

Table 1: Georeferencing criteria for animal-based plague surveillance in California

Geocode Confidence Level*	Criterion [†]
1	A specific location identifier ($\leq 16 \text{ km}^2$ area), such as: Precise location, small town, or medium town without a directional Precise location with $\leq 6.8 \text{ km}$ directional Small town with $\leq 3.4 \text{ km}$ directional Road section $\leq 5.7 \text{ km}$ long Other defined location $\leq 16 \text{ km}^2$ in area (e.g., small recreational area)
2	A less specific location identifier (Between 16 km^2 and 144 km^2 area), such as: Precise location with a directional between 6.8 km and 20.5 km Small town with a directional between 4.3 km and 17.1 km Medium town with a directional $\leq 13.7 \text{ km}$ Large town without a directional Road section between 5.7 km and 17 km long Other defined location between 16 km^2 and 144 km^2 (e.g., large reservoir)
3	An unspecific location identifier ($> 144 \text{ km}^2$ area), such as: Precise location with a directional $> 20.5 \text{ km}$ Small town with a directional $> 17.1 \text{ km}$ Medium town with a directional $> 13.7 \text{ km}$ Large town with a directional Extra large town with or without a directional Road section $> 17 \text{ km}$ long Other defined location $> 144 \text{ km}^2$ (e.g., Lake Tahoe)
4	No location identifier, such as: Uninterpretable location description

*If a geocoded specimen is located in a grid cell ($4 \text{ km} \times 4 \text{ km}$) with variable elevation (standard deviation of elevation greater than 125 meters calculated using the Shuttle Radar Topography Mission digital elevation model aggregated from $90 \text{ m} \times 90 \text{ m}$ resolution to $4 \text{ km} \times 4 \text{ km}$ resolution), then the specimen is penalized and dropped one geocode confidence level (e.g., from Geocode Confidence Level 1 to Geocode Confidence Level 2). Geocode Confidence Level 3 is the lowest classification (i.e., a specimen cannot drop from Geocode Confidence Level 3 to Geocode Confidence Level 4).

[†]Precise location: $\leq 0.4 \text{ km}^2$; Small town: $\leq 4 \text{ km}^2$; Medium town: $4 \text{ km}^2 - 16 \text{ km}^2$; Large town: $16 \text{ km}^2 - 144 \text{ km}^2$; Extra large town: $> 144 \text{ km}^2$