| Contaminant                   | Unit<br>Measure<br>ment | MCL<br>(AL)<br>[MRDL] | PHG<br>(MCLG)<br>[MRDLG] | Typical Source of<br>Contaminant  | Health Effects Language   |
|-------------------------------|-------------------------|-----------------------|--------------------------|---|---|
| <b>Inorganic Contaminants</b> |                         |                       |                          |   |   |
| Aluminum                      | ppm                     | 1                     | 0.6                      | Erosion of natural deposits; residue<br>from some surface water treatment<br>processes  | Some people who drink water containing aluminum in excess of the MCL over many years may experience short-term gastrointestinal tract effects.  |
| Antimony                      | ppb                     | 6                     | 20                       | Discharge from petroleum<br>refineries; fire retardants; ceramics;<br>electronics; solder   | Some people who drink water containing antimony in<br>excess of the MCL over many years may experience<br>increases in blood cholesterol and decreases in blood<br>sugar.                                 |
| Arsenic                       | ppb                     | 10                    | 0.004                    | Erosion of natural deposits; runoff<br>from orchards; glass and electronics<br>production wastes  | Some people who drink water containing arsenic in<br>excess of the MCL over many years may experience<br>skin damage or circulatory system problems, and may<br>have an increased risk of getting cancer. |
| Asbestos                      | MFL                     | 7                     | 7                        | Internal corrosion of asbestos<br>cement water mains; erosion of<br>natural deposits  | Some people who drink water containing asbestos in<br>excess of the MCL over many years may have an<br>increased risk of developing benign intestinal polyps.   |
| Barium                        | ppm                     | 1                     | 2                        | Discharge of oil drilling wastes and<br>from metal refineries; erosion of<br>natural deposits   | Some people who drink water containing barium in excess of the MCL over many years may experience an increase in blood pressure.  |
| Beryllium                     | ppb                     | 4                     | 1                        | Discharge from metal refineries,<br>coal-burning factories, and<br>electrical, aerospace, and defense<br>industries   | Some people who drink water containing beryllium in excess of the MCL over many years may develop intestinal lesions.   |
| Cadmium                       | ррЬ                     | 5                     | 0.04                     | Internal corrosion of galvanized<br>pipes; erosion of natural deposits;<br>discharge from electroplating and<br>industrial chemical factories, and<br>metal refineries; runoff from waste<br>batteries and paints | Some people who drink water containing cadmium in<br>excess of the MCL over many years may experience<br>kidney damage.   |
| Chromium                      | ppb                     | 50                    | (100)                    | Discharge from steel and pulp mills<br>and chrome plating; erosion of<br>natural deposits   | Some people who use water containing chromium in excess of the MCL over many years may experience allergic dermatitis.  |

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|--|-------------------------|-----------------------|--------------------------|--|--|
| Copper                                 | ppm                     | (AL=1.3)              | 0.3                      | Internal corrosion of household<br>plumbing systems; erosion of<br>natural deposits; leaching from<br>wood preservatives               | Copper is an essential nutrient, but some people who<br>drink water containing copper in excess of the action<br>level over a relatively short amount of time may<br>experience gastrointestinal distress. Some people who<br>drink water containing copper in excess of the action<br>level over many years may suffer liver or kidney<br>damage. People with Wilson's Disease should consult<br>their personal doctor.                       |
| Cyanide                                | ррb                     | 150                   | 150                      | Discharge from steel/metal, plastic<br>and fertilizer factories  | Some people who drink water containing cyanide in excess of the MCL over many years may experience nerve damage or thyroid problems.   |
