

2011 Consumer Confidence Report

Water System Name: Riverkern Mutual Co. Report Date: March 30, 2012

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2011.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo ó hable con alguien que lo entienda bien.

Type of water source(s) in use: Ground

Name & location of source(s): Well 1-01 and 3-01

Drinking Water Source Assessment information: Source water assessments for wells 01 and 03 were submitted to the Department of Public Health in January 2009. The assessments identify possible sources of contamination to aid in Prioritizing cleanup and pollution prevention efforts. The reports are available for viewing at our office.

Wells 01 and 03 are considered to be most vulnerable to activities associated with contaminants detected in the water Supply; agricultural drainage, other animal operations, pesticide/fertilizer/petroleum storage and transfer areas, septic Systems – low density (<1 house per acre), sewer collection systems, irrigated crops (berries, hops, mint, orchards, sod, and greenhouses), housing – high density (>1 house per 0.5 acre), campgrounds/recreational areas, and RV parks.

The sources are considered most vulnerable to the following activities not associated with any detected contaminants; farm machinery repair, and underground storage tanks – non regulated tanks (tanks smaller than regulatory limit).

Time and place of regularly scheduled board meetings for public participation: Second Saturday of every month, rotated between Board Members homes

For more information, contact: Terry Twombly Phone: (760) 376-1640

TERMS USED IN THIS REPORT

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency (USEPA).

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to

Primary Drinking Water Standards (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Variations and Exemptions: Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

ND: not detectable at testing limit

ppm: parts per million or milligrams per liter (mg/L)

ppb: parts per billion or micrograms per liter (ug/L)

ppt: parts per trillion or nanograms per liter (ng/L)

health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

ppq: parts per quadrillion or picogram per liter (pg/L)

pCi/L: picocuries per liter (a measure of radiation)

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- *Microbial contaminants*, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- *Inorganic contaminants*, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- *Pesticides and herbicides*, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- *Radioactive contaminants*, that can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the USEPA and the state Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Tables 1, 2, 3, 4, 5, 7, and 8 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The Department allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, are more than one year old.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

| Microbiological Contaminants (complete if bacteria detected) | Highest No. of Detections | No. of months in violation | MCL | MCLG | Typical Source of Bacteria |
|---|---------------------------|----------------------------|--|------|--------------------------------------|
| Total Coliform Bacteria | (In a mo.) <u>0</u> | 0 | More than 1 sample in a month with a detection | 0 | Naturally present in the environment |
| Fecal Coliform or <i>E. coli</i> | (In the year) <u>0</u> | 0 | A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or <i>E. coli</i> | 0 | Human and animal fecal waste |

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER

| Lead and Copper (complete if lead or copper detected in the last sample set) | No. of samples collected | 90 th percentile level detected | No. sites exceeding AL | AL | PHG | Typical Source of Contaminant |
|---|--------------------------|--|------------------------|-----|-----|---|
| Lead (ppb) | 11 | ND | 2 | 15 | 0.2 | Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits |
| Copper (ppm) ¹ | 11 | 1.35 | 2 | 1.3 | 0.3 | Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS

| Chemical or Constituent (and reporting units) | Sample Date | Level Detected | Range of Detections | MCL | PHG (MCLG) | Typical Source of Contaminant |
|--|-------------|----------------|---------------------|------|---------------|--|
| Sodium (ppm) | 2009 - 2010 | 24.5 | 21 - 28 | none | none | Salt present in the water and is generally naturally occurring |
| Hardness (ppm) | 2009 - 2010 | 79 | 67 - 91 | none | none | Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring |

*Any violation of an MCL or AL is asterisked. Additional information regarding the violation is provided later in this report.

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

| Chemical or Constituent (and reporting units) | Sample Date | Level Detected | Range of Detections | MCL [MRDL] | PHG (MCLG) [MRDLG] | Typical Source of Contaminant |
|--|-------------|----------------|---------------------|---------------|--------------------------|--|
| Gross Alpha (pCi/L) | 2004 - 2007 | 2.3 | ND – 4.6 | 15 | (0) | Erosion of natural deposits |
| Uranium (pCi/L) | 2004 - 2007 | 3.1 | ND – 4.5 | 20 | 0.43 | Erosion of natural deposits |
| Arsenic (ppb) | 2009 - 2010 | 1.7 | ND – 3.4 | 10 | 0.004 | Erosion of natural deposits; runoff from orchards; glass and electronics production wastes |
| Fluoride (ppm) | 2009 - 2010 | 0.36 | 0.35 – 0.37 | 2 | 1 | Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories |
| Nitrate (ppm) | 2011 | 6.4 | 2.8 – 9.9 | 45 | 45 | Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits |

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

| Chemical or Constituent (and reporting units) | Sample Date | Level Detected | Range of Detections | SMCL | PHG (MCLG) | Typical Source of Contaminant |
|--|-------------|----------------|---------------------|------|---------------|--|
| Chloride (ppm) | 2009 - 2010 | 8.1 | 6.2 - 10 | 500 | None | Erosion of natural deposits; seawater influence |
| Color (units) | 2009 - 2010 | 5 | ND - 10 | 15 | None | Naturally occurring organic matter |
| Iron (ppb) ² | 2009 - 2010 | 145 | ND - 330 | 300 | None | Leaching from natural deposits; industrial wastes |
| Odor (T.O.N) | 2010 | 2 | 2 | 3 | None | Naturally occurring organic matter |
| Specific Conductance (US) | 2011 | 373 | 310 - 410 | 1600 | None | Erosion of natural deposits; seawater influence |
| Sulfate (ppm) | 2009 - 2010 | 14.5 | 11 - 18 | 500 | None | Runoff/leaching from natural deposits; industrial wastes |
| Total Filterable Residue (ppm) | 2009 - 2010 | 170 | 150 - 190 | 1000 | None | Runoff/leaching from natural deposits; industrial wastes |
| Turbidity (NTU) | 2009 - 2010 | 0.95 | ND – 1.9 | 5 | None | Soil runoff |
| Zinc (ppm) | 2009 - 2010 | 0.03 | ND – 0.05 | 5 | None | Runoff/leaching from natural deposits; industrial wastes |

