

LANDFILL AREA WELL ASSISTANCE PROCEDURE

ORANGE COUNTY HEALTH DEPARTMENT

ENVIRONMENTAL HEALTH SERVICES

BACKGROUND

In 2000, Orange County and the towns of Chapel Hill, Carrboro, and Hillsborough entered into agreement whereby Orange County (subject to the terms of the agreement) assumed the solid waste management responsibility for the disposal of solid waste county-wide. Among items covered within that agreement were provisions to address community improvements within the 'areas' neighboring the existing landfill. In order to address concerns from citizens living near the landfill area with regard to drinking water wells, a policy to remedy failed wells is hereby established as a benefit to the surrounding community. The source of funding to administer this policy will be from the Solid Waste Reserve Fund (SWRF) generated by landfill operating fees.

The Landfill Area Well Assistance Procedure (LAWAP) is established to provide remedies through February 2, 2040 for failing drinking water wells serving residential properties located within 3000 feet of the Orange County Landfill perimeter. The Orange County Health Department, Environmental Health Services (OCHD), will assist in the determination of well failures. The development of strategies to repair, replace or otherwise remedy the failed wells will be the responsibility of a team representing the OCHD, Solid Waste Department, Community Development, and the Planning Department.

ELIGIBILITY

The beneficiaries of the fund must meet the following criteria:

- The well must serve residential property for drinking water purposes
- The well must not be classified as a public water supply
- The well must be operational and serving a residence on or after February 2, 2010.
- The subject property must be a distance of no more than 3000 feet from the perimeter of the landfill property.

WELL FAILURE

Suspected well failures will be reported directly to the OCHD by the well owner or resident by submitting an application for assistance. OCHD will apply field assessment, empirical laboratory results of water samples, technical expertise and professional judgment in evaluating the reported failure. Public water supply wells, non-drinking water wells, and wells serving non residential properties are not covered by this policy and are not eligible for the LAWAF funding.

Well failure will be defined in terms of problems with either quantity or quality.

Quantity: A well is considered to be failing if it is unable to produce at least 750 gallons per day or 100 gallons per day per permanent resident of the home, whichever is greater. The assessment of the well quantity will involve determining the total depth of the well, the total flow of the water zones in the well, the depth that the pump can effectively pump water, and any other factor that affects the quantity of water the well can produce.

Quality: A well is considered to be failing if it is unable to produce water that meets the primary drinking water standards of the US EPA or the State of North Carolina, or other standards established by the Orange County Board of Health deemed necessary to protect against adverse

health effects. Assessment of well water quality may include sampling, video analysis of the well casing/bore-hole, or other actions necessary to determine the water quality from the well. The following findings do not constitute a well failure:

- An inoperable or insufficient pump, pressure tank, or pressure switch serving the well
- Inoperable or insufficient wiring serving the well or plumbing problems in the distribution system.
- Water treatment systems installed prior to this policy that were improperly installed or maintained

WELL FAILURE DETERMINATION PROCEDURES

1. The homeowner or resident will notify the County of the problems they are experiencing with their well by submitting an application for assistance. The information given should be as specific and detailed as possible in regards to the problems they have and the history of those problems.
2. OCHD will investigate the claim and make a determination as to whether the well meets the criteria as a failed well. If necessary, the county may hire a contractor to conduct the necessary testing to validate the claim and prepare a report of their findings.
3. In the case of water quality complaints, the OCHD will conduct appropriate water sampling that may include analyses for the following contaminants: bacteriological, inorganic chemicals, nitrates/nitrites, volatile organics, pesticides, and others.
4. The OCHD or qualified contractor as applicable will make a recommendation to the county as to options available to remedy the failed well. Remedies may include; deepening the well, installing a liner in the well, shock chlorination of the well, installation of a water treatment system, abandoning and replacing the well with a new well, or connecting to the public water system.

REMEDICATION OF FAILURES

Best professional judgment will be used in choosing the best remedy for each failure based on a case-by-case analysis considering the technology available at the time. Potential remedies for correcting well failures include, but are not limited to:

Repair:

Well repairs will be implemented for those situation involving known or suspected flaws in the well construction. The repairs may involve the installation of a liner or sleeve in the existing casing; raising the wellhead above the finished grade; or deepening of the borehole. The age, performance history, location, condition, and construction of the well and availability of public water will be considered when recommending a well repair.

Treatment:

Treatment systems are indicated when the water sample results suggest that the water quality can be corrected and the well is otherwise viable. Examples of treatment systems include whole-house filters, point of use filters, softeners, iron-removal systems, chlorinators, ultra-violet light disinfection, reverse osmosis units and neutralizers.

Renovation:

Renovation is indicated when there are certain types of non-pathogenic bacteria present in the well such as iron or sulfur bacteria. The renovation process removes the slime and other buildup in the well and plumbing system through a chemical or mechanical process and eliminates or reduces the levels of nuisance constituents in the water.

Replacement:

Well replacement is indicated when the existing well is failing according to the definition established by this policy and it is not feasible or possible to renovate or repair the well. Replacement of the well will necessitate abandonment of any well that is no longer in use.

Connection to Public Water

When a public water utility is available to the subject property, connection to the water main and abandonment of the failed well will be considered a possible option. The property owner must agree to become a customer of the utility and will be responsible for payment of monthly utility fees. The fund will pay for connection fees, tap fees, connection of the residence to the meter, and abandonment of the failed well. The fund is not available for the extension of utility-owned water mains.

OTHER CONSIDERATIONS

Costs:

The following costs will be paid for by the SWRF:

- Costs incurred in the evaluation and determination of whether a well failure exists, including sampling, permits, and consultant fees
- Repair, treatment, renovation, replacement, and abandonment of failing wells on properties within the affected area
- Connection of a property to an alternative water supply or to the public water system
- Providing bottled water to residents with an identified failed well until the remedy is implemented for a period of time not to exceed 180 days
- Other approved ancillary costs related to the repair such as wiring, pump, and pipe replacement, and chlorination of the well.
- Miscellaneous improvements to a well head deemed necessary to protect the water supply from contamination, even if a well does not meet the qualifications as a failed well.
- Other costs deemed necessary by the Health Director and approved by the County Manager

Limitations:

- Each remediation strategy will be allowed once for each eligible well and any future repair, replacement, or maintenance costs associated with a strategy will be the responsibility of the property owner.
- Implementation of a remediation strategy is no guarantee of long term performance of the remedy.
- The well owner must sign an acknowledgement before the implementation of a strategy accepting the remedial action and agreeing to any resulting future costs such as maintenance and operation of treatment equipment or utility fees.
- Should a well owner not agree to the implementation of the recommended strategy, the county is not obligated to provide alternative assistance through the LAWAF.
- The LAWAF will not provide assistance for the residence plumbing system beyond the pressure tank and pump control switch. The homeowner will be responsible for the electrical system on the house side of the overload protection panel (circuit breaker or fuse panel).

Contractors:

Contractors used by the County in the remediation of well failures shall be subject to the County's contract/bid process as administered by the County's Financial Services Department.

EFFECTIVE DATE

This policy shall be effective upon adoption by the Board of Health and approval by the County Manager.

APPEALS

Appeals concerning the testing of wells and determination of well failures will be heard by the Orange County Board of Health in a manner consistent with Board of Health policies and procedures.

Reviewed and approved by the Orange County Board of Health on October 27th, 2010

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