

Electronic Precipitation Methodology

(Last rev. 07/10/2024)

The San Lorenzo Park (formerly known as Fort Sherman) station (Figure 1) is located approximately 10km southwest of the city of Colon in forest that has only been lightly altered by human activities. It is attached to a large construction crane (Figure 2).

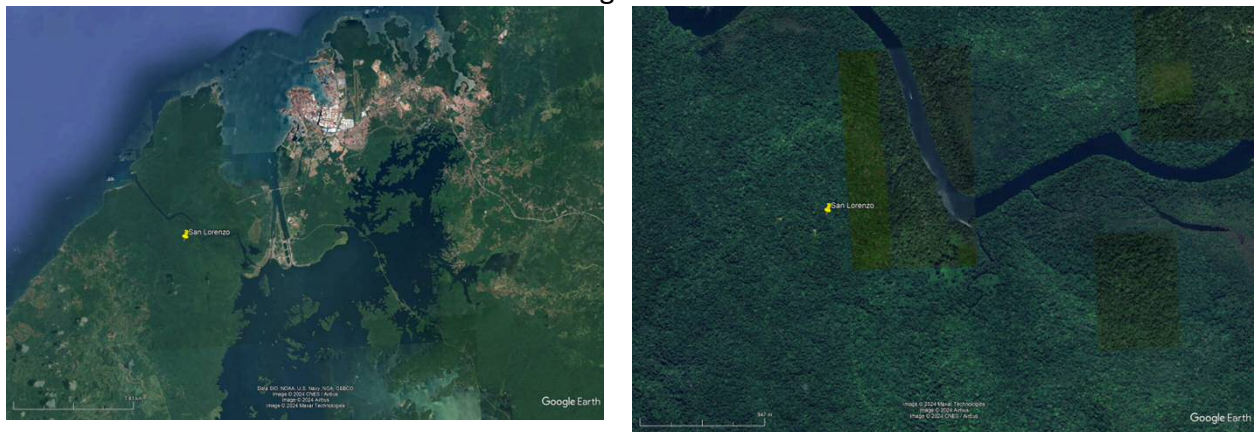
Rainfall at this location has always been measured using a Hydrological Services Model TB3 tipping bucket (see Figures 3 and 4). The tipping bucket is calibrated at least yearly. Tipping buckets have a resolution changed to 0.254mm (0.01") with recording intervals of 15 minutes. Totals are given at the end of each 15-minute period.

Tipping buckets are calibrated at least yearly according to the manufacturer's specifications (Figure 5).

Hydrological Services vs Manual gauges

A comparison of monthly totals over a period of 50 years on Barro Colorado shows that the Hydrological Services gauge reports approximately 13.5% less rainfall than the Manual rain gauge (Figure 6). The same trend is also observed at all other stations with both manual and electronically measured precipitation.

Figure 1



Location of the San Lorenzo Crane

Figure 2



San Lorenzo Crane

Figure 3



San Lorenzo Crane rain gauge

Figure 4



Hydrological Services Model TB4 tipping bucket

Figure 5



Tipping Bucket Calibration

Figure 6

