

Average High Temperatures in California January 2010 Monthly Normals

statewide/local values interpolated with IDW
from NOAA weather station data

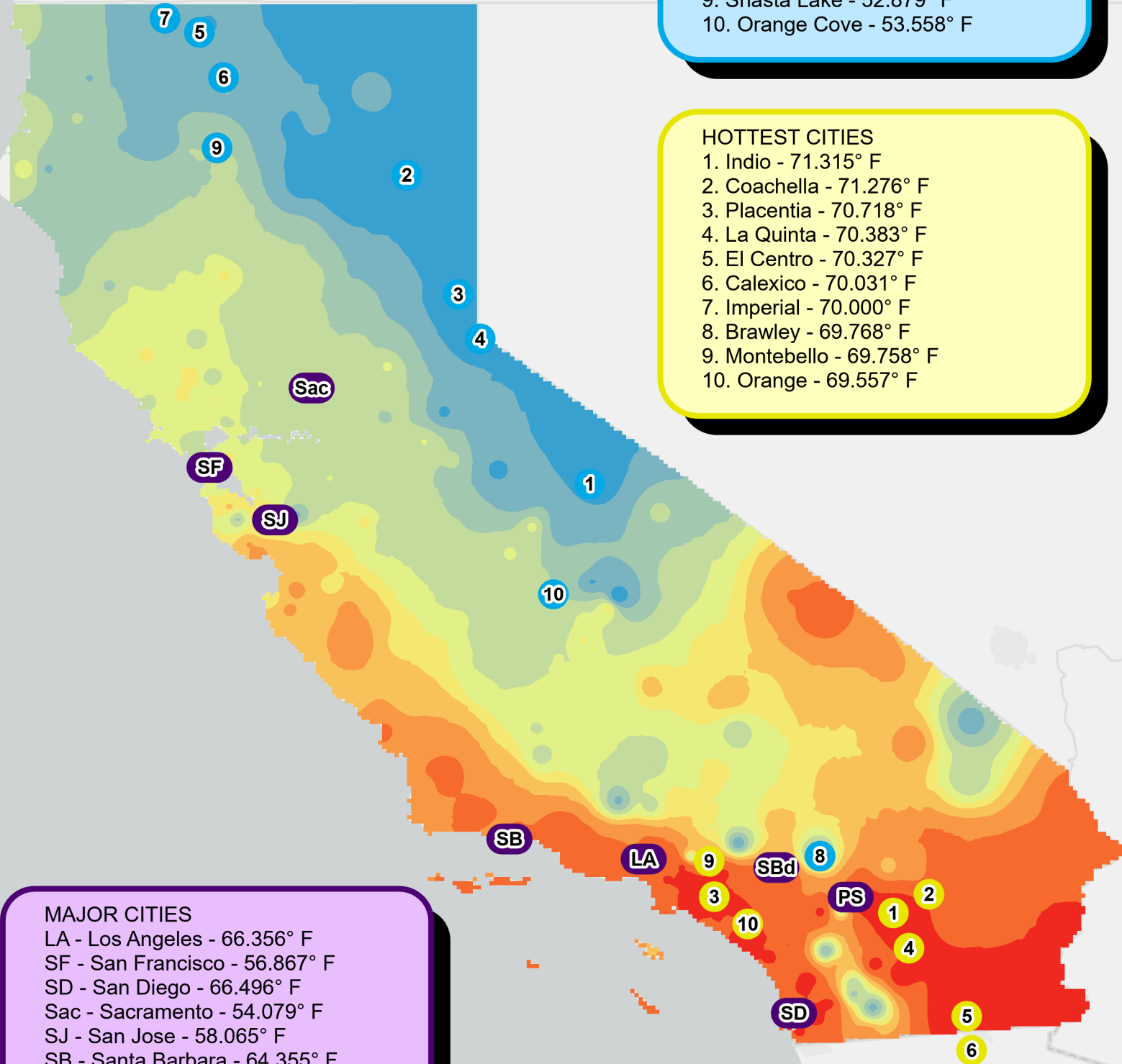
WINTER IN CALIFORNIA MAP

COLDEST CITIES

1. Mammoth Lakes - 40.563° F
2. Susanville - 41.001° F
3. Truckee - 41.816° F
4. South Lake Tahoe - 42.976° F
5. Montague - 45.315° F
6. Mount Shasta - 45.395° F
7. Yreka - 45.704° F
8. Big Bear Lake - 48.717° F
9. Shasta Lake - 52.879° F
10. Orange Cove - 53.558° F

