STATE WATER RESOURCES CONTROL BOARD
BOARD MEETING SESSION – DIVISION OF WATER QUALITY
JANUARY 19, 2011

ITEM 10

SUBJECT

CALIFORNIA DEPARTMENT OF PUBLIC HEALTH PRESENTATION ON NITRATE IN DRINKING WATER "NITRATE EFFECTS ON PUBLIC WATER SYSTEMS WELLS"

DISCUSSION

Nitrate is a contaminant that is found throughout California groundwater in concentrations at high enough levels to affect human health if used untreated for drinking water. Nitrate is also a nutrient that is found naturally in groundwater below levels that cause health effects.

Common sources of nitrate in water are associated with wastewater (e.g., wastewater treatment plants, septic systems, leaky sewer lines, dairies) and fertilizer production and application. Nitrate dissolves rapidly in water, and once nitrate enters groundwater it can remain there for decades. There is no simple way to remove nitrate from water. Boiling and filtration as a means of purifying water do not reduce nitrate concentrations.

The Water Boards and other public agencies, including the California Department of Public Health (CDPH), as well as various industries that have a role in addressing nitrate in water, are struggling with and investing financial resources in various aspects of the nitrate problem.

The Water Boards are responsible for protecting the waters of the state from discharges of waste, including issuance of waste discharge requirements, and requiring cleanup or abatement of waste discharges. The Recycled Water Policy adopted by the State Water Board on February 3, 2009 required that salt and nutrient management plans be developed and submitted to the Regional Water Boards for every groundwater basin in California within five years of Policy adoption. The State Water Board has provided funding for projects related to various aspects of nitrate in water through its Dairy Water Quality Grant Program, Small Community Wastewater Grant Program, and Small Community Groundwater Grant Program. The State Water Board is responsible for submitting two reports to the Legislature in early 2012 related to contaminants in groundwater and potential solutions and funding to provide clean water to affected communities [SB X2 1 (Perata, 2008) and AB 2222 (Caballero, 2008)]. SB X2 1 is limited to nitrate contamination in Tulare Basin and Salinas Valley. U. C. Davis is performing studies related to SB X2 1. State Water Board staff are working with CDPH staff on both reports to the Legislature.

In addition, the State Water Board's Groundwater Ambient Monitoring & Assessment (GAMA) Program has identified areas of the state where private domestic wells pump nitrate-contaminated groundwater. It is estimated that over two million people in California rely on domestic well water supply. However, there are no local or state requirements for domestic well testing.

CDPH is responsible for the enforcement of the federal and California Safe Drinking Water Acts (SDWAs) and the regulatory oversight of about 7,500 public water systems to assure the delivery of safe drinking water to all Californians. CDPH staff work with the U.S. Environmental Protection Agency (U.S. EPA), the Water Boards, and a wide variety of other parties interested in the protection of drinking water supplies. CDPH will make a presentation that provides insight about the problem of nitrate in groundwater from a CDPH perspective, in particular the magnitude and seriousness of the problem as it affects community and domestic wells, and what are seen as obstacles to solving that problem for affected communities.

POLICY ISSUE

This is an Information Item.

FISCAL IMPACT

None (Information Item only).

REGIONAL BOARD IMPACT

None (Information Item only).

STAFF RECOMMENDATION

None (Information Item only).

Shared information related to this item will assist the Water Boards in reaching Goals 2 and 3 of the Strategic Plan Update: 2008-2012. Goal 2 is to improve and protect groundwater quality in high-use basins by 2030. Goal 3 is to promote sustainable local water supplies.