

# THE ALTAMONT PASS WIND RESOURCE AREA



Photograph by SumikoPhoto / iStock / Getty Images Plus

## ABOUT

Wind is a viable source of clean, renewable energy. The Altamont Pass is the location of one of the first U.S. wind farms. East of San Francisco, the Altamont Pass is a gap through the Diablo Mountain range, which spans the Alameda and Contra Costa counties. Air in the valley is warm—warmer than the air hovering over the San Francisco Bay to the west. This air moves from cooler regions over the water onto the land, forming a sea breeze, which blows consistently through the Altamont Pass at about 24 kilometers (15 miles) per hour. The Altamont Pass provides an ideal location for capturing wind energy. However, it is also an important migratory path for many bird species.

## HUMAN IMPACTS

Wind farms are placed in locations where wind blows consistently, which is why the Altamont Pass is a perfect location for one. The Altamont Pass Wind Resource area spans more than 12,000 hectares (30,000 acres). During the past three decades, more than 5,000 wind turbines have operated in the region. This particular wind resource area supplies about 580 megawatts of electricity to the local counties, and wind energy in general accounts for roughly a third of California's renewable energy portfolio.

## IMPACTS TO WILDLIFE

The rotating blades of wind turbines kill between 140,000 and 328,000 birds every year in North America. The golden eagle (*Aquila chrysaetos*) is one of the most heavily affected species along the pass. New wind turbine designs are replacing older models along the Altamont Pass. The new design requires fewer turbines to produce more electricity, which should hopefully reduce the number of bird deaths in the region.

## MAPPING

Create a map that shows the boundaries of the Altamont Pass region. Label the state the region is located in and any major cities in the region. Use Google Earth to explore the satellite image of the region. What signs of human impact do you see? These might include a wall or fence, lights, active construction, roads, traffic, human settlements (towns, houses/buildings). Determine which human impacts exist in this area and add these to your map. Make sure to include a key on your map so that people looking at your map will know what your symbols and lines mean.