HOTTEST CITIES

1. Indio - 71.315° F
2. Coachella - 71.276° F
3. Placentia - 70.718° F
4. La Quinta - 70.383° F
5. El Centro - 70.327° F
6. Calexico - 70.031° F
7. Imperial - 70.000° F
8. Brawley - 69.768° F
9. Montebello - 69.758° F
10. Orange - 69.557° F



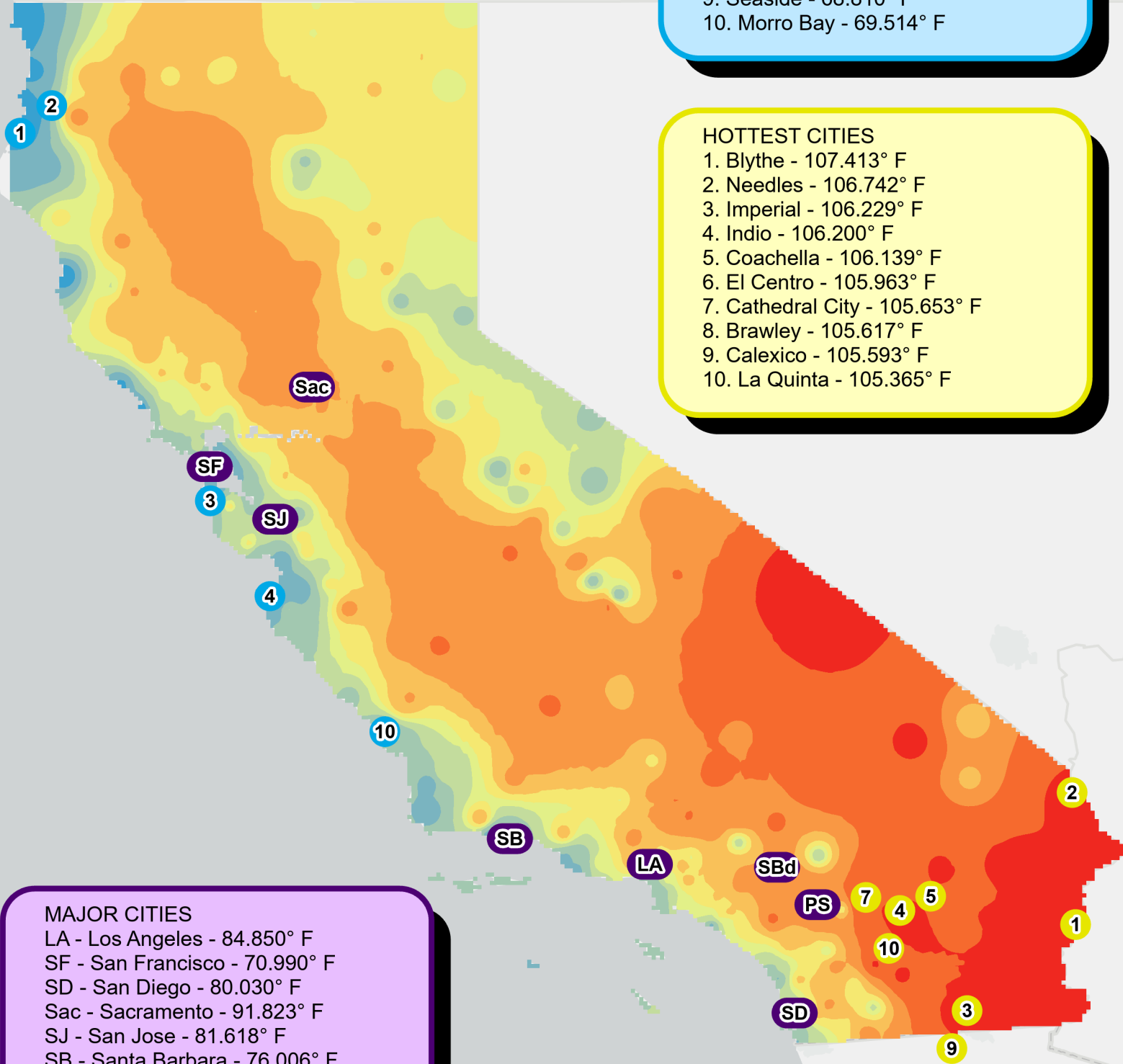
MAJOR CITIES

- LA - Los Angeles - 66.356° F
- SF - San Francisco - 56.867° F
- SD - San Diego - 66.496° F
- Sac - Sacramento - 54.079° F
- SJ - San Jose - 58.065° F
- SB - Santa Barbara - 64.355° F
- PS - Palm Springs - 67.535° F
- SBd - San Bernardino - 64.071° F