| Fluoride                               | ppm                     | 2.0                   | 1                        | Erosion of natural deposits; water<br>additive which promotes strong<br>teeth; discharge from fertilizer and<br>aluminum factories     | Some people who drink water containing fluoride in<br>excess of the federal MCL of 4 mg/L over many years<br>may get bone disease, including pain and tenderness of<br>the bones. Children who drink water containing fluoride<br>in excess of the state MCL of 2 mg/L may get mottled<br>teeth.   |
| Lead                                   | ppb                     | (AL=15)               | 0.2                      | Internal corrosion of household<br>water plumbing systems; discharges<br>from industrial manufacturers;<br>erosion of natural deposits | Infants and children who drink water containing lead in<br>excess of the action level may experience delays in their<br>physical or mental development. Children may show<br>slight deficits in attention span and learning abilities.<br>Adults who drink this water over many years may<br>develop kidney problems or high blood pressure.   |
| Mercury (inorganic)                    | ppb                     | 2                     | 1.2                      | Erosion of natural deposits;<br>discharge from refineries and<br>factories; runoff from landfills and<br>cropland                      | Some people who drink water containing mercury in<br>excess of the MCL over many years may experience<br>mental disturbances, or impaired physical coordination,<br>speech and hearing.  |
| Nickel                                 | ррь                     | 100                   | 12                       | Erosion of natural deposits;<br>discharge from metal factories   | Some people who drink water containing nickel in excess of the MCL over many years may experience liver and heart effects.   |
| Nitrate (as nitrate, NO <sub>3</sub> ) | ppm                     | 45                    | 45                       | Runoff and leaching from fertilizer<br>use; leaching from septic tanks and<br>sewage; erosion of natural deposits                      | Infants below the age of six months who drink water<br>containing nitrate in excess of the MCL may quickly<br>become seriously ill and, if untreated, may die because<br>high nitrate levels can interfere with the capacity of the<br>infant's blood to carry oxygen. Symptoms include<br>shortness of breath and blueness of the skin. High<br>nitrate levels may also affect the oxygen-carrying ability<br>of the blood of pregnant women. |

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|--------------------------|-------------------------|-----------------------|--------------------------|---|--|
| Nitrite (as nitrogen, N) | ppm                     | 1                     | 1                        | Runoff and leaching from fertilizer<br>use; leaching from septic tanks and<br>sewage; erosion of natural deposits   | Infants below the age of six months who drink water<br>containing nitrite in excess of the MCL may quickly<br>become seriously ill and, if untreated, may die.<br>Symptoms include shortness of breath and blueness of<br>the skin.  |
| Perchlorate              | ppb                     | 6                     | 6                        | Perchlorate is an inorganic chemical<br>used in solid rocket propellant,<br>fireworks, explosives, flares,<br>matches, and a variety of industries.<br>It usually gets into drinking water as<br>a result of environmental<br>contamination from historic<br>aerospace or other industrial<br>operations that used or use, store, or<br>dispose of perchlorate and its salts. | Perchlorate has been shown to interfere with uptake of<br>iodide by the thyroid gland, and to thereby reduce the<br>production of thyroid hormones, leading to adverse<br>affects associated with inadequate hormone levels.<br>Thyroid hormones are needed for normal prenatal<br>growth and development of the fetus, as well as for<br>normal growth and development in the infant and child.<br>In adults, thyroid hormones are needed for normal<br>metabolism and mental function. |
| Selenium                 | ррb                     | 50                    | 30                       | Discharge from petroleum, glass,<br>and metal refineries; erosion of<br>natural deposits; discharge from<br>mines and chemical manufacturers;<br>runoff from livestock lots (feed<br>additive)  | Selenium is an essential nutrient. However, some people<br>who drink water containing selenium in excess of the<br>MCL over many years may experience hair or fingernail<br>losses, numbness in fingers or toes, or circulation<br>system problems.  |
| Thallium                 | ррb                     | 2                     | 0.1                      | Leaching from ore-processing sites;<br>discharge from electronics, glass,<br>and drug factories   | Some people who drink water containing thallium in<br>excess of the MCL over many years may experience<br>hair loss, changes in their blood, or kidney, intestinal, or<br>liver problems.  |