr>
</tbody>
</table>

*The coordinates are only given to two decimal places at the request of the observer

**Some of the data were removed due to an inhomogeneity.

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