Average High Temperatures in California August 2010 Monthly Normals

statewide/local values interpolated with IDW
from NOAA weather station data

SUMMER IN CALIFORNIA MAP



- ### COLDEST CITIES
1. Eureka - 64.823° F
 2. Arcata - 66.336° F
 3. Half Moon Bay - 67.201° F
 4. Monterey - 67.622° F
 5. Sand City - 68.412° F
 6. Pacific Grove - 68.593° F
 7. Del Rey Oaks - 68.662° F
 8. Daly City - 68.750° F
 9. Seaside - 68.810° F
 10. Morro Bay - 69.514° F

- ### HOTTEST CITIES
1. Blythe - 107.413° F
 2. Needles - 106.742° F
 3. Imperial - 106.229° F
 4. Indio - 106.200° F
 5. Coachella - 106.139° F
 6. El Centro - 105.963° F
 7. Cathedral City - 105.653° F
 8. Brawley - 105.617° F
 9. Calexico - 105.593° F
 10. La Quinta - 105.365° F

- ### MAJOR CITIES
- LA - Los Angeles - 84.850° F
 - SF - San Francisco - 70.990° F
 - SD - San Diego - 80.030° F
 - Sac - Sacramento - 91.823° F
 - SJ - San Jose - 81.618° F
 - SB - Santa Barbara - 76.006° F
 - PS - Palm Springs - 103.050° F
 - SBd - San Bernardino - 93.927° F

Data source: NOAA Monthly Normals
US Census Bureau Tiger/LINE Places database
Cartography by Aaron Goodman
Mono County, California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA

