



**ORANGE COUNTY  
HEALTH DEPARTMENT**

*Improving health. Inspiring change.*

**EH 63.0 NO FAULT WELL REPAIR FUND (Quarry Area)**

**EFFECTIVE DATE**

June 4, 2002

*Alan Clapp*

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Environmental Health Director

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## ORANGE COUNTY HEALTH DEPARTMENT

### ENVIRONMENTAL HEALTH SERVICES POLICY AND PROCEDURE MANUAL

Original Effective Date: June 4, 2002

Reviewed By: Environmental Health Director 9/16/16

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## Procedure 63.0 NO FAULT WELL REPAIR FUND POLICY

### PURPOSE/BACKGROUND

The No Fault Well Repair Fund (NFWRF) was established by Martin Marietta (d.b.a. American Stone Company or ASC) to provide for the repair or replacement of wells that fail and it is determined that the failure is not a probable result of the American Stone's quarry operations. The fund was established as a condition of a special use permit for the continued quarry activities and will expire in 2033 or 3 years after the quarry use is discontinued, whichever is sooner. The active quarry is in south central Orange County just to the north and west of the intersection of Highway 54 and Bethel-Hickory Grove Church Road. Wells serving properties that are within 3,000 feet of the perimeter of the quarry are eligible for this relief if and when they fail. The Orange County Health Department, Environmental Health Division (OCHD), will assist in the determination of well failures and in the development of strategies to repair, replace or renovate the failures.

Other activities involving the quarry and claims against the quarry will be administered through other agencies and will not involve OCHD. Other funds established by the special use permit are not covered in this policy.

### 63.1 WELL FAILURE

Suspected well failures reported to the County will be referred to OCHD in a timely manner. The initial review of the complaint will be to determine if the failure is related to water quality or quantity. Once that initial determination is made, steps to evaluate the well and confirm or deny the failure will begin according to this policy. The evaluation will be made in accordance with field assessment, empirical laboratory results of water samples, technical expertise and professional judgment of the evaluators. The evaluators will be OCHD staff, American Stone consultants and other experts as appropriate and as deemed necessary by OCHD. Public water supply wells are not covered by this policy and are not eligible for the NFWRF monies.

American Stone Company will also have the initial responsibility, at their expense, to determine whether the well failure is a probable result of the quarry operation. If the determination is made that the well failure is a probable result of the operation, American Stone has complete and sole responsibility to repair or replace the well and the resident is not eligible for the NFWRF monies. The County or OCHD will not be involved with the negotiations when a well fails as a probable result of the quarry operation except to provide water sampling and technical expertise when requested. Well permits and inspections for replacement wells will be required and fees for those services will be paid out of the NFWRF, the resident, or American Stone as indicated by the findings or negotiations.

Well failure will be defined in terms of problems with either quality or quantity. Following is a short description of what constitutes a well failure in both those categories and the procedures through which determination will be made in each category.

Quantity: A well must be able to produce a minimum of 750 gallons per day or 100 gallons 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 must produce water that meets the current or future 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 long term or short term adverse health effects. Assessment of well water quality may include sampling, videotaping 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 serving the well (see section on pumps below)
- Inoperable or insufficient wiring or plumbing serving the well
- Water treatment systems installed prior to this policy that were improperly installed or maintained

### **63.2 WELL FAILURE DETERMINATION PROCEDURES**

Quality:

1. The homeowner or resident notifies the County of the problems they are experiencing with their well. 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. The Health Department will conduct bacteriological and inorganic chemical water samples. Other types of samples may be collected, depending on the specifics of the complaint.
3. If the sample results indicate there is a well failure, the Health Department will notify ASC so their expert can visit the site to complete the probable result assessment.
4. ASC's "qualified expert" visits the site and performs diagnostic procedures to evaluate whether the quality problems are a probable result of the quarry operations.
5. The expert shall prepare a report of their findings for review and reference in further handling of the matters.
6. If there is a determination that a well failure exists and is a probable result of the quarry operation, ASC is responsible for remediation of the situation.
7. If the probable result determination is negative, the expert will refer the situation back to the County for renovation, repair, treatment system, or replacement through the NFWRF.

