State of Nevada
Nevada Division of Environmental Protection
Bureau of Safe Drinking Water
ndep NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
protecting the future for generations
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Requirements for Monitoring Chemical Contaminants

All public water systems are required to conduct monitoring for chemical contaminants. Contaminants are placed in categories known as primary or secondary contaminants. **Primary contaminants** have been evaluated by the U.S. EPA and have been determined to be a risk to health. Secondary contaminants have also been evaluated. The **secondary contaminants** affect the aesthetic quality of the water but have not been determined to be a risk to health. These contaminants cause problems that may be visible or detectable by consumers such as iron staining or odors.

The degree of **risk** assigned to contaminants results in **acute** and **chronic risk** categories. Acute contaminants may cause a serious health problem with one exposure. Nitrate, nitrite and combined nitrate/nitrite are acute contaminants because infants with a minimal exposure may suffer serious health problems and possibly death if maximum contaminant levels are exceeded. There are currently no other chemical contaminants in the acute category. Chronic contaminants may cause health problems after many years of exposure. The majority of the primary chemical contaminants are considered to be chronic health risks. Groups of chronic primary contaminants are: inorganic chemicals, volatile organic chemicals, synthetic organic chemicals, disinfection by-products, lead and copper and radionuclide contaminants.

Each primary contaminant, with the exception of lead and copper, has a maximum contaminant level goal (MCLG). Lead and copper have action levels that trigger additional monitoring and possibly corrective action. Studies indicate that the goal will provide the best protection level. The MCLG may not be practically, economically or realistically obtainable and therefore the U.S. EPA sets enforceable maximum contaminant levels (**MCLs**) for all primary contaminants. MCLs are set as close to the MCLGs as can be realistically obtained.

All public water systems must deliver water that does not exceed the running annual average for a maximum contaminant level. The running annual average may be determined by monthly or quarterly samples averaged over 12 consecutive months. The regulatory authority will determine if monthly or quarterly samples are required for the purpose of determining the running annual average. When an MCL has been exceeded, continued notification of the affected water users is required each calendar quarter and the public water system must develop a corrective action plan to bring the system into compliance with the MCL. Public notification will be discontinued when the system has returned to compliance. The U.S. EPA has determined which treatment technology will work to reduce contaminants in drinking

water. This is known as the best available technology (**BAT**) and is available for all contaminants.

All chemical contaminants must be analyzed by state certified drinking water laboratories. Collection of samples must be done by certified operators or their designee or by the owners of the water system or their designee if the system is not required to use a certified operator. Proper sample containers and sample collection protocols provided by the laboratory must used and followed. All samples have holding times that must also be observed and sample submission forms that must be properly and completely filled out. The sample collection forms must always identify: who collected the sample, the location where the sample was collected, the public water system name, the public water system ID#, the source # (well, spring or surface source) that the sample represents, and the chain of custody forms.

Selection of the proper locations to obtain samples is also critical. Lead and copper samples and disinfection by-products samples are collected in the distribution system of the public water system. These contaminants require specific sampling plans that identify approved sampling locations. The Bureau of Safe Drinking Water must approve these sample plans. The disinfection by-product sample plans must be updated on a regular basis as the distribution system size increases. The Stage 2 Disinfection By-Products Rule will require public water systems to locate and sample "hot spots" in the distribution system where contaminants may be at the highest levels.

Public water systems in Nevada have each been provided with chemical monitoring schedules. The schedules are a part of the source water assessment documents and are source specific. The common name for the monitoring schedule is the **Attachment A**. The Bureau of Safe Drinking Water also sends monitoring reminder letters to public water systems twice a year. The reminder letter is source, distribution system and contaminant specific. **Please be advised that disinfection by-products and lead and copper are included in the Attachment A document but must be collected at approved sites in the distribution system.** Public water systems may have been granted monitoring waivers for a contaminant group or an individual contaminant. The Attachment A also reminds system owners and operators when monitoring waivers must be renewed. A document known as the Form B is used to renew waivers. The completed Form B and copies of required samples must be sent to the Bureau of Safe Drinking Water to renew monitoring waivers.

Copies of all chemical monitoring results must be sent to the Bureau of Safe Drinking Water by the 10th day of the month following receipt of the results. A copy of the results, quality control data and the chain of custody form(s) must be provided.