

# Use of Carbon Derived from Almond Shells to Filter Municipal Drinking Water Supplies

## Project Leader: Craig Ledbetter

USDA/ARS, 9611 S. Riverbend Ave., Parlier, CA 96348  
(559) 596-2817, [craig.ledbetter@ars.usda.gov](mailto:craig.ledbetter@ars.usda.gov)

## PROJECT SUMMARY

### Objectives:

- Ascertain the effectiveness of using activated carbon made from almond shells to remove various concentrations of Dibromochloropropane (DBCP), formerly a widely used soil fumigant, from municipal water systems.
- Compare the effectiveness of almond-shell-based activated carbon with that of the currently used standard form of activated carbon in terms of their ability to meet both USEPA and local contamination-reduction requirements.

### Background:

Although 33 years have passed since DBCP was last used in California to control nematodes in such crops as citrus, almonds, plums, and peaches, the compound persists at high levels in San Joaquin Valley groundwater. Consequently, local municipalities are required to use carbon-based filtration to treat water intended for human consumption.

This new project represents a pilot study follow-on to the project cooperator's laboratory study, which showed that activated carbon can be made from almond shells, that such carbon removes DBCP from water, and that it does so as effectively as the standard form does.

This pilot study is being undertaken in cooperation with, and at the facilities of, the Fresno Department of Public Utilities' Water Division. If it produces results comparable to those of the initial lab study, it could well lead to both environmental improvement for the valley and an additional revenue source for almond shellers.

---

**Project Cooperators:** K. Thomas Klasson, USDA/ARS, New Orleans; Robert Little, Fresno Department of Public Utilities, Water Division

### For More Details, Visit

- Poster location 22, Exhibit Hall, Session 3; or on the web (after January 2011) at [AlmondBoard.com/AICposters](http://AlmondBoard.com/AICposters)