

8th International Conference on Fog, Fog Collection and Dew
Taipei, Taiwan, 14–19 July 2019
IFDA2019-152
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Fog Collection along Coastal California from San Diego to Arcata

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For the past 10 years an array of standard passive fog collectors along coastal California has been gradually changing and expanding as new sites come online for the purpose of monitoring spatial and temporal fog variability along the Western Coast of California, USA. Beginning with one site near Monterey, CA in 2009, fog collectors have gradually been added to other sites both north and south of the initial sites in Monterey and represent an irregularly-spaced grid of standard fog collector measurements at over two dozen sites scattered within the coastal region and spanning a distance of over 1200 km. This paper examines some of the trends associated with data collected from this array during the past decade. Of note is the significant spatial variability at hourly (and finer) time scales even between fog collectors at relatively closely-spaced sites. Additionally, differences associated with elevation and distance from the coast are examined.

Of further interest are the significant reductions in fog events at some near-sea level elevations during the typically foggy late summer in 2014 and 2015. Such trends will also be examined at other sites and at other years at various locations that exhibit a diversity of elevations, latitudes and distances from the coastline.

We have also recently deployed a pair of fog collectors at Fray Jorge National Park in central-northern Chile, significantly extending the size of our previous footprint. Recent data collected from this site will be compared to data from northern hemisphere locations on fine timescales to note any distinctions in the collection rates during typical fog events.