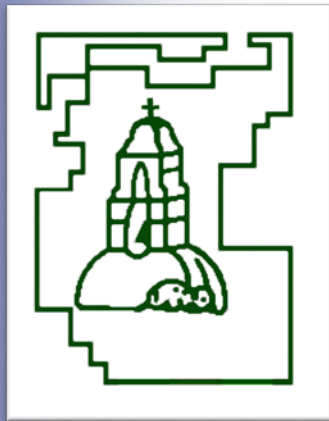


Pala Fire Station Solar Project



Pala Band of
Mission Indians

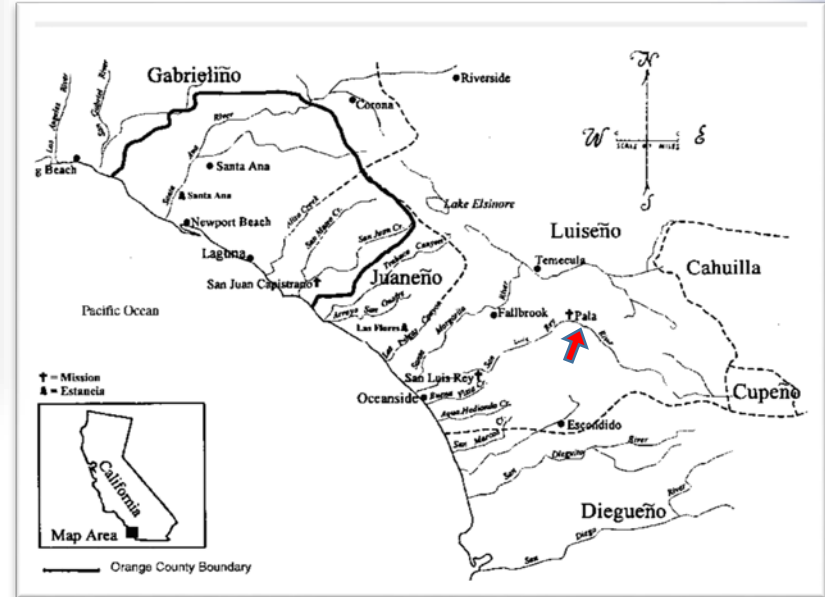


Pala Fire
Department



Pala Environmental
Department

The Pala Reservation



- Located in the northern portion of San Diego County in Southern California
- Encompasses of over 4,000 acres of forest; 8 acres of Lakes; 6 acres of wetlands and approximately 40 miles of streams totally over 13,000 acres of land
- Over 1,000 tribal members of both Cupeño and Luisiño tribes
- Home to approximately 1,350 people

Pala Reservation Historically



- The “Old Pala” reservation was established in 1875.
- The reservation was originally occupied by the Luiseño people.
- In 1903 the new village of Pala was created for the Cupeño people who were relocated from Cupa.
- The “New Pala” mirrored the village pattern of Cupa.
- The US government supplied tents and tiny houses for the new residents.

Pala Reservation Presently



- Approximately 800 homes and commercial buildings
 - Newly constructed homes all have PV solar installed
- Pala's main energy users:
 - Pala Casino Resort & Spa
 - Pala Administration Complex
 - Pala Transfer Station
 - Pala Fire Station
 - Pala Fitness Center

Pala Fire Station



- Initially established in 1978
- Total of 23,000 square feet – a two-story administration building with sleeping quarters was completed in 2008
- Six bay garages with weight rooms and a laundry facility
- Training Classroom/Emergency Operations Center
- Featured four-story live fire training tower

Pala Fire Station Solar Existing



- In 2009 the Pala Fire Station received funding from the ARRA (American Recovery Reinvestment Act) to install solar electric panels as a demonstration project.

Pala Fire Station Solar Project



- In April of 2015, the Pala Band of Mission Indians received grant funding from the Department of Energy to assist in the installation and operation of a photovoltaic solar electric generating facility at the Pala Fire Station.
- There were numerous benefits to installing a solar electric generating facility at the Pala Fire Station:
 - Reducing Pala's dependence on grid-supplied electricity by as much as 95.5%
 - Displace approximately 80% of the Fire Station's overall energy usage
 - Reduction in the consumption of fossil fuels and thus reducing the amount of CO2 emissions generated

Pala Fire Station Roof Mounted Solar Panel Installation



- The solar contractor, Good Energy Solar, successfully installed 138 high efficiency LG 310 watt modules onto the south facing standing seam metal roof.
- In May of 2016, the Pala Fire Station received permission to operate a photovoltaic solar electric generating facility.

Pala Fire Station Carport Solar Panel Installation



- In early November 2015, a newly constructed carport structure was built.
- During the drilling of the borings for the columns, the electrical wiring for one of the parking lot lamps was encountered which required the rewiring of the lamp.
- The carport required additional lock-washer to be installed to the support structure of the awning to maintain levelness.

Pala Fire Station Solar Project



- This 91.14 kW DC addition to the Pala Fire Station provides annual production of 145,896 kilowatt hours of energy to the facility.
- The projected production of electricity over a 25 year period will result in a utility bill savings of approximately \$52,000/year or \$1.3 million over the life of the system.
- We also expect to save CO2 emissions totaling the planting of 70,000 trees, the savings of 300,000 gallon of fossil fuels, the recycling of 10,000 tons of waste and the displacement of CO2 produced by 350 homes.

Questions?



**The Pala Band of Mission Indians
Thanks you Department of Energy!**

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