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS

| Chemical or Constituent (and reporting units) | Sample Date | Level Detected | Range of Detections | Notification Level | Health Effects Language |
|--|-------------|----------------|---------------------|--------------------|---|
| Calcium (ppm) | 2011 | 36 | 30 - 39 | None | Erosion of natural deposits |
| Magnesium (ppm) | 2009 - 2010 | 4.1 | 3.5 - 4.6 | None | Erosion of natural deposits |
| pH field (Std Units) | 2011 | 6.7 | 6.2 - 7.8 | None | Inherent characteristic of water |
| Sodium (ppm) | 2009 - 2010 | 24.5 | 21 - 28 | None | Erosion of natural deposits; seawater influence |

*Any violation of an MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.

Additional General Information on Drinking Water

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

¹ In the Riverkern System, the 90th percentile copper level was 1.35 ppm, which exceeds the action level of 1.3 ppm. This means that 10% of the samples collected contained copper in excess of 1.35 ppm. Copper is an essential nutrient, but some people who drink water in excess of the action level over a relatively short amount of time may experience gastrointestinal distress. Some people

who drink water containing copper in excess of the action level over many years may suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.

² Iron is present at levels that exceed the secondary MCL of 300 in one of the two wells in Riverkern Mutual. Both wells actively serve the system. Compliance for iron is based on an annual average. The iron secondary MCL was set to protect you against unpleasant aesthetic effects, such as color, taste, odor, and the staining of plumbing fixtures and clothing when washed.

Exceeding these secondary MCLs does not pose a health risk.

Summary Information for Violation of a MCL, MRDL, AL, TT, or Monitoring and Reporting Requirement

| VIOLATION OF A MCL, MRDL, AL, TT, OR MONITORING AND REPORTING REQUIREMENT | | | | |
|---|---|------------------|--|---|
| Violation | Explanation | Duration | Actions Taken to Correct the Violation | Health Effects Language |
| Copper AL | In the Riverkern System, the 90th percentile copper level was 1.35 ppm, which exceeds the action level of 1.3 ppm. This means that 10% of the samples collected contained | 2 of 11 samples. | We have initiated a public education campaign to ensure our customers know about the copper action level exceedance and understand the health effects of copper, | Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time may |

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|--|---|--|---|--|
| | <p>copper in excess of 1.35 ppm. Samples are collected semi-annually from residences in the distribution system. 11 samples were collected in total for 2011. Copper exceedance was detected in one residence for both samples collected in 2011. All other samples were below the action level for copper.</p> | | <p>sources of copper, and actions they can take to reduce exposure to copper in drinking water.</p> | <p>experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years may suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.</p> |
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For Water Systems Providing Ground Water as a Source of Drinking Water

**TABLE 7 – SAMPLING RESULTS SHOWING
FECAL INDICATOR-POSITIVE GROUND WATER SOURCE SAMPLES**

| Microbiological Contaminants (complete if fecal-indicator detected) | Total No. of Detections | Sample Dates | MCL [MRDL] | PHG (MCLG) [MRDLG] | Typical Source of Contaminant |
|--|----------------------------|-----------------|---------------|--------------------------|-------------------------------|
| <i>E. coli</i> | (In the year) | | 0 | (0) | Human and animal fecal waste |
| Enterococci | (In the year) | | TT | n/a | Human and animal fecal waste |
| Coliphage | (In the year) | | TT | n/a | Human and animal fecal waste |

**Summary Information for Fecal Indicator-Positive Ground Water Source Samples,
Uncorrected Significant Deficiencies, or Ground Water TT**

SPECIAL NOTICE OF FECAL INDICATOR-POSITIVE GROUND WATER SOURCE SAMPLE

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SPECIAL NOTICE FOR UNCORRECTED SIGNIFICANT DEFICIENCIES

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VIOLATION OF GROUND WATER TT

| TT Violation | Explanation | Duration | Actions Taken to Correct the Violation | Health Effects Language |
|--------------|-------------|----------|---|----------------------------|
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For Systems Providing Surface Water as a Source of Drinking Water

| TABLE 8 - SAMPLING RESULTS SHOWING TREATMENT OF SURFACE WATER SOURCES | |
|--|---|
| Treatment Technique ^(a) (Type of approved filtration technology used) | |
| Turbidity Performance Standards ^(b) (that must be met through the water treatment process) | Turbidity of the filtered water must: 1 – Be less than or equal to ____ NTU in 95% of measurements in a month. 2 – Not exceed ____ NTU for more than eight consecutive hours. 3 – Not exceed ____ NTU at any time. |
| Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1. | |
| Highest single turbidity measurement during the year | |
| Number of violations of any surface water treatment requirements | |

(a) A required process intended to reduce the level of a contaminant in drinking water.

(b) Turbidity (measured in NTU) is a measurement of the cloudiness of water and is a good indicator of water quality and filtration performance. Turbidity results which meet performance standards are considered to be in compliance with filtration requirements.

* Any violation of a TT is marked with an asterisk. Additional information regarding the violation is provided below.

Summary Information for Violation of a Surface Water TT

| VIOLATION OF A SURFACE WATER TT | | | | |
|--|--------------------|-----------------|---|--------------------------------|
| TT Violation | Explanation | Duration | Actions Taken to Correct the Violation | Health Effects Language |
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Summary Information for Operating Under a Variance or Exemption
