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## Nickels Soil Laboratory Irrigation Well

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**Project No.:** 09-HORT12-Murray

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### **Objectives:**

Secure a dependable irrigation supply to protect the longterm viability of almond research projects at the Nickels Soil Lab.

### **Interpretive Summary:**

Federal irrigation water allocations for the Nickels Soil Lab orchards via the Tehema Colusa Canal have been drastically reduced in recent years. At the onset of the 2009 growing season, the 200-acre research facility had no irrigation well or alternate source of water putting 15 almond research projects and other production acreage at severe risk. The Nickels Trust did not have sufficient resources to install an adequate well and needed industry support to sustain ongoing Almond Board supported projects. The Production Research and Environmental Research committees combined their contingency funds toward the construction of irrigation well at Nickels Soil Lab in the spring of 2009. (See also 2009 Proceedings Project No. 09-PREC4-Murray for additional information.)

### **Materials and Methods:**

Upon the request of local almond growers, Sullivan Drilling agreed to install the irrigation well on the Marine Road orchard of Nickels Soil Lab in time for the peak 2009 irrigation season. Using test well information, an 830 ft, 16" steel cased well was constructed including slotted casing at the 460-500' and at 780'-830'. Alsco/Geyer Irrigation installed a 100 hp turbine pump to yield an estimated 1000 gpm flow.

Cost for the well test, casing, seal, pump, filter discharge pipe, electrical service and PG&E and county fees, totaled \$200,000.

## **Results and Discussion:**

The completed irrigation well should now be able to supply sufficient irrigation water to sustain the research orchards at the Nickels Soil Lab in the event that federal district irrigation allotments are limited.