

National Weather Service Office in Los Angeles/Oxnard, CA Announces Forecast Zone Changes for Los Angeles and Ventura Counties

November 2022

Why: Southern California has a very diverse topography which creates a complicated weather regime that is very challenging to portray, both in terms of general weather, marine, and fire weather forecasts as well as with short and long fuse weather hazards. The placement of hundreds of utility-owned weather stations in the last few years has further highlighted this weather diversity and heightened our awareness of certain unique weather issues in our area. To address these diverse climatological differences, the first round of zone changes occurred in April 2022. Many of these changes were in Santa Barbara and San Luis Obispo Counties as well as the beach areas of Los Angeles and Ventura Counties. A second round of zone changes to address remaining issues across the rest of Los Angeles and Ventura Counties is being proposed for March 2023 implementation.

As with the changes in 2022, the current zone boundaries are too broad in many areas resulting in WFO watch, warning, and advisory products being in effect for large areas that will likely not be impacted. For these reasons and with input from core partners as well as collaboration with local, regional, and national offices, NWS Los Angeles/Oxnard (LOX) has proposed significant improvements to zone boundaries in Los Angeles and Ventura Counties. In a few instances, boundaries that were changed in 2022 have been further modified with additional input from core partners.

Where:

Los Angeles County:

- The Santa Monica Mountains have been split into two zones, west (369) and east (370), per partner feedback. During Santa Ana wind events the winds are typically much stronger in the western portion creating a more significant fire weather hazard. The eastern portion is more populated and can be significantly impacted by parking restrictions when Red Flag Warnings are issued. This portion also incorporates a small portion of the Los Angeles Inland Coast zone (primarily in the hills west of Franklin Canyon) due to similarities in climatology. Partners provided suggestions for precise zone boundaries based on their local knowledge of the climatology which were incorporated into the zone changes.
- The San Fernando Valley has been split into three zones as described below:
 - The Western San Fernando Valley (372) is much more prone to Santa Ana winds and fire hazards than the east. It's also much warmer there in the afternoon and cooler at night. Core partners agreed with this reasoning and

provided excellent suggestions for precise boundaries that were all incorporated into the shapefile. In addition, a small portion of the northwest portion of this zone was incorporated into the new Santa Susana Mountains zone (375). Refer to the Ventura County section below for more details.

- The Eastern San Fernando Valley (373) tends to be cooler in the afternoon and less prone to Santa Ana winds, minimizing the overwarming of strong winds in this zone.
- The Calabasas/Agoura Hills zone (371) is very different climatologically from the San Fernando Valley. It tends to be much cooler at night with many more frost/freeze events.
- The Los Angeles County Beaches zone (366) was modified to split out the Palos Verdes Hills (367), which has a much different climatology than the beaches due to it being at a much higher elevation and often above the coastal marine layer. Temperatures in this area tend to be much warmer, especially in certain weather patterns. No other adjustments were made.
- The Los Angeles Inland Coast zone (368) had a minor change made based on partner feedback. The northeast portion of the zone (primarily in the hills west of Franklin Canyon) was incorporated into the new eastern Santa Monica Mountain Zone (370) due to climatological similarities, particularly with respect to wind and fire hazards. The remainder of the zone was unchanged.
- The Los Angeles County Mountains zone was split up into three portions. Explanations for each are provided below:
 - The northwest portion (378) includes one of the busiest mountain transit corridors in the country via Interstate 5, which is the primary connector route from Los Angeles to northern California. Weather conditions can often be significantly different in this area from the rest of the mountain zones, especially in cold post-frontal or northerly flow weather patterns during winter. During these situations snow can often fall at or below pass levels causing major weather delays and closures, while the other mountain zones to the east can often cloud free. Core partners provided key input into the eastern boundary of this zone.
 - The next mountain zone to the east (379) is the beginning of the San Gabriel Mountains and tends to be much windier during Santa Ana wind patterns, leading to greater fire weather concerns. The elevations of this part of the San Gabriel Mountains are generally much lower than the mountains to the east, thus tend to receive less snow.
 - The eastern San Gabriel Mountains zone (380) incorporates the highest peaks in this mountain range as well as the primary travel route (Highway 2, aka, the Angeles Crest Highway) through the mountains into the Antelope Valley. This portion of the mountains tends to receive higher rain and snow amounts resulting in a larger threat to travel. Also, the eastern mountain ranges tend to be much more susceptible to monsoon thunderstorms which can produce severe weather, including flash flooding and/or debris flows.
- The previous Antelope Valley zone has been split into 3 zones due to significant climatological differences in the foothills versus the valley floor.