Average High Temperatures in California August 2010 Monthly Normals

statewide/local values interpolated with EBK*
from NOAA weather station data

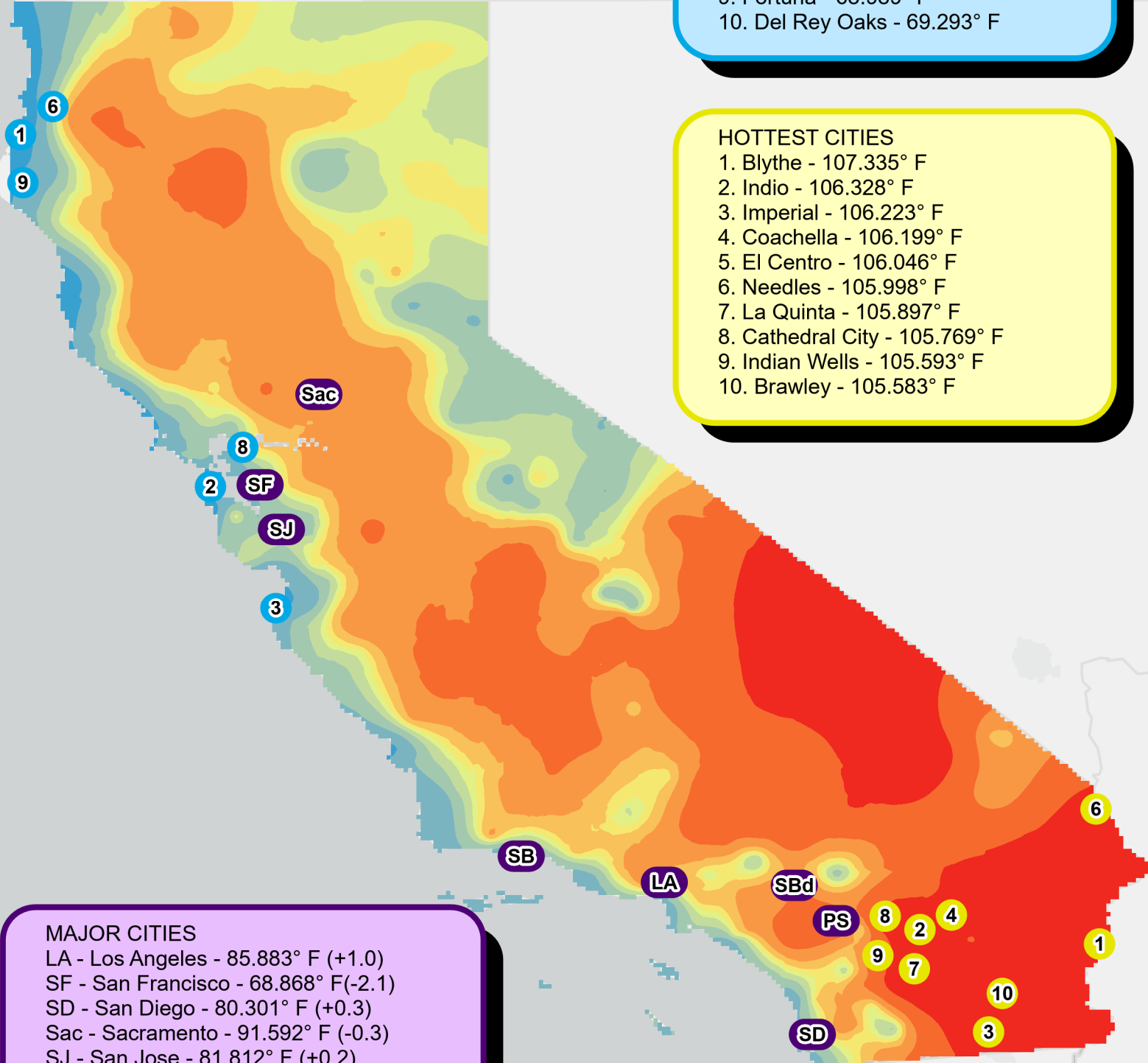
SUMMER IN CALIFORNIA MAP - TECHNICAL ADDENDUM

COLDEST CITIES

1. Eureka - 65.139° F
2. Daly City - 67.129° F
3. Monterey - 67.918° F
4. Sand City - 68.955° F
5. Pacific Grove - 68.156° F
6. Arcata - 68.237° F
7. Seaside - 68.751° F
8. San Francisco - 68.867° F
9. Fortuna - 68.989° F
10. Del Rey Oaks - 69.293° F

HOTTEST CITIES

1. Blythe - 107.335° F
2. Indio - 106.328° F
3. Imperial - 106.223° F
4. Coachella - 106.199° F
5. El Centro - 106.046° F
6. Needles - 105.998° F
7. La Quinta - 105.897° F
8. Cathedral City - 105.769° F
9. Indian Wells - 105.593° F
10. Brawley - 105.583° F



MAJOR CITIES

- LA - Los Angeles - 85.883° F (+1.0)
- SF - San Francisco - 68.868° F (-2.1)
- SD - San Diego - 80.301° F (+0.3)
- Sac - Sacramento - 91.592° F (-0.3)
- SJ - San Jose - 81.812° F (+0.2)
- SB - Santa Barbara - 75.730° F (-2.5)
- PS - Palm Springs - 101.982° F (-1.1)
- SBd - San Bernardino - 92.456° F (-1.5)

Data source: NOAA Monthly Normals

US Census Bureau Tiger/LINE Places database

Cartography by Aaron Goodman

Mono County, California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA

Aaron Goodman
Ruth Engel
UCLA GEOG XL 181B
16 April 2023

Unit 1 - Interpolation, Technical Addendum

The main maps depicting average high temperatures across California were created with Inverse Distance Weighting interpolation. This method produced statistical error that tended towards overestimation rather than underestimation.

The same data from the summer month of August was interpolated once more with Empirical Bayesian Kriging to produce the third map for the technical addendum. This method produced a surface or raster that expanded the coverage of higher temperature areas in the dataset. Several hot regions from the IDW map have been expanded and connected to others in the EBK map. Additionally, some of the spots around individual weather stations have been smoothed into larger areas of consistent temperature. This refinement is especially visible in the central valley as well as California's central coast.

The ranking of hottest and coldest cities in California was only slightly reordered from this alternate interpolation method, though values of a city's estimate may have changed by up to three degrees. California's major cities' temperatures are appended in this third map with their approximate change in degrees from the IDW's estimates.