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TO: Office of Drinking Water Staff

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SUBJECT: Water - Policy - Use of Emergency Wells

REFERENCE: WM 823 (SDWIS) and WM 844 (Boil Water Notices)

SUMMARY

This Memo establishes policy for the use of emergency wells and includes routine use, activation/deactivation, sampling, notification and other requirements.

BACKGROUND:

Several waterworks maintain what are commonly referred to as “emergency” wells. These are wells which are connected or could easily be connected to the distribution system but are not intended to be routinely used. For the purpose of this memo wells are defined as follows:

Primary Well:

An active production source that is available to meet peak capacity requirements. The frequency of its use is a matter of operational preference. For example, a well with secondary contaminant levels that can be reduced sufficiently by blending with other well(s) is a primary well source. The maximum day demand is achieved with the use of this well, however most of the time the actual demand will be much less, and the well is not used.

All primary wells are included on the Engineering Description Sheet (EDS) with a capacity evaluation. All routine monitoring schedules apply to primary wells.

Emergency Well:

This is a source that is available for emergency purposes only and is returned to an inactive status as soon as possible. The use of these wells may be needed when health risks associated with water shortages outweigh the risks associated with potential chronic contaminant levels. These wells do not have the same level of routine monitoring as primary wells. These wells are to be listed on the EDS, but not included in the capacity evaluation.

Both Emergency and Primary wells must have a full developmental series of tests on record.

ROUTINE PROCEDURES FOR EMERGENCY WELLS:

All emergency wells shall be exercised on a routine basis. Quarterly raw water bacteriological testing may be required by the Field Office, at the Field Director's discretion.

All emergency wells shall be tested annually for raw water MPN and nitrate, using a single grab sample. Triennial sampling may be required if chronic contaminants are of special concern, using one or more of the following tests: Metals, Inorganics, VOCs, Radiological, and Cyanide.

SDWIS Data Entry:

In order to schedule and track all emergency well test results electronically through SDWIS and R&R, the well facility must be added to SDWIS from the 'Water System Facilities' button on 'Basic Information'. The well should be clearly named (it is recommended that "Emergency" be included in the name for ease of identification); select the Availability as 'Emergency', and Activity Status as 'Active' (this is necessary to use R&R Scheduler and Reports features, even if the well is not actually in use). A Sampling Point must be linked to the Emergency Well facility. Refer to W.M. 823 for further instructions.

ACTIVATING / DEACTIVATING AN EMERGENCY WELL:

The Field Office must be notified of the intent to use the emergency well prior to its actual use, and when it is returned to an inactive status.

All emergency wells shall be pumped to waste for a minimum of 15 minutes prior to being placed in service.

If bacteriological contamination of the emergency well is of concern, and time allows, then the well shall be disinfected in accordance with AWWA C654.

Special bacteriological testing shall be required. After the well is pumped to waste, two samples taken at least 30 minutes apart and tested for the presence of coliform bacteria shall be required, and satisfactory results obtained prior to placing the well in service. If the well must be activated prior to receipt of satisfactory bacteriological results, then a Boil Water Advisory shall be issued concurrently. Special samples may be waived if the system is already on a Boil Water Notice, or if continuous chlorination is provided. The waterworks may also issue a notice to customers advising them of a change in water source (even if a Boil Water Advisory is not needed), if changes to water quality and/or customer complaints are anticipated.

Routine bacteriological sampling, and other parameters as required by the Field Office, must be performed for the period an emergency well is in service. If the well is subsequently put to routine use, its status will be upgraded to primary, and the Operation Permit and monitoring requirements must be modified accordingly.

OTHER CONSIDERATIONS

There are a variety of waterworks configurations with multiple sources, treatment facilities, and entry points. These are to be handled on a case-by-case basis considering the guidance provided above.