

DATE: December 11, 2014
TO: Contractors, Homeowners, Aggregate Producers/Retailers and Community
FROM: Environmental Health Services Division
SUBJECT: **Notice Regarding Washoe County Health District Requirements for Drain Rock in Onsite Sewage Disposal Systems**

This memorandum is intended to inform and reiterate to contractors, homeowners and the community the requirements for drain rock used in Onsite Sewage Disposal Systems (OSDS) per the [Regulations of the Washoe County District Board of Health Governing Sewage, Wastewater and Sanitation effective May 23, 2013](#) (SWS Regulations).

Recently, Washoe County Health District Environmental Health Services (WCHD) observed numerous occasions where drain rock was delivered for installation in an OSDS that did not meet the SWS Regulations. This often resulted in the drain rock not being approved by WCHD for use in the OSDS. This may have resulted in additional cost and construction delays to the contractor and homeowner involved. As a service to the community, WCHD wants to reiterate the requirements for drain rock for use in an OSDS.

The most common characteristics that resulted in the drain rock not being approved by WCHD include the following:

- Unwashed drain rock,
- Excessive fines, sand, dust and silt, and
- Excessive amounts of drain rock less than $\frac{3}{4}$ " in diameter.

SWS Regulation Summary

Drain rock is defined in the SWS as:

010.089 *DRAIN ROCK means washed, crushed rock or other approved material for use in the septic design as a media so that wastewater trickles through as a method of treatment and as approved by the Health Authority.*

The SWS Section 100.015 states:

100.015 *Drain Rock Requirements*

1. *Washed crushed rock, or similar acceptable drain rock approved by the Health District and sized according to Table 3; and*
 - a. *Chipped or shredded tires may also be used as a filter media in lieu of drain rock. No more than 10% of the chipped tire material shall have any dimension greater than six (6) inches and no exposed steel wire greater than one-half inch long.*
2. *Washed drain rock must be free from dirt, wood chips, debris, or excessive dust and silt.*
3. *All drain rock must be approved by the Health Authority.*

Table 3 of the SWS Regulations states the following regarding drain rock in standard disposal trenches:

	MINIMUM	MAXIMUM
DRAIN ROCK SIZE (washed crushed rock)	1 ½"	2 ½"

Table 4 of the SWS Regulations states the following regarding drain rock as part of an engineered sand filter:

	MINIMUM	MAXIMUM
DRAIN ROCK SIZE	¾" to 1 ½" open graded	1 ½" to 3" open graded

WCHD OSDS Policy on Drain Rock Approval - Summary

For all permitted construction to construct, alter, extend, repair or replace an OSDS from the date of this memorandum **will be strictly enforced** to SWS Section 100. This includes, but is not limited to, the following:

- All drain rock must be **free of dirt, wood chips, debris, sand or silt and dust**
- All **crushed** drain rock must be **washed**
- All rock must be [open-graded](#) in which a skip between the sieve gradations has been deliberately achieved so that the voids are not filled with intermediate-size particles
- The size of drain rock to be installed in a **standard disposal trench** must generally conform to:
 - The **majority** of rock must be roughly 1 ½" in diameter
 - The **minimum** drain rock must be greater than ¾" in diameter and must not form the majority of the drain rock gradation
 - The **maximum** drain rock size must be no greater than 2 ½" in diameter and must not form the majority of the drain rock gradation
 - Coarse aggregate meeting gradation of Standard Specifications for Public Works Construction (SSPWC) Class D Backfill
 - SSPWC Coarse Aggregate for Portland Cement Size No. 4
- The drain rock to be installed as part of an **engineered sand filter** must generally conform to:
 - Coarse aggregate meeting gradation of SSPWC Class C Backfill
 - Coarse aggregate meeting gradation of SSPWC Class D Backfill
- Other approved material must be approved by WCHD prior to delivery to the site and must be the same and actual material delivered to the site for construction of the OSDS
- The entire drain rock volume required to complete construction of the OSDS must be on-site at the time of WCHD inspection
 - For small sites where this is not possible any rock that is delivered and installed that does not meet the SWS requirements, and as outlined in the memorandum, shall not be approved by WCHD and **will be required to be removed** from the OSDS.

Please contact our office at (775) 328-2434 or [email EHS](#) with any questions or concerns.

CA/JE/DB