- The western Antelope Valley Foothill zone (381) experiences much stronger winds during west and northwest wind events. And due to the higher elevation this zone also receives significantly more snow in winter than on the valley floor.
- The eastern Antelope Valley Foothill zone (382) also experiences increased snow amounts but less wind than the western zone. This area also is much more susceptible to afternoon thunderstorms and flash flooding.
- The only change to the primary Antelope Valley zone (383) is the separation of the two above mentioned Foothill zones (381 and 382). Most of the Antelope Valley population is in this zone. Due to the lower elevation there tends to be less snow in the winter months.

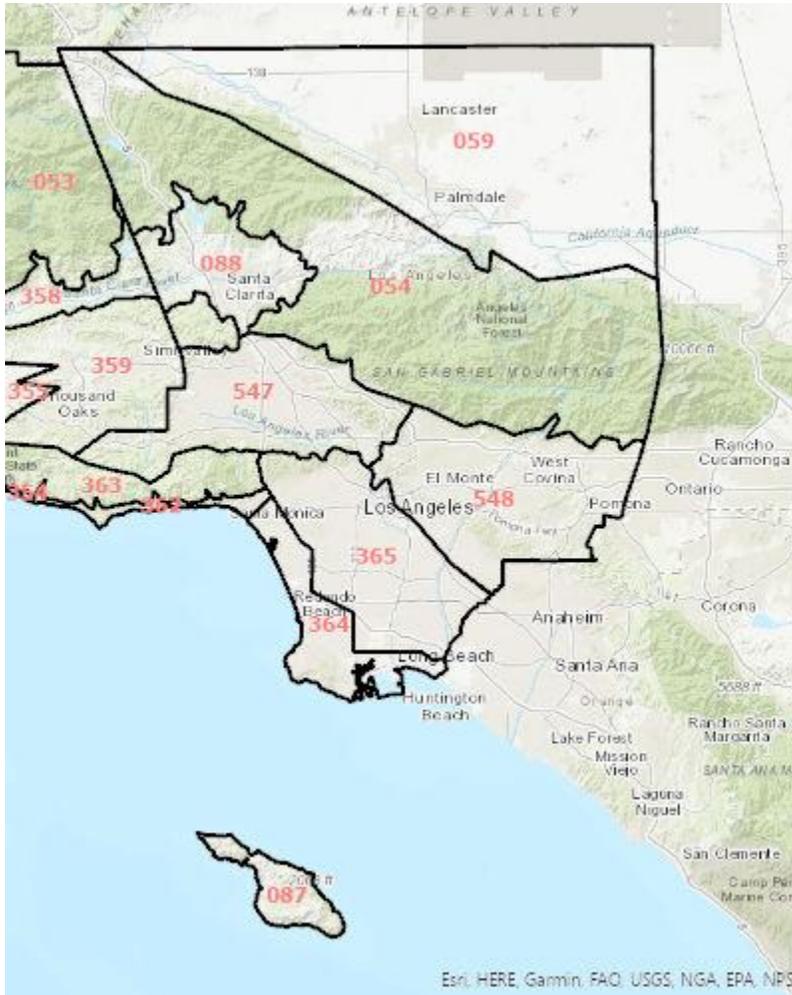
Ventura County:

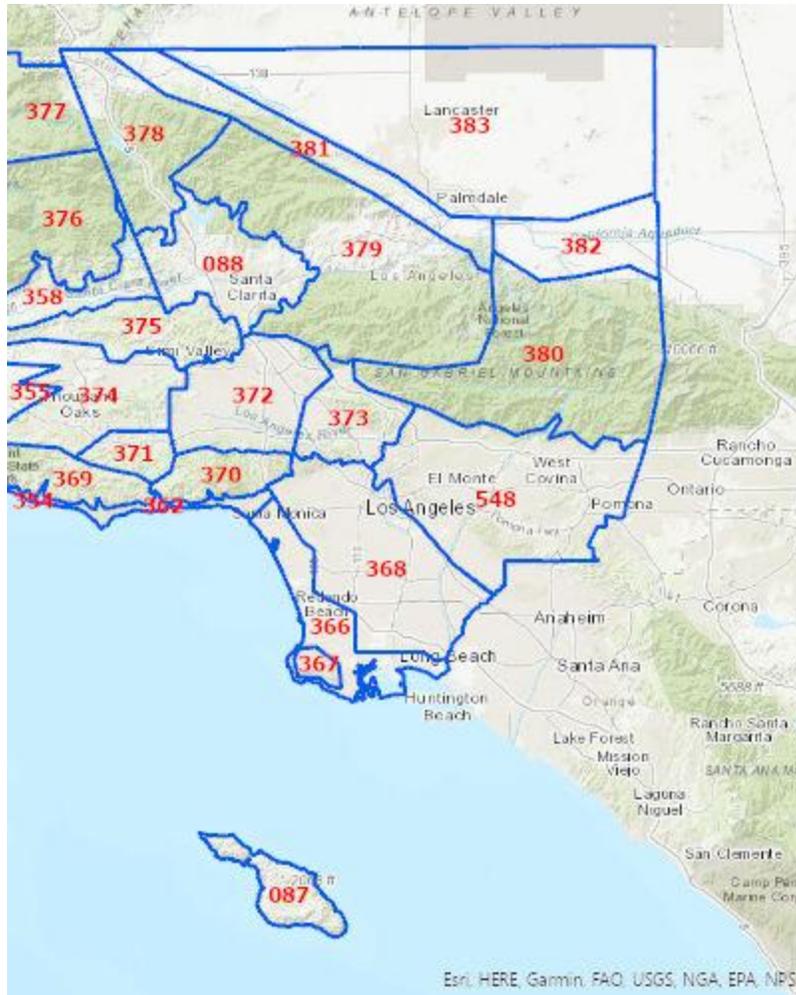
- The Santa Susanna Mountains (375) have been split out from the Southeastern Ventura County Valleys (374) and the northwest portion of the Western San Fernando Valley (372) for several reasons. It tends to be much drier and windier during Santa Ana wind events due to its elevation, resulting in more hazardous fire weather conditions. Also, a small portion of the Los Angeles County Mountains was incorporated into this zone because this mountain range crosses the county line and the LA County portion has similar climatology as the Ventura County portion.
- The Ventura County Mountains have been split into two zones, Northern (377) and Southern (376). The boundary between the two is the Pine Mountain Ridge which is a natural climatological boundary. The northern portion tends to receive much higher snow amounts and is colder. It also is more prone to summer thunderstorms.