Quantity:

1. The homeowner or resident notifies the County of the problems they are experiencing with their well. 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. The County will notify ASC
3. ASC will have a "qualified expert" visit the site and perform diagnostic procedures to evaluate whether there is a defined well failure in terms of well water quantity.
4. The expert shall prepare a report of their findings for review and reference in further handling of the matters.
5. If there is a determination that a well failure exists and is a probable result of the quarry operation, the well will be renovated, repaired or replaced by ASC.
6. If the probable result determination is negative, the expert will refer the situation back to the County for renovation, repair, or replacement of the well by the NFWRF.

### **63.3 REMEDIATION OF FAILURES**

Repair:

Well repairs can be implemented for those situation involving known or discoverable 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 use of a well repair strategy is usually limited, especially when the well is more than 15-20 years old.

Treatment:

Treatment systems are indicated when they are the best solution for the well failure. Treatment systems may be the only remediation available for some well failure situations. Examples of treatment systems are whole-house filters, point of use filters, softeners, reverse osmosis units and neutralizers.

Renovation:

Renovation is generally indicated when there are certain types of non-pathogenic bacteria present in the well such as iron or sulfur bacteria. Over time, these bacteria cause an increase in undesirable qualities in the water and many times cause a slime to develop on the well walls or within the plumbing system that exacerbates the problem. 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 definition established by this policy and the well cannot be renovated or repaired. Any new well may need a new pump, wiring and water line in order to be put into service. These items will be covered under the NFWRF.

Limitations:

Each remediation strategy will be allowed once for each eligible well and any long term maintenance costs associated with a strategy, if incurred, will be the responsibility of the well owner. The well owner will be required to sign a release for each strategy provided. There will be no guarantee from Orange County that any strategy will solve the problems with existing or replacement wells.

**63.4 PUMPS**

Pump replacement for wells that have not failed will be paid for from the NFWRF based on the following conditions:

- Based on an average well pump life of 15 years, the cost of the replacement will be inversely proportional to the age of the pump according to the following chart:

Well is:	Percentage Paid
Less than 1 year old	100%
1-2 years old	93%
2-3 years old	87%
3-4 years old	80%
4-5 years old	73%
5-6 years old	67%
6-7 years old	60%

7-8 years old	53%
8-9 years old	47%
9-10 years old	40%
10-11 years old	33%
11-12 years old	27%
12-13 years old	20%
13-14 years old	13%
More than 14 years old	7%

- Wiring and plumbing necessary to effect pump replacements will be paid for in the percentages listed above

### **63.5 OTHER CONSIDERATIONS**

#### Costs:

The following costs will be paid for out of the NFWRF:

- Repair, treatment, renovation, or replacement of failing wells on properties within the affected zone
- Costs incurred in the evaluation and determination of whether a well failure exists, including sampling, permits and consultant fees
- Other costs as deemed necessary by the Health Director and approved by the County Manager

#### Contractors:

Contractors used by the County in the remediation of well failures shall be subject to the County's competitive bid process as administered by the County's Purchasing Department or other agency as appropriate.

#### Discoveries:

Any well failures or other associated problems determined to be the direct responsibility of ASC after the initial assessment will be referred back to ASC for remediation. If the County has spent funds from the NFWRF and such a discovery is made, ASC will be responsible for reimbursing the County for the amount spent.

#### Educational Packets:

The County should prepare an informational literature packet to be given to well owners as they apply for use of the NFWRF. The information should detail the processes involved in the use of the fund and what the applicant can expect as they proceed with a claim.

### **63.6 EFFECTIVE DATE**

Remediation of failed wells pursuant to this policy may begin only after both the Orange County Board of Health and the Orange County Board of County Commissioners approve the policy. Residents that incurred costs relating to well failures prior to the approval of the two boards may seek reimbursement of those costs upon submittal of supporting documentation for the work. The work performed must have been otherwise consistent with this policy.

### **63.6 APPEALS**

Appeals concerning the NFWRF fund will be heard by the Orange County Board of Health in a manner consistent with Board of Health policies and procedures.

*Adopted by the Orange County Board of Health on January 17, 2002.*

*Amended by the Orange County Board of Health on April 25, 2002.*

*Adopted by the Orange County Board of County Commissioners on June 4, 2002.*

This policy is now an Environmental Health Policy. The adoption by the Orange County Board of Health and Orange County Commissioners are left for historical reference.