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## **New Research Highlights Impacts of Nitrate Contamination to San Joaquin Valley Communities**

### ***Report details economic costs and exposure burden of nitrate-contaminated drinking water for Valley residents***

**March 16, 2011:** New research led by the Pacific Institute finds that nitrate contamination of groundwater has wide-reaching effects on California's health, economic vitality, and environmental well being, disproportionately affecting low-income households and Spanish-speaking residents. While most Californians take for granted that safe water is readily available at the turn of a tap, a growing number of communities, primarily in the San Joaquin Valley and other agricultural areas of the state, face very real impacts from nitrate contamination of the drinking water sources serving their homes and schools.

The analysis brings a stark reality check to the fore as the Central Valley Water Board considers a new regulatory program for irrigated lands, the primary source of nitrate contamination in the San Joaquin Valley. There have never been any regulatory requirements on irrigated agriculture to protect groundwater from fertilizers, which are the primary source of nitrate in the valley. Nitrate levels have increased dramatically in drinking water supplies over the last few decades.

The new study, [\*The Human Costs of Nitrate-Contaminated Drinking Water in the San Joaquin Valley\*](#), a collaboration of the Pacific Institute, Community Water Center, Clean Water Fund, and California Rural Legal Assistance Foundation, focuses on the household costs of avoiding nitrate-contaminated drinking water connected to community water systems and the costs to these systems of removing or avoiding nitrates, and it points to key policies and further research needed to better understand and resolve this entrenched challenge.

The eight-county San Joaquin Valley has some of the most contaminated aquifers in the nation: 92 drinking water systems in the San Joaquin Valley had a well with nitrate levels above the legal limit from 2005-2008, potentially affecting the water quality of approximately 1.3 million residents. In addition to public water systems, the State Water Board sampled 181 domestic wells in Tulare County in 2006 and found that 40% of those tested had nitrate levels above the legal limit.

“Nitrate-contaminated drinking water has a pronounced impact on residents in small community water systems. Their health and their resources are compromised when they consume their tap water or pay for water from safer sources – and the problem is most dire in some areas of the state with the least capacity to cope with its effects and invest in sustainable solutions,” said Eli Moore, co-director of the Pacific Institute Community Strategies for Sustainability and Justice Program and co-author of the report.

Nitrate levels in drinking water are regulated because of the potentially fatal effect ingestion can have on infants, known as Blue Baby Syndrome. Studies have also shown that high levels of nitrates can harm the respiratory and reproductive systems, as well as potentially impact the kidneys, spleen, and thyroid in children and adults.

(more)

The [report](#) includes the following key findings:

- **A significant number of people are at high risk of health problems resulting from nitrate exposure.** One-third of residents surveyed used tap water for drinking or cooking, despite years of existing nitrate contamination.
- **The expense to households of having to purchase drinking water pushes household water costs well above affordable levels.** Households in the primary community surveyed spend an average of \$.65 per gallon on non-tap water, or more than 200 times the average water rate in California. The total average household water costs constitute 4.6% of median household income in Beverly Grand, more than three times the affordability threshold for drinking water recommended by the U.S. EPA.
- **The health and economic burden of nitrate contamination disproportionately affects low-income households and Spanish-speaking residents.** Spanish-speaking households were less aware of nitrate contamination and were more likely to drink and cook with contaminated tap water.
- **Groundwater nitrate levels are increasing and the number of wells with nitrate violations may double within ten years.** If current trends like those in Kern County continue, the number of wells with nitrate levels above the MCL will increase from 5% to 10% of monitored wells by the year 2020.
- **Public funding for nitrate mitigation in small community water systems remains inadequate and projects funded may not be providing sustainable solutions.** An estimated \$150 million in funding is needed to make drinking water in community water systems safe from nitrates in the San Joaquin Valley, and 90% of the systems with nitrate violations from 2005-2007 had not received needed funding as of 2009. The most common approach for mitigating nitrates is drilling new wells, a strategy vulnerable to being unsustainable due to fluctuating and increasing nitrate levels in groundwater.
- **Nitrate contamination is a growing problem for community drinking water supplies in the valley.** Already, at least 88 water providers in the San Joaquin Valley are in need of projects to mitigate nitrate contamination, and some have been waiting longer than ten years without receiving necessary funding.

The new report delineates the following critical steps necessary in California to protect health in nitrate-impacted communities:

- **Ensure residents are well-informed about their water quality and about appropriate measures to protect their health.**
- **Provide sufficient funding for short and long-term solutions to ensure safe drinking water.**
- **Remove political barriers to consolidating small community water systems.**
- **Prioritize source control to reduce current and prevent new nitrate contamination.**

The report *The Human Costs of Nitrate-Contaminated Drinking Water in the San Joaquin Valley* can be downloaded on the Pacific Institute website at: [http://www.pacinst.org/reports/nitrate\\_contamination/index.htm](http://www.pacinst.org/reports/nitrate_contamination/index.htm)

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**Community Water Center** (CWC) is an environmental justice nonprofit organization whose mission is to create community-driven water solutions through organizing, education, and advocacy in California's San Joaquin Valley. [www.communitywatercenter.org](http://www.communitywatercenter.org)

**Clean Water Fund** (CWF) is a national Section 501(c)(3) research and education organization that promotes the public interest on issues relating to water, waste, toxics and natural resources. [www.cleanwaterfund.org](http://www.cleanwaterfund.org)

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