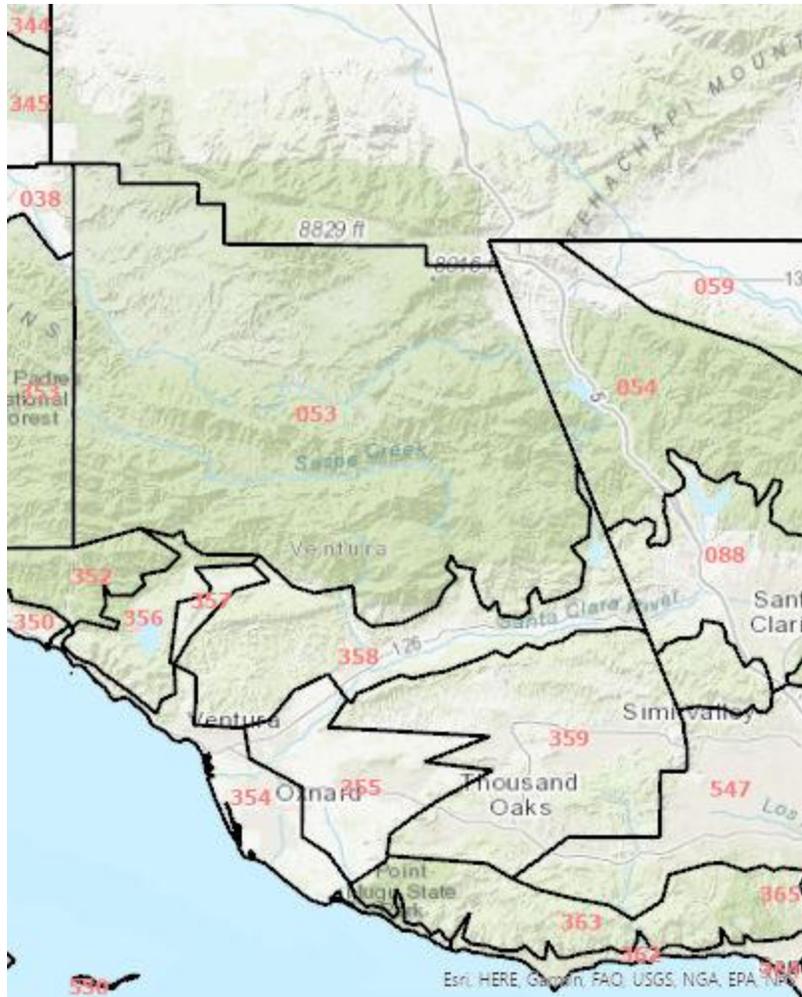
Collaboration:

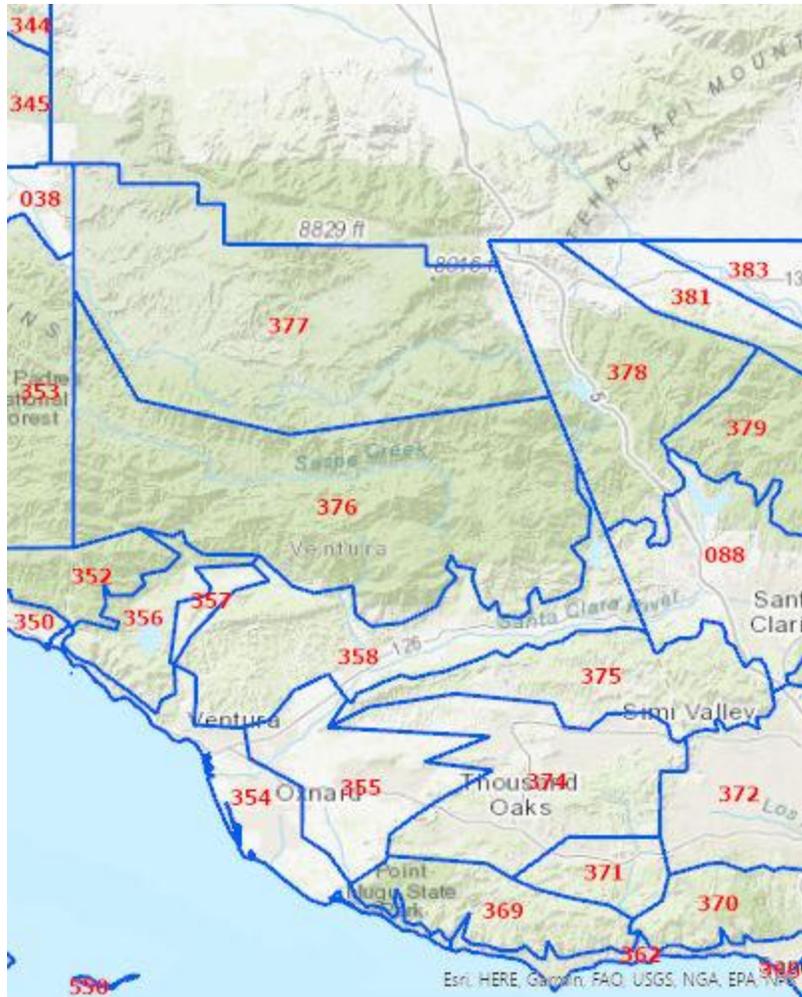
- NWS LOX communicated the planned zone changes with the Warning Coordination Meteorologists from their backup NWS offices, Monterey and San Diego, respectively. The Analyze, Forecast and Support Office (AFS) was informed of the zone change request and helped with finalizing the Service Change Notice, written justification, and shape files necessary for this change.
- Both the National Hurricane Center and the National Tsunami Warning Center were notified of the intended zone changes for coastal zones. Breakpoints were discussed and new zone numbers and coordinates were exchanged.

Old public zone boundaries in black/New public zone boundaries in blue

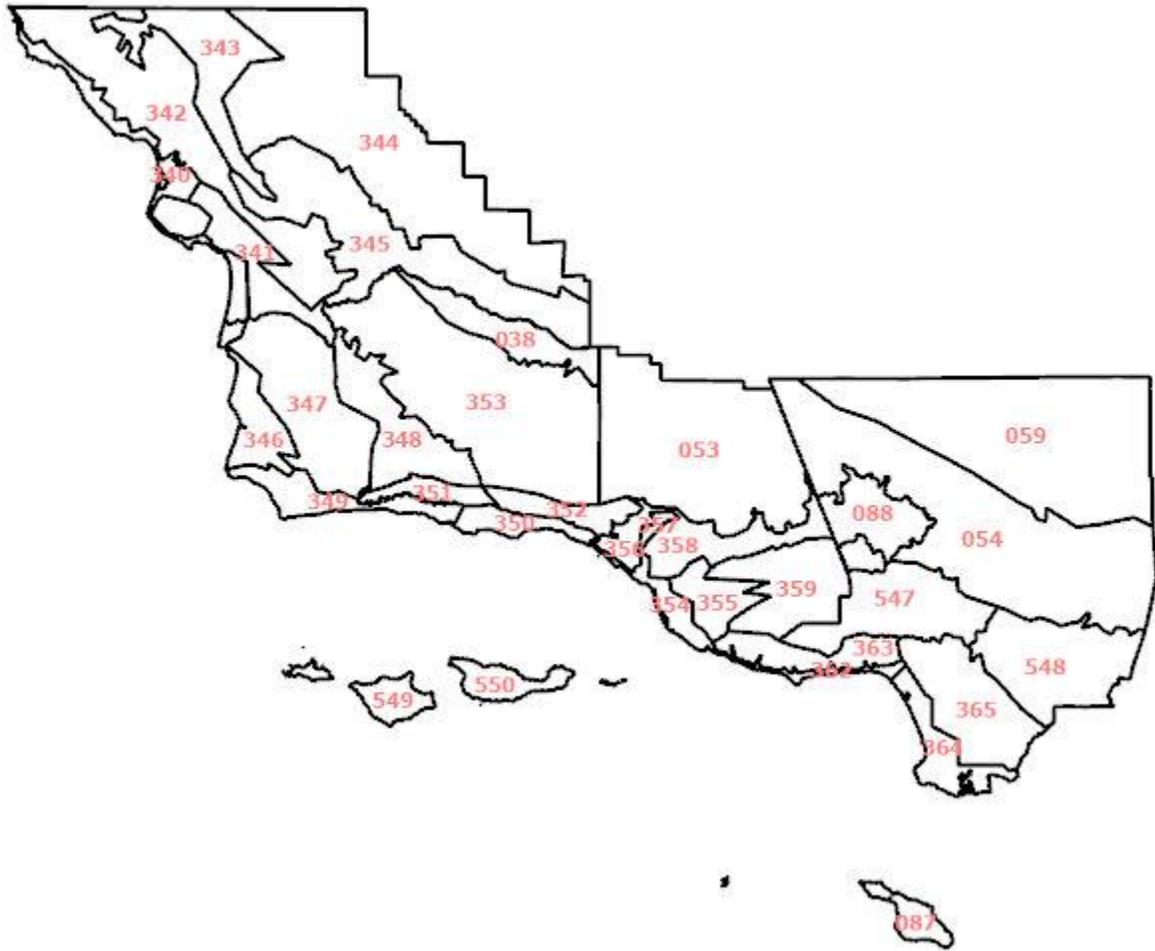




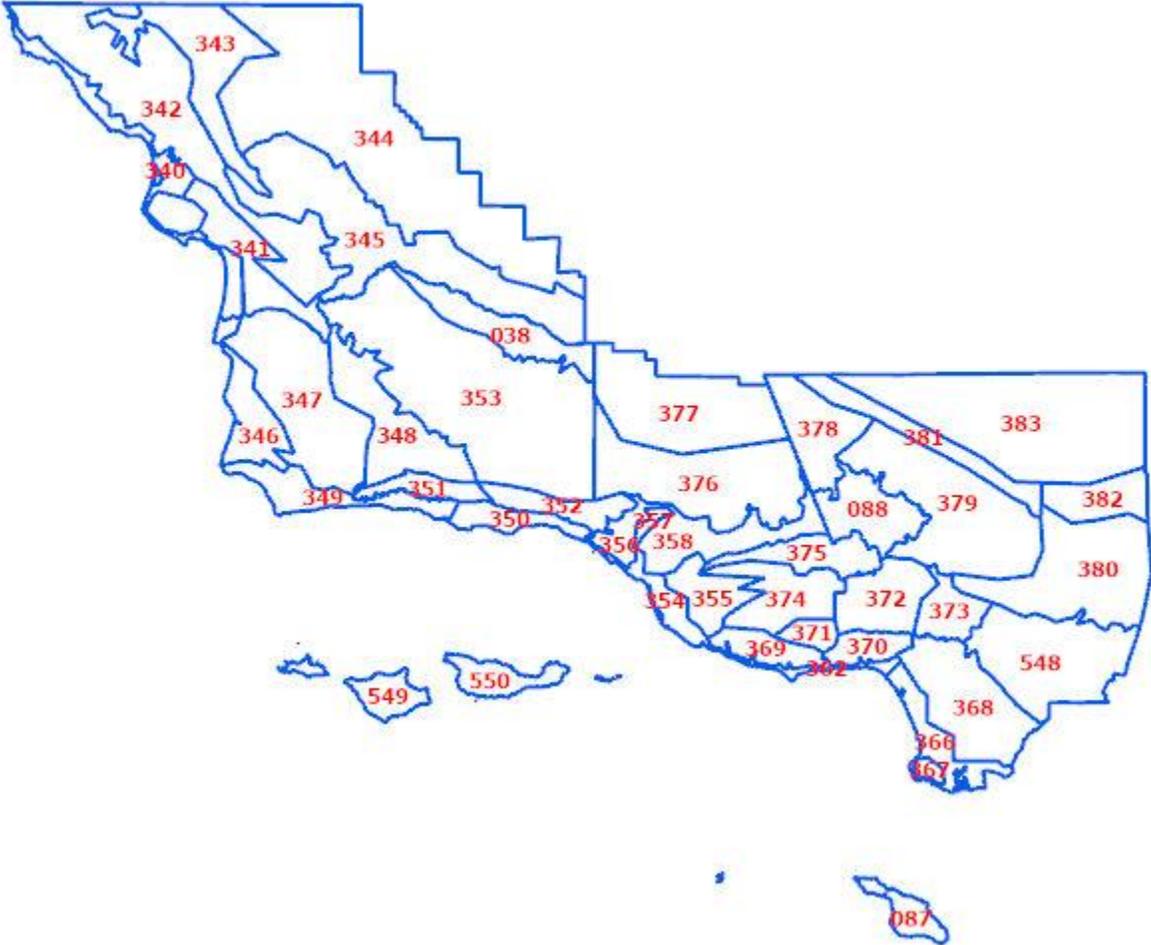




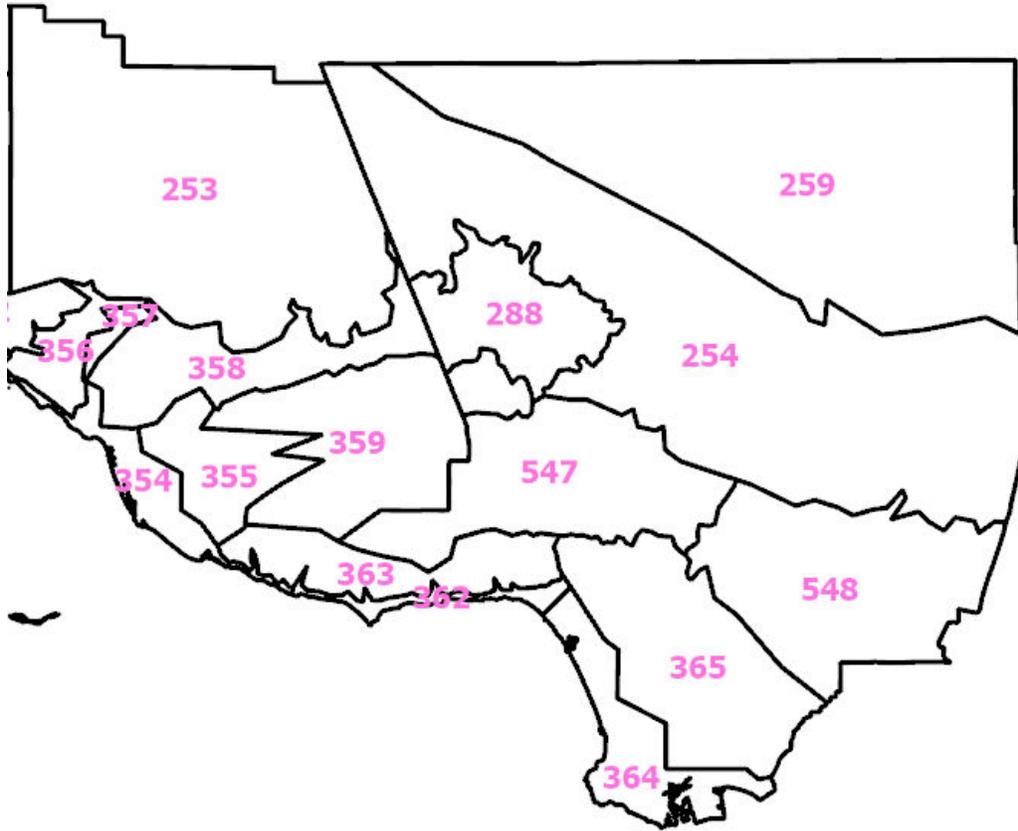
Old public zone boundaries across the County Warning Area



New public zone boundaries across the County Warning Area



Old fire weather zone numbers/boundaries (showing affected areas of Ventura and Los Angeles Counties)



New fire weather zone numbers/boundaries (showing affected areas of Ventura and Los Angeles Counties)

